

29TH IAEA FEC 2023 29-MAEA Fusion Energy Conference FUSION ENERGY CONFERENCE



Organized by the:



Hosted by the Government of the United Kingdom through the United Kingdom Atomic Energy Authority (UKAEA):



29th IAEA Fusion Energy Conference 16th-21st October 2023 London, UK

Programme & Book of Abstracts & Conference Material

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Mobile Conference App for smartphones and tablets

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For iPhone or iPad users, get your free download through the App Store; those with Android devices can visit the Google Play Store.

Introduction

The International Atomic Energy Agency (IAEA) fosters the exchange of scientific and technical results in nuclear fusion research and development through its series of Fusion Energy Conferences.

The 29th Fusion Energy Conference (FEC 2023) aims to provide a forum for the discussion of key physics and technology issues as well as innovative concepts of direct relevance to the use of nuclear fusion as a future source of energy.

According to the IAEA's Fusion Device Information System (FusDIS), as of 2023, there are almost 130 experimental fusion devices and testing facilities operating, under construction or being planned, and a dozen of demonstration plant or pilot plant designs under development. Driven by recent scientific and technical advances, a vibrant private sector and the climate crisis, attention is switching to the remaining challenges of demonstrating the technological feasibility of fusion power as well as the safe and economic viability of this energy source.

The scope of FEC 2023 is, therefore, intended to reflect the priorities of this new era in fusion energy research, technology development and preparation to industrial deployment. The conference aims to serve as a platform for sharing the results of research and development efforts in both national and international fusion programmes that have been shaped by these new priorities, and to thereby help in pinpointing worldwide advances in fusion theory, experiments, technology, engineering, materials, advanced concepts, safety, socio-economics and preparation to industrial deployment. Furthermore, the conference will also set these results against the backdrop of the requirements for a net energy-producing fusion device and a fusion power plant in general and will thus help in defining the way forward.

With the participation of international organizations such as the ITER International Fusion Energy Organization and the European Atomic Energy Community (Euratom), as well as the collaboration of more than 40 countries and a great number of research institutes and organisations, including those working on smaller devices, it is expected that this conference will, like previous conferences in the series, serve to identify the possibilities and means for continuous and effective international collaboration in this area.

The 29th IAEA Fusion Energy Conference is being organized by the IAEA in cooperation with the Government of the United Kingdom through the United Kingdom Atomic Energy Authority (UKAEA). Previous conferences in this series were held in Salzburg, Austria (1961), Culham, United Kingdom (1965), Novosibirsk, Russian Federation (1968), Madison, United States of America (1971), Tokyo, Japan (1974), Berchtesgaden, Germany(1976), Innsbruck, Austria (1978), Brussels, Belgium (1980), Baltimore, United States of America (1982), London, United Kingdom (1984), Kyoto, Japan (1986), Nice, France (1988), Washington DC, United States of America (1990), Würzburg, Germany (1992), Seville, Spain (1994), Montreal, Canada (1996), Yokohama, Japan (1998), Sorrento, Italy (2000), Lyon, France (2002), Vilamoura, Spain (2004), Chengdu, China (2006), Geneva, Switzerland (2008), Daejeon, Republic of Korea (2010), San Diego, United States of America (2012), St. Petersburg, Russian Federation (2014), Kyoto, Japan (2016), Ahmedabad, India (2018), Nice, France (postponed from 2020 to 2021 and held online because of the global COVID-19 pandemic).

Programme Committee

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Guangnan Luo | China

 $Min \ Xu \mid China$

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Daniel Raju | India

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TFI Lodestar

Publications and Proceedings

Presentation and Abstract Book

This book contains all abstracts accepted for the conference. Abstracts have been edited for style uniformity. The views expressed remain the responsibility of the named authors. No responsibility is held by the organizers for any material reproduced, or linked, in this book.

IAEA Publications

All IAEA publications may be ordered from the

Sales and Promotion Unit,

International Atomic Energy Agency,

P.O. Box 100, A-1400 Vienna,

Austria Fax: +43 1 2600-29302

sales.publications@iaea.org

www.iaea.org/Publications/index.html

Conference Material

Contributed papers will be published electronically on the IAEA Fusion Portal under the FEC dedicated webpage as a part of the FEC material.

Nuclear Fusion Journal

Participants have been invited to submit their paper for possible publication in the IAEA journal, Nuclear Fusion. If your institution does not have access to the journal, pdfs of these FEC derived articles can be requested from nf@iaea.org.

Links on the abstract pages direct the reader to both the pre-print and the Nuclear Fusion journal, respectively.

Participation in an IAEA Scientific Meeting

Governments of Member States and those organizations whose activities are relevant to the meeting subject matter are invited to designate participants in the IAEA scientific conferences and symposia. In addition, the IAEA itself may invite a limited number of scientists as invited speakers. Only participants designated or invited in this way are entitled to present papers and take part in the discussions.

Representatives of the press, radio, television or other information media and members of the public, the latter as "observers", may also be authorized to attend, but without the right to take part in the proceedings.

Scientists interested in participating in any of the IAEA meetings should request information from the Government authorities of their own countries, in most cases the Ministry of Foreign Affairs or national atomic energy authority.

Working Language & Resolutions

Working Language: English. No simultaneous translation will be provided.

Resolutions: No resolutions may be submitted for consideration on any subject; no votes will be taken.

Information for Participants

The **conference website** contains links to many helpful guides. Notably, the **Indico** conference system is used for all correspondence concerning contributions.

Overview of Contributions

This book contains all abstracts accepted by the FEC programme committee. Note that abstracts have been edited for style uniformity.

Overview of Contributions (as of October 10, 2023)

- 1 Keynote presentations
- 19 Overview talks
- 100 Regular talks
- 2 Rapporteur and Rapporteured talks
- 36 Overview posters
- 774 Regular posters
- 2 Post deadline talks
- 15 Post deadline poster

Overview posters will be exhibited during the entire conference. All oral presentations will also be displayed as posters according to the programme.

Rapporteur papers are identified by the letter "a" after the paper number. Rapporteured papers are identified by the letters "b" or "c" after the paper number.

Participation in an IAEA Scientific Meeting

Topics

OV - Overview

Programme overview

EX – Magnetic Fusion Experiments including Validation

Experimental plasma physics including validation

Keywords (indicative only and not limiting): toroidal and helical configurations; confinement; stability; performance and control; wave-plasma interactions; current drive; heating; energetic particles; plasma material interactions; divertors; limiters; scrape-off-layer

EX-C - Confinement

Confinement and transport, including scenario development & L-H

EX-S - Stability Stability, including disruptions, runaways, control, mitigation & consequences

EX-W - Waves

Plasma waves and energetic particle interactions

EX-D - Divertor

Divertor/SOL physics and general power handling

EX-E - Edge Transient Control

Edge transients, ELMs, mitigation & benign/no ELM scenarios

EX-M - Material Interactions

Materials-plasma interactions

EX-P - Pedestal, Core-edge

Pedestal physics and core-edge integration

EX-H - Heating & Current Drive

Heating and current drive physics, antenna-plasma interactions

TH - Magnetic Fusion Theory and Simulation

Theory and simulation

TH-C - Confinement

Confinement and transport, including scenario development & L-H

TH-S - Stability

Stability, including disruptions, runaways, control, mitigation & consequences

TH-W - Waves

Plasma waves and energetic particle interactions

TH-D - Divertor

Divertor/SOL physics and general power handling

TH-E - Edge Transient Control

Edge transients, ELMs, mitigation & benign/no ELM scenarios

TH-M - Material Interactions

Materials-plasma interactions

TH-P - Pedestal, Core-edge

Pedestal physics and core-edge integration

TH-H - Heating & Current Drive

Heating and current drive physics, antenna-plasma interactions

TEC - Fusion Energy Technology

Not plasma interaction

Keywords (indicative only and not limiting): materials; magnets; engineering; system integration; neutron sources; radiation; transport and activation; power plant design; safety; maintenance and remote handling; socio-economic and environmental aspects

TEC-MTL - Material Developments

Material Developments

TEC-IVC - In Vessel Components

TEC-HCD - Heating & Current Drive

Heating & Current Drive

TEC-ITR - ITER Technology

ITER Technology

TEC-FNT - Fusion Nuclear Technology: Includes nuclear science & tech research devices Fusion Nuclear Technology: Includes nuclear science & tech research devices

TEC-LS - Licensing and Safety

Licensing and Safety

TEC-SEE - Socio-economic and Environment

Socio-economic and Environment

TEC-NSM - Next Step Machine designs (DEMOs, Pilots, etc.), enabling devices and roadmaps

Next Step Machine designs (DEMOs, Pilots, etc.), enabling devices and roadmaps.

IFE - Inertial Fusion Energy

Keywords (indicative only and not limiting): experiments, theory and modelling, materials, power plant design, targets, drivers.

IAC - Innovative and Alternative Fusion Concepts

Keywords (indicative only and not limiting): linear configuration; non-magnetic configurations; hybrid concepts; fusors

PWF - Pathway to Fusion Special Event (Saturday sessions)

Pathways to Fusion Special Event (Saturday sessions).

Scope: fusion pathways, demonstration devices, timelines, engineering, integration, supporting facilities, risk, partnership, commercialization with an emphasis on private sector developments alongside publicly funded plans. Comprising: morning posters, afternoon quick fire talks 12-15 mins each, coffee time networking, exhibit hall, panel debate with audience Q&A

Conference Location

The 29th Fusion Energy Conference (FEC2023) will be held at the **Queen Elizabeth II Centre** in London, United Kingdom. The Conference will be organized by the IAEA and hosted by the Government of the United Kingdom through the United Kingdom Atomic Energy Authority (UKAEA).

Timetable FEC 2023

Day Date	Monday October 16, 2023	Day Date	Tuesda October 17	-	Wednes October 18	-	Thursd October 19	-	Friday October 20		Day Date	Sature October 2	-
08:30- 10:15	O/I Opening -&- High Level Session	08:30 - 10:10	EX/1 & TH/1 Core Edge	P1 Posters	TH/3 Edge & Divertor	P3 Posters	EX/3 & TH/4 Turbulence	P5 Posters	EX/6 & TH/7 3D Physics	P7 Posters	08:30- 10:10	EX/8 Exhaust	P9 Posters
10:15 - 10:45	Coffee Break	10:10 - 10:40		Coffee Break									
10:45 - 12:45	OV/I Overview: Burning Plasmas and Long Pulse	10:40 - 12:20	TH/2 Fast Ions	P1 Posters	IFE/1 Inertial Fusion Energy	P3 Posters	TH/5 IAC/1 EX/4 Control	P5 Posters	TEC/4 Next steps and H &CD	P7 Posters	10:40 - 12:40	TH/9 Core Transport	P9 Posters
12:45	Lunch	12:20 - 14:00					Lı	ınch					
14:00		13:00 - 14:00	Women in	Fusion	Inertial F Energ		Energy Just Social Lic		Public Engagement 13:10 - IAEA Second		IAEA Sess	sion	
14:00 - 16:05	OV/2 Overview: Tokamak	14:00 - 16:05	OV/4 Overview: Technology, Long Pulse, Science	P2 Posters	TEC/2 In Vessel Component + Heating	P4 Posters	EX/5 & TH/6 Scenarios I	P6 Posters	TH/8 & IA C/2 MHD & Disruptions	P8 Posters	14:00 - 16:35	PWF Pathways	to Fusion
16:05 - 16:30	Coffee Break					10.33							
16:30 - 18:30	OV/3 Overview: Stellarator, ST, Private	16:30 - 18:30	TEC/I ITER Technology	P2 Posters	EX/2 Pedestal	P4 Posters	TEC/3 Fus Nucl Tech, Materials, Heating	P6 Posters	EX/7 Scenarios II	P8 Posters	16:35 - 17:00	Closing	

Monday 16 October 2023

O /1		Opening & High Level Session	(00 00 11 00)
			(08:30-11:00)
08:30	O/1-1	R. Grossi	IAEA
		Opening Statement by IAEA Director General	
08:40	O/1 -2	A. Bowie	UK
		Opening Statement by UK Parliamentary Under Secretary of	
		State (Minister for Nuclear and Networks)	
08:50	O/1-3	Rafael Mariano Grossi	IAEA
		I. Chapman	UK
		Andrew Bowie	UK
		Pietro Barabaschi	ITER
		Jean Paul Allain	DOE
		Satoshi Konishi	Japan
		High-level Panel on "World Fusion Outlook"	
09:50	O/1-4	I. Chapman	UK
		UK Fusion Program	
10:10	O/1-5	Nuclear Fusion Journal Representative	IAEA
		Nuclear Fusion Journal Awards (2021-2023)	
10:45		IAEA FEC Secretariat and Technical Programme Committee Chair Administrative and Technical Remarks	IAEA

OV/1 Overview 1: Burning Plasmas and Long Chairperson: Arianna Gleason-Holbrook (USA)

(11:00-12:45) Co-Chairperson: Melissa Denecke (IAEA)

OV/1-1	C. Maggi	UK
OV /1 2	Overview of T and D-T results in jet with ITER-like wall	I IC A
OV/1-2		USA
	at the National Ignition Facility	
OV/1-3	P. Barabaschi	ITER
	Ü	
	OV/1-2	Overview of T and D-T results in jet with ITER-like wall OV/1-2 A. Pak Target gain >1 from inertial confinement fusion implosions at the National Ignition Facility

Continued...

12:03	OV/1-4	X. Gong	P.R. China
		Overview of recent experimental results on EAST tokamak	
12:24- 12:45		Discussion, Q & A	

OV/2 Overview 2: Tokamak

Chairperson: Shinichi Ishida (Japan) (14:00-16:05)

Co-Chairperson: Aline Des Cloizeaux (IAEA)

14:00	OV/2-1	W. Ko	Korea
		Overview of the KSTAR experiments	
14:21	OV/2-2	C. Holcomb	USA
		DIII-D Research to Provide Solutions for ITER and Fusion	
		Energy	
14:42	OV/2-3	H. Zohm	Germany
		Overview of ASDEX upgrade results in preparation of ITER	•
		and DEMO	
15:03	OV/2-4	B. Duval	Switzerland
		Experimental Research on the TCV Tokamak	
15:24	OV/2 4	M V	P.R.
15:24	OV/2-4	M. Xu	China
		Progress Of HL-2M Experiments	
15:45-		Diamesian O & A	
16:05		Discussion, Q & A	

OV/3 Overview 3: Stellarator, Spherical Tokamak

Chairperson: Elisabeth Wolfrum (Germany) (16:30-18:35)

Co-Chairperson: Matteo Barbarino (IAEA)

16:30 OV/3-1 **O. Grulke** Germany

Overview of the first Wendelstein 7-X long pulse campaign with fully water-cooled plasma facing components

Continued...

16:51	OV/3-2	K. Ida Overview of Large Helical Device experiments on basic plasma physics for solving future issues in nuclear fusion research	Japan
17:12	OV/3-3	J. Harrison	UK
		Overview of physics results from MAST Upgrade towards core-pedestal-exhaust integration	
17:33	OV/3-4	S. McNamara	UK
		Overview of high temperature plasmas in the ST40 compact high-field spherical tokamak	
17:54	OV/3-4	Z. Hartwig	USA
		The SPARC Toroidal Field Model Coil Project	
18:15- 18:35		Discussion, Q & A	

Tuesday 17 October 2023

	,	Core-Edge g Xu (P.R. China) m Wagner (IAEA)	(08:30-10:10)
08:30	EX/1-1	F. Turco	USA
		First Tungsten radiation studies and non-linear oscillations in DIII-D's ITER Baseline Demonstration Discharges	
08:47	EX/1-2	K. Thome	USA
	,	Assessment of Negative Triangularity as a Reactor Scenario in DIII-D	
09:04	EX/1-3	O. Sauter	Switzerla
		Negative triangularity tokamak operation in TCV	
09:21	Th/1-1	A. Mariani	Italy
		Negative triangularity scenarios: from TCV and AUG exper-	
09:38	EX/1-4	iments to DTT predictions Y. In	Korea
09.36	EA/1-4	Susceptibility of RMP-driven, ELM-crash-suppression to radiatively controlled scrape-off-layers (SOL), and its impact on divertor	Rofed
09:55-		Discussion, Q & A	

TH/2 Fast-Ions

Chairperson: Adelle Wright (USA) (10:40-12:20)

Co-Chairperson: Danas Ridikas (IAEA)

10:40	TH/2-1	G. Brochard	ITER
	•	Saturation of fishbone instability by self-generated zonal	
		flows in tokamak plasmas	
10:57	TH/2-2	Z. Lin	USA
		Prediction of energetic particle confinement in ITER opera-	
		tion scenarios	
11:14	TH/2-3	P. Oyola	Spain
		Mitigation of toroidal alfven eigenmodes in negative trian-	-
		gularity plasmas at TCV	
11:31	TH/2-4	A. Bierwage	Japan
	,	Energy-Selective Confinement of Alpha Particles during Be-	, 1
		nign Sawtooth Crashes in a Large Tokamak Plasma	
11:48	TH/2-4	C. Sung	Korea
11.10	111/ = 1	Fast ion effects on internal transport barrier formation in	110100
		KSTAR plasmas	
12:05-		NOTAL PROBLEM	
12:25		Discussion, Q & A	
14.20			

LUNCH EVENT 1: WiF - Women in Fusion (13:00 - 14:00)

Description

The Women in Fusion (WiF) group was formed in 2022 as a follow-up action after the 2021 IAEA Fusion Energy Conference, with a vision of making fusion a fully inclusive field and with a focus on gender equity. Improving gender equity in Science and Technology is a critical and growing challenge. WiF aims to ensure that fusion can fully benefit from the perspectives, talent, skills, and intellect of women around the world.

WiF invites you to attend this lunch event "Creating an Inclusive Fusion Workforce", which comprises of statements and panel discussion by distinguished quests representing various sectors and career experiences in nuclear fusion.

Please use the following link for registering to the event and for more information: https://conferences.iaea.org/e/WiF-at-FEC2023.

(N.B. Registration for FEC2023 is required to attend this lunch event)

Moderator

Sehila GONZALEZ DE VICENTE, Chair of Women in Fusion

Opening statements

Rafael GROSSI, Director General of IAEA (recorded message) Najat MOKHTAR, Deputy Director General of IAEA Warrick MATTHEWS, CEO, Tokamak Energy Amanda QUADLING, Director of Materials, UKAEA, UK

Panellists

Aline DES CLOIZEAUX, Vice President of WiN IAEA, Director of Nuclear Power Division of IAEA Yutaka KAMADA, Deputy Director-General Science Technology, ITER Organization Steffi DIEM, Assistant Professor, Engineering Department, UW-Madison, USA Amanda QUADLING, Director of Materials, UKAEA, UK Amani ZALZALI, Oak Ridge Associated University Postdoc based at General Atomics, San Diego, USA

Format

Panel statements and audience Q&A

OV/4 Overview 4: Technology, Long Pulse and Science

Chairperson: Min Xu (P.R. China) (14:00-16:05)

Co-Chairperson: Anna Hajduk Bradford (IAEA)

14:00	OV/4-1	J. Bucalossi	France
		WEST first experiments with an ITER grade tungsten diver-	
		tor	
14:21	OV/4-2	H. Shirai	Japan
		Recent Progress of JT-60SA Project toward Plasma Operation	-
14:42	OV/4-3	G. Kurskiev	Russia
		Confinement, heating and current drive in spherical toka-	
		mak GLOBUS-M2 with high magnetic field	
15:03	OV/4-4	S. Maeyama	Japan
		Overview of multi-scale turbulence studies covering ion to	-
		electron scales in magnetically confined fusion plasma	
15:24	OV/4-5a	Y. Carin	F4E
		Overview of Achievements of the IFMIF/EVEDA Project	
	OV/4-5b	The DONES Programme: Status and next steps	Spain
12:05-		Diamorian O. 8. A	•
12:25		Discussion, Q & A	

TECH/1 ITER Technology Chairperson: George Tynan (USA) Co-Chairperson: Matteo Barbarino (IAEA)

(16:30-18:30)

16:30	TECH/1-	M. Lehnen	ITER
		Physics basis and technology development for the ITER dis- ruption mitigation system	
16:47	TECH/1- 2	T. Hemmi	ITER
		Lessons learned from European and Japanese productions of ITER toroidal field coils	
17:04	TECH/1- 3	K. Wooley	USA
		Lessons learned from ITER central solenoid manufacturing	
17:21	TECH/1- 4	A.K. Bhardwaj	India
		Challenges and lessons learnt during Manufacturing, Transportation and Assembly of the ITER Cryostat	
17:38	TECH/1- 5	M. Martinez Lopez	F4E
		Lessons learned in the management of the production of the poloidal field coils (and other coils)	
17:55	TECH/1- 5	K. Lu	ITER
		Correction coil and magnet feeder lessons learned	
18:12- 18:30		Discussion, Q & A	

Wednesday 18 October 2023

		Edge & Divertor Lore (USA) le Heinola (IAEA)	(08:30-10:10)
08:30	TH/3-1	C. Chang Role of turbulent separatrix tangle in the improvement of the integrated pedestal/heat-exhaust issue for stationary operation in ITER and Fusion Reactors Continued	USA

08:47	TH/3-2	G. Wilkie	USA
		Kinetic simulations of pedestal fueling asymmetry and im-	
		plication for scrape-off layer flows	
09:04	TH/3-3	P. Ricci	Switzerland
		Theoretical scaling of the operational density limit in toka-	
		maks and comparison to experimental data	
09:21	TH/3-1	J. Parisi	USA
		A Gyrokinetics-Based Model For Predicting Pedestal Width	
		Scaling At Arbitrary Aspect Ratio	
09:38	TLI /2 /	R. Pitts	ITER
09:36	TH/3-4		HEK
		On the possibility of X-point radiation regime for ITER-like	
		TOKAMAKS	
09:55-		Discussion O & A	
10:10		Discussion, Q & A	

IFE/1 Inertial Fusion Energy
Chairperson: Yasuhiko Sentoku (Japan)
Co-Chairperson: Matteo Barbarino (IAEA) (10:40-12:20)

10:40	IFE/1-1	S. Fujioka	Japan
		Compression of solid spherical fuel for fast ignition based	
		inertial fusion energy	
10:57	IFE/1-2	A. Moore	USA
		Diagnosing Inertial Confinement Fusion Ignition	
11:14	IFE/1-3	K. Humbird	USA
		Predictions of Performance Variations in Inertial Confine-	
		ment Fusion Experiments at the National Ignition Facility	
11:31	IFE/1-4	A. Casner	France
		80 beams, 270 kJ ICF implosions on LMJ-PETAL	
11:48	TH/2-4	R. Scott	UK
		Results from the EUROFUSION Enabling Research Project	
		"Advancing shock ignition for direct-drive inertial fusion"	
12:05-		Discussion, Q & A	
12:25		Discussion, Q & A	

LUNCH EVENT 2: IFE - Inertial Fusion Energy (13:00 - 14:00)

Description

Developing IFE Programs across the globe may be accelerated by private industry driving commercialization, new and upgraded facilities/experimental infrastructure, and advancing benchmarked theory and simulation capabilities. At this watershed moment in IFE science and technology, it is important to hear how each major country/region is directing resources and framing technical strategies for success, which may include private industry partnerships and/or government support for dedicated IFE Research Programs. At this Lunch Event we will hear from several invited panel members to share the international stage on their IFE Programs and Policies – learning from each other to help achieve a global goal of clean energy realization through fusion.

Charge to each Panel member: 10 min overview on their country's/region's current IFE Program status, strategy, and near-/long-term goals.

Moderator

Arianna Gleason | SLAC National Accelerator Laboratory, Stanford University (USA)

Invited panelists

Tammy Ma | Lawrence Livermore National Laboratory (USA) Sébastien Le Pape | Laboratory for the Use of Intense Laser (France) Ryosuke Kodama | Osaka University (Japan) Fuyuan Wu | Shanghai Jiao Tong University (China) Nicholas Hawkerm | First Light Fusion (UK)

Moderated discussion points:

- Identify technical hurdles where we can leverage more international cooperation
- Comment on strategy to build the needed IFE workforce
- Key areas where the IFE community can learn from the MFE community

Forma

Panel statements and audience Q&A

TECH/2 In Vessel Components and Heating

Chairperson: EunMi Choi (Korea) Co-Chairperson: Palak Jain (IAEA) (14:00-16:00)

14:00 TECH/2-

M. Missirlian

France

Overview related to manufacturing, testing and installation of the full tungsten actively cooled ITER-like divertor in the WEST tokamak

Continued...

		Continuea	
14:17	TECH/2- 2	A. Pizzuto	Italy
		The divertor tokamak test facility: engineering and technology integration challenges	
14:24	TECH/2- 3	R. Maingi	USA
		Progress in a US-based liquid metal plasma-facing component design activity for a fusion nuclear science facility	
14:51	TECH/2- 4	I. Fernandez-Berceruelo	Spain
		Progress in design and experimental activities for the development of an advanced breeding blanket	
15:08	TECH/2- 4	J. Chen	P.R. China
		Development and Manufacturing of Beryllium-armoring ITER Enhanced Heat Flux FW towards Series Production in China	
15:25	TECH/2- 5	A. Seltzman	USA
		Development of monolithically additive manufactured lower hybrid current drive launchers and RF systems	
15:42- 16:00		Discussion, Q & A	

EX/2 Pedestal Chairperson: Volker Naulin (Denmark) Co-Chairperson: Danas Ridikas (IAEA) (16:30-18:30)

16:30	EX/2-1	E. Solano L-H transition physics results from recent tritium and	Spain
16:47	EX/2-2	deuterium-tritium campaigns at JET N. Logan Improved pedestal performance utilizing resonant magnetic perturbations and edge localized electron cyclotron current	USA
17:04	EX/2-3	drive X. Chen Recent progress of the reactor-relevant intrinsically ELM-	USA
17:21	EX/2-4	stable quiescent H-mode on the DIII-D tokamak L. Gil Overview of EDA H-mode experiments and studies in AS- DEX Upgrade	Portugal

Continued...

17:38	EX/2-4	N. Aiba	Japan
		Identification of plasma conditions affecting MHD phenomena in QH-mode and ELMy H-mode plasmas in DIII-D	
17:55	EX/2-5	A. Hakola	Finland
		Helium plasma operations on ASDEX Upgrade and JET in support of the non-nuclear phases of ITER	
18:12- 18:30		Discussion, Q & A	

Thursday 19 October 2023

		Turbulence n Kwon (Korea) eul Choi (IAEA)	(08:30-10:10)
08:30	EX/3-1	M. Kobayashi	Japan
		Turbulence spreading into edge stochastic magnetic layer induced by MHD activity and its impact on divertor heat load	
08:47	EX/3-2	G. McKee	USA
		Turbulence, transport and confinement dependence on isotope mass in dimensionally similar H-mode plasmas on	
		DIII-D	
09:04	EX/3-3	T. Nasu	Japan
09:21	EX/3-4	Electron-scale turbulence characteristics in LHD plasma N. Howard	USA
07.21	Lixi, o 1	A Performance and Transport in ITER: Multi-Channel Val-	0011
		idation in DIII-D ITER-Like Conditions and Predictions of	
		ITER Burning Plasmas Via Nonlinear Gyrokinetic Profile Prediction	
09:38	TH/4-5	P. Ulbl	Germany
		Progress on understanding the nature of edge and scrape-	
		off layer turbulence using ab-initio simulations in diverted geometry	
09:55-		Discussion, Q & A	
10:10		Discussion, Q & A	

TH/5, IAC/1 & EX/4

Control

Chairperson: Elina Militello Asp (UK) Co-Chairperson: Christian Hill (IAEA) (10:40-12:20)

10:40	TH/5-1	S. Inoue	Japan
		Development of a novel optimization scheme for plasma	_
10:57	IFE/1-2	equilibrium control with superconducting coil in JT-60SA T. Wakatsuki	Japan
		Adaptive control of safety factor profile and normalized beta	
		for JT-60SA using reinforcement learning	
11:14	IFE/1-3	J. Romero	USA
		Optimization and feeback control of the C-2W field reversed	
		configuration	
11:31	IFE/1-4	R. Shousha	USA
		closed loop RMP ELM suppression with minimized confine-	
		ment degradation using adaptive control demonstrated in	
		DIII-D and KSTAR	
11:48	TH/2-5	S. Yang	USA
11.10	111/20	Tailoring error field of tokamak to control plasma instability	0.011
		and transport	
12:05-		and transport	
		Discussion, Q & A	
12:25			

LUNCH EVENT 3: Energy Justice and Social Licensing (13:00 - 14:00)

Description

With the fusion energy ecosystem entering an era focused on design and construction of fusion pilot plants and fusion commercialization, it is imperative that the international fusion community tackle the social implications of this new technology.

Energy development and deployment has, historically, benefited and burdened communities inequitably, with the benefits going disproportionally to affluent communities and the burdens imposed, overwhelmingly, on historically disadvantaged communities.

The international fusion community has the opportunity to be intentional in incorporating these energy justice concerns into fusion energy's development and deployment but this is the moment

to begin engaging with the potentially affected communities and other stakeholders and subjectmatter experts. This panel will focus on these energy justice concerns as they relate to fusion energy as well as the closely-related issue of "social licensing" which concerns the community buy-in of the development and deployment of the technology.

Moderator

Arturo Dominguez | Head of Science Education | PPPL (USA)

Introductory Remarks

Sir Steven Cowley | Director | PPPL (USA)

Invited panelists

Seth Hoedl | President, Chief Science Officer Co-founder | Post Road Foundation Karoly Tamas | ITER Site Building Legal Affairs | Fusion for Energy Prabhat Ranjan | Vice Chancellor | D. Y. Patil International University Yasmin Yacobi | Deputy Chief Of Staff in the Office of Economic Impact and Diversity, U.S. Department of Energy (DOE)

Format

Panel statements and audience Q&A

EX/5 & TH/6	Scenarios I
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Chairperson: Juan Huang (P.R. China) (14:00-16:00) Co-Chairperson: Danas Ridikas (IAEA)

14:00	EX/5-1	J. Garcia	France
		Overview of alpha particle and fast ion studies in JET DTE2	
14:17	EX/5-2	plasmas Y. Na	Korea
1111	271,0 2	Fire mode: a new fast ion regulated regime for high-	110100
		performance, steady-state operation	
14:24	EX/5-3	A. Dinklage	German
		Controlling performance bifurcations in large stellarators	
14:51	EX/5-4	F. Nespoli	USA
		Impurity powder injection experiments in the Large Helical	
		Device	
15:08	TH/6-5	I. Calvo	Spain
		A quasi-isodynamic stellarator configuration optimized for	•
		fast-ion confinement and turbulent transport	
15:25	Ex/5-6	W. Zhong	P.R.
13.23	EX/5-0	W. Zhong	China
		Realization of high energy confinement plasmas with I-mode and ion ITB regimes in the HL-2A tokamak	
		e e e e e e e e e e e e e e e e e e e	

TECH/3 Fusion Nuclear Technology, Materials, Heating Chairperson: Alberto Loarte (ITER) (Co. Chairment Mattern Review (ITER)

(16:30-18:50)

Co-Chairperson: Matteo Barbarino (IAEA)

16:30	TECH/3-	D. King	UK
	1	JET machine operations in tritium & D-T	
16:47	TECH/3- 2	E. Bernard	France
	_	Understanding tritium inventory and permeation in materials for fusion reactors: a coupled experimental and modelling approach	
17:04	TECH/3-	R. Ikeda	Japan
		Demonstration of triple-frequency gyrotron for ITER and development of gyrotron operation technology	
17:21	TECH/3- 4	K. Thackston	USA
		High Frequency Dielectric Lined Waveguides to Enable Future ECH / ECE in Fusion Energy Development	
17:38	TECH/3- 5	L. Packer	UK
		ITER materials irradiation within the D–T neutron environment at JET: Post-irradiation analysis outcomes and recommendations	
17:55	TECH/3-	V. Chakin	Germany
	·	High-Dose Neutron Irradiation of Beryllium and Titanium Beryllide: Summary and Outlook	
18:12	TECH/3-	N. Yanagi	Japan
	•	Applicability of large-current HTS simply-stacked conductor (STARS) for fusion reactors and next-generation fusion experimental devices	
18:30- 18:50		Discussion, Q & A	

Friday 20 October 2023

EX/6 & TH/7 3D Physics

Chairperson: Theresa Wilks (USA) Co-Chairperson: Danas Ridikas (IAEA) (08:30-10:10)

08:30	EX/6-1	M. Willensdorfer Resistive and 3D effects in ELM-suppressed H-mode with	Germany
08:47	EX/6-2	resonant magnetic perturbations in ASDEX upgrade S. Kim Investigation of RMP-induced ion-scale turbulence in the pedestal and its role in accessing the optimized high-	USA
09:04	EX/6-3	confinement ELM-free state Q. Hu Integration of RMP ELM control with divertor detachment	USA
09:21	EX/3-4	in the DIII-D tokamak V. Izzo Runaway electron prevention by a passive 3D coil in disrup-	USA
00.20	TII /4 F	tion simulations of the SPARC and DIII-D tokamaks	P.R.
09:38	TH/4-5	Y. Sun Achievement of ELM suppression with N=4 RMP in EAST	China
09:55- 10:10		towards ITER baseline scenario Discussion, Q & A	

TECH/4 Next steps and Heating & Current drive Chairperson: Jérôme Bucalossi (France) (10:40-12:20) Co-Chairperson: Matteo Barbarino (IAEA)

10:40	TECH/4-	G. Federici	Germany
		Status and prospects for DEMO related developments in EUROPE	
10:57	TECH/4- 2	J. Kang	Korea
		Assessing the technological and physics maturity required for the design space of the K-DEMO	

Continued...

11:14	TECH/4-3	Y. Sakamoto	Japan
	-	Progress of basic conceptual design of JA DEMO	
11:31	TECH/4- 4	U. Fantz	Germany
		Contributions of the extended ELISE and BATMAN Upgrade test facilities to the roadmap towards ITER NBI	
11:48	TECH/4- 5	H. Tobari	Japan
		Progress on long-pulse and ITER-relevant-intensity negative ion beam accelerations for ITER neutral beam injector	
12:05- 12:25		Discussion, Q & A	

LUNCH EVENT 4: Public Engagement (13:00 - 14:00)

Description

The recent acceleration in advances in fusion brings into focus the need for an engaged public and a prepared fusion energy workforce. This panel will focus on the critical importance of multi-level education, public engagement, and workforce development in fusion energy research and deployment. With the goal of garnering public support and preparing for a boom in job growth, panelists will discuss their experiences and best practices for engaging and training people to join the fusion energy community. The panel will explore whether current efforts are effective and what can be learned from international community leaders and experts outside the field.

Moderator

Shannon Swilley Greco | Science Education Senior Program Associate | PPPL (USA)

Invited panelists

Hyeon Park, UNIST, Rep. of Korea Sabina Griffith | ITER Organization Claudia Fracchiola | Head of Public Engagement | American Physical Society Katemari Rosa | Federal University of Bahia, Brazil Roddy Vann | Chair of FuseNet Board

Format

Panel statements and audience Q&A

TH/8 & IAC/2

MHD & disruptions

Chairperson: Akihiro Ishizawa (Japan) Co-Chairperson: Vladimir Artisiuk (IAEA)

(14:00-16:00)

14:00	TH/8-1	M. Hoelzl Non-linear MHD investigations of high-confinement regimes without type-I ELMs in ASDEX Upgrade and IT-60SA	Germany
14:17	TH/8-2	A. Wingen Prediction of pellet mass thresholds for ELM triggering in	USA
		low-collisionality, ITER-like discharges	
14:24	TH/8-3	G. Dong	Germany
		Toroidal modeling of interactions between internal kink in-	-
		stability and energetic ions in HL-2M	
14:51	IAC/2-4	Y. Ono	Japan
		Bifurcated Merging Operations of Two Spherical Tokamak	
		Plasmas for Reconnection Heating and Helicity Injection	
15:08	TH/8-5	E. Nardon	France
		Modelling of runaway electron dynamics in tokamak dis- ruptions	
15:25	TH/8-6	N. Schwarz	Germany
		Mechanisms of the global force reduction in disruptions - Experimental validation of mitigated and unmitigated VDEs with the MHD code JOREK	·
15:42-		Discussion, Q & A	
16:00		Discussion, Q & A	

EX/7 Scenarios II Chairperson: Yoshiteru Sakamoto (Japan) Co-Chairperson: Ryan Wagner (IAEA) (16:30-18:50)

16:30	EX/7-1	E. Lerche	Germany
16:47	EX/7-2	The JET hybrid scenario in D, T and D-T M. Maslov	UK
17:04	EX/7-3	Tritium-rich scenario for high fusion power in JET DTE2 L. Garzotti	UK
		Development of high current baseline scenario for high deuterium-tritium fusion performance at JET	
17:21	EX/7-4	J. Park	USA

		Long pulse high li steady state scenario on KSTAR	
		Continued	
17:38	EX/7-5	J. Huang	P.R. China
		Sustainment of High qmin, High N Plasmas on DIII-D towards Steady-state Advanced Tokamak Fusion	
17:55	EX/7-6	M. Mantsinen Radio-frequency heating schemes in JET deuterium-tritium plasmas in preparation of ITER	Spain
18:12- 18:30		Discussion, Q & A	

Saturday 21 October 2023

		Exhaust I Unterberg (USA) ne Des Cloizeaux (IAEA)	(08:30-10:10)
08:30	EX/8-1	O. Pan	Germany
		The compact radiative divertor in ASDEX Upgrade and EU- DEMO, experiments & simulation	
08:47	EX/8-2	M. Groth	Finland
	,	Impact of H, D, T and D-T Hydrogenic Isotopes on Detachment in JET ITER-like Wall Low-Confinement Mode Plas-	
09:04	EX/8-3	mas D. Moulton	UK
07.04	EX/0-3	Interpretative modelling of MAST-U Super-X and Conventional divertor configurations	OK
09:21	EX/8-4	F. Scotti	USA
		2D characterization of radiative divertor regimes with im-	
09:38	EX/8-5	purity seeding in DIII-D H-mode discharges D. Douai	France
09.36	EA/6-3	Overview of Plasma-Wall Interactions studies in JET-ILW H	France
		D, T and DT campaigns	
09:55- 10:10		Discussion, Q & A	

TH/9 Core Transport

Chairperson: Francesca Poli (USA) (10:40-12:20)

Co-Chairperson: Ryan Wagner (IAEA)

10:40	TH/9-1	G. Choi	Korea
		Gyrokinetic study of fast ion effects on Alfvenic modes and	
		microturbulence in KSTAR L-mode plasmas	_
10:57	TH/9-2	E. Narita	Japan
		A neural network-based semi-empirical turbulent transport	
		model dekanis for integrated simulations of upcoming fu- sion devices	
11:14	TH/9-3a	C. Angioni	Germany
11.17	111/ 5-54	The L-mode tokamak confinement, from full-radius inte-	Germany
		grated modelling validation on ASDEX Upgrade to reactor	
		predictions	
	TH/9-3b	Successful Prediction of Tokamak Transport in the L-mode	USA
	111/9-30	Regime	USA
11:31	TH/9-4	L. Qi	Korea
		Hydrogen isotope effects on microturbulence and linear to	
11.40	EV /0 F	saturated Ohmic confinement transition	LICA
11:48	EX/9-5	A. Sips Power and isotope effects on the ITER Baseline Scenario with	USA
		W and W-equivalent radiators in DIII-D	
	TECH/9-	•	
12:05	6	M. Zlobinski	Germany
		First Results of Laser-Induced Desorption - Quadrupole	
		Mass Spectrometry (LID-QMS) at JET-ILW	
12:22-		Discussion, Q & A	
12:40			

LUNCH EVENT 5: IAEA Panel Session (13:10 - 14:00)

Description

In this session, you will hear an update on the IAEA's activities across the Departments of Nuclear Sciences and Applications, Nuclear Energy and Nuclear Safety and Security. The event will be an opportunity to get acquainted with these developments and engage with the Agency on its activities.

Convener

Melissa DENECKE | IAEA Aline DES CLOIZEAUX | IAEA

PWF Pathways to fusion Chairperson: Richard Buttery (USA) Co-Chairperson: Matteo Barbarino (IAEA) (14:00-16:35)

14:00	PWF-1	R. Buttery Introduction	USA
14:05	PWF-2	D. Brunner	USA
14.03	TVVT-Z	Commonwealth Fusion Systems' High-Field Path to Fusion	USA
		, 0	
		Energy Continued	
		Continueu	
14:17	PWF-3	B. Grierson	USA
1111	11110	Design and Technology Maturation of General Atomics	0011
		Steady-State Advanced Tokamak Fusion Pilot Plant	
14:29	PWF-4	A. Becoulet	ITER
		Pathways to fusion energy – the ITER contributions and	
		views	
14:41	PWF-5	A. Donné	Germany
		The European path towards fusion electricity	,
14:53	PWF-6	S. Ishida	Japan
		Pathways to fusion energy at the QST	, 1
15:05	PWF-7	T. Pedersen	USA
		The High Field Stellarator Direct Path to Fusion Energy	
15:17	PWF-8	S. Diem	USA
		Reimagining The Design Of Fusion Energy Systems In Sup-	
		port Of A Just Energy Transition	
15:29	PWF-8	K. Masuda	Japan
		EX-Fusion: Advancing high power high repetition laser as a	-
		platform for laser fusion power	
15:41-		Discussion, Q & A	
16:00		Discussion, Q & A	
16:00-		Discussion with invited panel	
16:35		Discussion with invited panel	

C/1 Closing
Chairperson: Takashi Inoue (Japan)
Co-Chairperson: Danas Ridikas (IAEA)

(17:00-18:15)

4 6 0 5	C /1 1	D. D. H.	T.1.T.1
16:35	C/1-1	Danas Ridikas	IAEA
		Matteo Barbarino	
		Ryan Wagner	
		Poster Prizes Announcement	
16:45	C/1-2	M. Xu	IAEA
		FEC 2025 Announcement	
16:50	C/1-3	Aline Des Cloizeaux	IAEA
		IAEA closing statement	
		Č	

Overview Orals

1946	Costanza Maggi	United Kingdom
2224	Overview Of T And D-T Results In JET With ITER-Like Wall Arthur Pak	United States
2354	Target Gain >1 From Inertial Confinement Fusion Implosions At The National Ignition Facility Pietro Barabaschi Progress On ITER Manufacturing, Construction, Commission-	ITER Organization
2055	ing And Plans Xianzu Gong	China
1885	Overview Of Recent Experimental Results On EAST Tokamak Won-Ha Ko	Korea, Republic of
2027	Overview Of The KSTAR Experiments Christopher Holcomb DIII-D Research To Provide Solutions For ITER And Fusion En-	United States
1754	ergy Hartmut Zohm Overview Of ASDEX Upgrade Results In Preparation Of ITER	Germany
2084	And DEMO Basil Duval Experimental Research On The TCV Takamak	Switzerland
2362	Experimental Research On The TCV Tokamak Xuru Duan Progress Of HL-2M Experiments	China
2270	Olaf Grulke Overview Of The First Wendelstein 7-X Long Pulse Campaign With Fully Water-Cooled Plasma Facing Components	Germany
1654	Katsumi Ida Overview Of Large Helical Device Experiments On Basic Plasma Physics For Solving Future Issues In Nuclear Fusion Research	Japan
2407	James Harrison Overview Of Physics Results From Mast Upgrade Towards Core-Pedestal-Exhaust Integration	United Kingdom
2277	Steven Mcnamara Overview Of High Temperature Plasmas In The ST40 Compact High-Field Spherical Tokamak	United Kingdom
2001	Zachary Hartwig The SPARC Toroidal Field Model Coil Project	United States
2392	Jérôme Bucalossi West First Experiments With An ITER Grade Tungsten Divertor	France
1679	Hiroshi Shirai Recent Progress Of JT-60SA Project Toward Plasma Operation	Japan
1638	Gleb Kurskiev Confinement, Heating And Current Drive In Spherical Toka-	Russia
1734	mak Globus-M2 With High Magnetic Field Shinya Maeyama	Japan

	Overview Of Multi-Scale Turbulence Studies Covering Ion To	
	Electron Scales In Magnetically Confined Fusion Plasma	
1681	Yann Carin	Fusion for Energy
	[Rapporteur] Overview Of Achievements Of The	
	IFMIF/EVEDA Project	
2058	Angel Ibarra	Spain
	[Rapporteured] The Dones Programme: Status And Next	-
	Steps	

Overview Posters

2157	John Berkery NSTX-U Research Advancing The Physics Of Spherical Toka-	United States
2344	maks Craig Petty DIII-D: Closing The Gaps To Future Fusion Reactors	United States
2223	Juan Arturo Alonso De Pablo Density Profiles In Stellarators: An Overview Of Particle Trans-	Spain
2139	port, Fueling And Profile Shaping Studies At TJ-II Francesco Romanelli The Divertor Tokamak Test Project: Strengths And Critical Is-	Italy
2379	Yi Tan Twenty Years Of Research On The SUNIST Spherical Tokamak And The Design, Construction And First Operation Of The SUNIST-2 Spherical Tokamak	China
1772	Xavier Litaudon Eurofusion Technology Contributions To ITER Nuclear Oper-	France
1944	ation Yong-Seok Hwang Research Activities In Versatile Experiment Spherical Torus (VEST) For The Development Of Compact Fusion Reactor	Korea, Republic of
2075	Ainur Zhaksybayeva Overview Of Experimental Results On The KTM Tokamak	Kazakhstan
2378	Emmanuel Joffrin Progress On An Exhaust Solution For A Reactor Using Euro- fusion Multi-Machine Capabilities	France
1641	Yuejiang Shi Overview Of EXL-50 Research Progress And Future Plan	China
2126	Yonghua Ding Overview Of The Recent Experimental Research On The J- TEXT Tokamak	China
2348	Tao Lan An Overview Of KTX Reversed Field Pinch Upgrade Progress	China
2468	Costanza Maggi [Ov Poster Twin] Overview Of T And D-T Results In JET With ITER-Like Wall	United Kingdom
2471	Arthur Pak [Ov Poster Twin] Target Gain >1 From Inertial Confinement	United States
2472	Fusion Implosions At The National Ignition Facility Pietro Barabaschi [Ov Poster Twin] Progress On ITER Manufacturing, Construc-	ITER Organization
2473	tion, Commissioning And Plans Xianzu Gong [Ov Poster Twin] Overview Of Recent Experimental Results On EAST Tokamak	China

2474	Gleb Kurskiev [Ov Poster Twin] Confinement, Heating And Current Drive In	Russia
2475	Spherical Tokamak Globus-M2 With High Magnetic Field Katsumi Ida [Ov Poster Twin] Overview Of Large Helical Device Experiments On Basic Plasma Physics For Solving Future Issues In	Japan
2476	Nuclear Fusion Research Hiroshi Shirai [Ov Poster Twin] Recent Progress Of JT-60SA Project Toward Plasma Operation	Japan
2477	Shinya Maeyama [Ov Poster Twin] Overview Of Multi-Scale Turbulence Studies Covering Ion To Electron Scales In Magnetically Confined Fusion Plasma	Japan
2478	Hartmut Zohm [Ov Poster Twin] Overview Of ASDEX Upgrade Results In Preparation Of ITER And DEMO	Germany
2479	Won-Ha Ko	Korea, Republic of
2480	[Ov Poster Twin] Overview Of The KSTAR Experiments Zachary Hartwig [Ov Poster Twin] The SPARC Toroidal Field Model Coil Project	United States
2481	Christopher Holcomb [Ov Poster Twin] DIII-D Research To Provide Solutions For ITER And Fusion Energy	United States
2482	Basil Duval [Ov Poster Twin] Experimental Research On The TCV Tokamak	Switzerland
2483	Olaf Grulke [Ov Poster Twin] Overview Of The First Wendelstein 7-X Long Pulse Campaign With Fully Water-Cooled Plasma Facing Components	Germany
2484	Steven Mcnamara [Ov Poster Twin] Overview Of High Temperature Plasmas In The ST40 Compact High-Field Spherical Tokamak	United Kingdom
2485	Xuru Duan	China
2486	[Ov Poster Twin] Progress Of HL-2M Experiments Jérôme Bucalossi [Ov Poster Twin] West First Experiments With An ITER Grade Tungsten Divertor	France
2487	James Harrison [Ov Poster Twin] Overview Of Physics Results From MAST	United Kingdom
2591	Upgrade Towards Core-Pedestal-Exhaust Integration Angel Ibarra [Ov Poster Twin] [Rapporteured] The Dones Programme: Status And Next Steps	Spain
2592	Yann Carin [Ov Poster Twin] [Rapporteur] Overview Of Achievements Of The IFMIF/EVEDA Project	Fusion for Energy

1627	Hiroshi Gota	United States
	Enhanced Plasma Performance In C-2W Advanced Beam-	
	Driven Field-Reversed Configuration Experiments	
1693	Matthias Hoelzl	Germany
	Non-Linear MHD Modelling Of Transients In Tokamaks: Re-	•
	cent Advances With The Jorek Code	
2125	Rakesh Tanna	India
	Overview Of Physics Results From The ADITYA-U Tokamak	
	And Future Experiments	
2301	Novimir Antoniuk-Pablant	United States
	The US Stellarator Program On The Path To A Fusion Pilot	
	Plant	

Regular Orals

First Tungsten Radiation Studies And Non-Linear Oscillations In DIII-D3S ITER Baseline DEMOnstration Discharges Kathreen Thome Assessment Of Negative Triangularity As A Reactor Scenario In DIII-D 1863 Olivier Sauter Negative Triangularity Tokamak Operation In TCV Alberto Mariani Negative Triangularity Scenarios: From TCV And AUG Experiments To DTT Predictions Yongkyoon In Susceptibility Of RMP-Driven, ELM-Crash-Suppression To Radiatively Controlled Scrape-Off-Layers (SOL), And Its Impact On Divertor 1898 Guillaume Brochard Saturation Of Fishbone Instability By Self-Generated Zonal Flows In Tokamak Plasmas Zhihong Lin Prediction Of Energetic Particle Confinement In ITER Operation Scenarios Pablo Oyola Mitigation Of Toroidal Alfven Eigenmodes In Negative Triangularity Plasmas At TCV Andreas Bierwage Energy-Selective Confinement Of Alpha Particles During Benign Sawtooth Crashes In A Large Tokamak Plasma Choongki Sung Fast Ion Effects On Internal Transport Barrier Formation In KSTAR Plasmas Michael Lehnen Physics Basis And Technology Development For The ITER Disruption Mitigation System Michael Lehnen Physics Basis And Technology Development For The ITER Disruption Mitigation System Sof ITER Toroidal Field Coils Kyle Wooley Lessons Learned From European And Japanese Productions Of ITER Toroidal Field Coils Alessandro Bonito Oliva Lessons Learned In The Management Of The Production Of The Poloidal Field Coils (And Other Coils) Kun Lu 11ER Organization	1600	Francesca Turco	United States
Askersen Thome Assessment Of Negative Triangularity As A Reactor Scenario In DIII-D 1863 Olivier Sauter Negative Triangularity Tokamak Operation In TCV 1703 Alberto Mariani Negative Triangularity Scenarios: From TCV And AUG Experiments To DTT Predictions 1825 Yongkyoon In Susceptibility Of RMP-Driven, ELM-Crash-Suppression To Radiatively Controlled Scrape-Off-Layers (SOL), And Its Impact On Divertor 1898 Guillaume Brochard Saturation Of Fishbone Instability By Self-Generated Zonal Flows In Tokamak Plasmas 2295 Zhihong Lin Prediction Of Energetic Particle Confinement In ITER Operation Scenarios Pablo Oyola Mitigation Of Toroidal Alfven Eigenmodes In Negative Triangularity Plasmas At TCV Andreas Bierwage Energy-Selective Confinement Of Alpha Particles During Benign Sawtooth Crashes In A Large Tokamak Plasma Choongki Sung Fast Ion Effects On Internal Transport Barrier Formation In KSTAR Plasmas Michael Lehnen Physics Basis And Technology Development For The ITER Disruption Mitigation System 2302 Michael Lehnen Physics Basis And Technology Development For The ITER Disruption Mitigation System 2305 Boris Bellesia Lessons Learned From European And Japanese Productions Of ITER Toroidal Field Coils Kyle Wooley Lessons Learned From ITER Central Solenoid Manufacturing 2192 Anil Kumar Bhardwaj Challenges And Lessons Learnt During Manufacturing, Transportation And Assembly Of The ITER Cryostat Alessandro Bonito Oliva Lessons Learned In The Management Of The Production Of The Poloidal Field Coils (And Other Coils)		First Tungsten Radiation Studies And Non-Linear Oscillations In DIII-DâS ITER Baseline DEMOnstration Discharges	
In DIII-D 1863 Olivier Sauter Negative Triangularity Tokamak Operation In TCV 1703 Alberto Mariani Negative Triangularity Scenarios: From TCV And AUG Experiments To DTT Predictions 1825 Yongkyoon In Susceptibility Of RMP-Driven, ELM-Crash-Suppression To Radiatively Controlled Scrape-Off-Layers (SOL), And Its Impact On Divertor 1898 Guillaume Brochard Saturation Of Fishbone Instability By Self-Generated Zonal Flows In Tokamak Plasmas 2295 Zhihong Lin Prediction Of Energetic Particle Confinement In ITER Operation Scenarios 2093 Pablo Oyola Mitigation Of Toroidal Alfven Eigenmodes In Negative Triangularity Plasmas At TCV 1663 Andreas Bierwage Energy-Selective Confinement Of Alpha Particles During Benign Sawtooth Crashes In A Large Tokamak Plasma 1865 Choongki Sung Fast Ion Effects On Internal Transport Barrier Formation In KSTAR Plasmas 2302 Michael Lehnen Physics Basis And Technology Development For The ITER Disruption Mitigation System 2305 Boris Bellesia Lessons Learned From European And Japanese Productions Of ITER Toroidal Field Coils Kyle Wooley Lessons Learned From ITER Central Solenoid Manufacturing 2192 Anil Kumar Bhardwaj Challenges And Lessons Learnt During Manufacturing, Transportation And Assembly Of The ITER Cryostat Alessandro Bonito Oliva Lessons Learned In The Management Of The Production Of The Poloidal Field Coils (And Other Coils)	2355	Kathreen Thome	United States
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The Poloidal Field Coils (And Other Coils)	2390	Alessandro Bonito Oliva	Fusion for Energy
	2437		ITER Organization

2299	Correction Coil And Magnet Feeder Lessons Learned Alberto Loarte	United States
	Role Of Turbulent Separatrix Tangle In The Improvement Of The Integrated Pedestal/Heat-Exhaust Issue For Stationary Operation In ITER And Fusion Reactors	
2384	George Wilkie Kinetic Simulations Of Pedestal Fueling Asymmetry And Implication For Scrape-Off Layer Flows	United States
1994	Paolo Ricci Theoretical Scaling Of The Operational Density Limit In Toka-	Switzerland
2325	maks And Comparison To Experimental Data Jason Parisi A Gyrokinetics-Based Model For Predicting Pedestal Width	United States
1635	Scaling At Arbitrary Aspect Ratio Vladimir Rozhansky	Russia
1736	On The Possibility Of X-Point Radiation Regime For ITER-Like Tokamaks Shinsuke Fujioka	Japan
2347	Compression Of Solid Spherical Fuel For Fast Ignition Based Inertial Fusion Energy Alastair Moore	United States
1616	Diagnosing Inertial Confinement Fusion Ignition Kelli Humbird	United States
2358	Predictions Of Performance Variations In Inertial Confinement Fusion Experiments At The National Ignition Facility Alexis Casner	France
2284	80 Beams, 270 kJ ICF Implosions On LMJâPETAL Robbie Scott Robbie Scott	France
1989	Results From The Eurofusion Enabling Research Project âAdvancing Shock Ignition For Direct-Drive Inertial Fusion" Marc Missirlian	France
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2071	Aldo Pizzuto The Divertor Tokamak Test Facility: Engineering And Technol-	Italy
2334	ogy Integration Challenges Andrei Khodak Progress In A US-Based Liquid Metal Plasma-Facing Compo-	United States
2089	nent Design Activity For A Fusion Nuclear Science Facility Ivan Fernandez-Berceruelo Progress In Design And Experimental Activities For The De-	Spain
2226	velopment Of An Advanced Breeding Blanket Jiming Chen Development And Manufacturing Of Beryllium-Armoring ITER Enhanced Heat Flux Fw Towards Series Production In	China
1722	China Andrew Seltzman	United States

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1837	Lower Hybrid Current Drive Launchers And RF Systems Emilia R. Solano	Spain
1037	L-H Transition Physics Results From Recent Tritium And	Эранг
	Deuterium-Tritium Campaigns At JET	
1585	Nikoas Logan	United States
1000	Improved Pedestal Performance Utilizing Resonant Magnetic	Office States
	Perturbations And Edge Localized Electron Cyclotron Current	
	Drive	
1992	Xi Chen	United States
	Recent Progress Of The Reactor-Relevant Intrinsically ELM-	
	Stable Quiescent H-Mode On The DIII-D Tokamak	
1804	LuÃs Gil	Portugal
	Overview Of EDA H-Mode Experiments And Studies In AS-	O
	DEX Upgrade	
1672	Nobuyuki Aiba	Japan
	Identification Of Plasma Conditions Affecting MHD Phenom-	•
	ena In QH-Mode And ELMy H-Mode Plasmas In DIII-D	
1659	Antti Hakola	Finland
	Helium Plasma Operations On ASDEX Upgrade And JET In	
	Support Of The Non-Nuclear Phases Of ITER	
1647	Masahiro Kobayashi	Japan
	Turbulence Spreading Into Edge Stochastic Magnetic Layer In-	
	duced By MHD Activity And Its Impact On Divertor Heat Load	
2332	George Mckee	United States
	Turbulence, Transport And Confinement Dependence On Iso-	
	tope Mass In Dimensionally Similar H-Mode Plasmas On DIII-	
	D	
1802	Tatsuhiro Nasu	Japan
	Electron-Scale Turbulence Characteristics In LHD Plasma	
2194	Nathan Howard	United States
	Performance And Transport In ITER: Multi-Channel Valida-	
	tion In DIII-D ITER-Like Conditions And Predictions Of ITER	
	Burning Plasmas Via Nonlinear Gyrokinetic Profile Prediction	
2352	Philipp Ulbl	Germany
	Progress On Understanding The Nature Of Edge And Scrape-	
	Off Layer Turbulence Using AB-INITIO Simulations In Di-	
1650	verted Geometry	т
1650	Shizuo Inoue	Japan
	Development Of A Novel Optimization Scheme For Plasma	
1642	Equilibrium Control With Superconducting Coil In JT-60SA	T
1643	Takuma Wakatsuki	Japan
	Adaptive Control Of Safety Factor Profile And Normalized	
2115	Beta For JT-60SA Using Reinforcement Learning	United States
2115	Jesus Romero Optimization And Fooback Control Of The C-2W Field Re-	Officed States
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1961	Ricardo Shousha	United States
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1962	Seongmoo Yang Tailoring Error Field Of Tokamak To Control Plasma Instability And Transport	United States
1814	Jeronimo Garcia Overview Of Alpha Particle And Fast Ion Studies In JET DTE2 Plasmas	France
1925	Yong-Su Na Fire Mode: A New Fast Ion Regulated Regime For High- Performance, Steady-State Operation	Korea, Republic of
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1852	Confinement ELM-Free State Qiming Hu Integration Of RMP ELM Control With Divertor Detachment In The DIII-D Tokamak	United States
1611	Valerie Izzo Runaway Electron Prevention By A Passive 3D Coil In Disruption Simulations Of The SPARC And DIII-D Tokamaks	United States
1854	Youwen Sun Achievement Of ELM Suppression With N=4 Rmp In EAST Towards ITER Baseline Scenario	China
1993	Gianfranco Federici Status And Prospects For DEMO Related Developments In Europe	Germany
1917	Ara Cho Assessing The Technological And Physics Maturity Required For The Design Space Of The K-DEMO	Korea, Republic of
1751	Yoshiteru Sakamoto Progress Of Basic Conceptual Design Of JA DEMO	Japan
1794	Ursel Fantz Contributions Of The Extended Elise And Batman Upgrade Test Facilities To The Roadmap Towards ITER NBI	Germany
1691	Hiroyuki Tobari Progress On Long-Pulse And ITER-Relevant-Intensity Nega-	Japan
2023	tive Ion Beam Accelerations For ITER Neutral Beam Injector Andres Cathey Non-Linear MHD Investigations Of High-Confinement Regimes Without Type-I ELMs In ASDEX Upgrade And IT-60SA	Germany
1605	Andreas Wingen Prediction Of Pellet Mass Thresholds For ELM Triggering In Low-Collisionality, ITER-Like Discharges	United States
2079	Guanqi Dong Toroidal Modeling Of Interactions Between Internal Kink Instability And Energetic Ions In HL-2M	China
1707	Yasushi Ono Bifurcated Merging Operations Of Two Spherical Tokamak	Japan
2174	Plasmas For Reconnection Heating And Helicity Injection Eric Nardon Modelling Of Runaway Electron Dynamics In Tokamak Dis-	France
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	With The MHD Code JOREK	
1880	Jörg Hobirk	Germany
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1935	Mikhail Maslov	United Kingdom
1042	Tritium-Rich Scenario For High Fusion Power In JET DTE2	Hatta IVia a Iam
1943	Luca Garzotti Development Of High Current Receling Scanario For High	United Kingdom
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2257	Jin Myung Park	United States
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1965	Juan Huang	China
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	wards Steady-State Advanced Tokamak Fusion	
1930	Mervi Mantsinen	Spain
	Radio-Frequency Heating Schemes In JET Deuterium-Tritium	
1757	Plasmas In Preparation Of ITER	C
1757	Ou Pan The Compact Radiative Divertor In ASDEX Upgrade And EU-	Germany
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2021	Mathias Groth	Finland
	Impact Of H, D, T And D-T Hydrogenic Isotopes On Detach-	
	ment In JET ITER-Like Wall Low-Confinement Mode Plasmas	
2063	Andrew Kirk	United Kingdom
	Interpretative Modelling Of MAST-U Super-X And Conven-	
	tional Divertor Configurations	
2423	Filippo Scotti	United States
	2D Characterization Of Radiative Divertor Regimes With Impurity Seeding In DIII-D H-Mode Discharges	
1896	David Douai	France
1070	Overview Of Plasma-Wall Interactions Studies In JET-ILW H	Trance
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1858	Gyungjin Choi	Korea, Republic of
	Gyrokinetic Study Of Fast Ion Effects On Alfvenic Modes And	-
	Microturbulence In KSTAR Plasmas	_
1800	Emi Narita	Japan
	A Neural Network-Based Semi-Empirical Turbulent Transport	
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1598	Gary Staebler	United States
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	Radius Integrated Modelling Validation On ASDEX Upgrade	
4.600	To Reactor Predictions	
1690	Lei Qi	Korea, Republic of

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	Saturated Ohmic Confinement Transition	
2604	Adrianus Sips	United States
	Power And Isotope Effects On The ITER Baseline Scenario With	
	W And W-Equivalent Radiators In DIII-D	
2606	Miroslaw Zlobinski	Germany
	First Results Of Laser-Induced Desorption â" Quadrupole	
	Mass Spectrometry (LID-QMS) At JET-ILW	
1639	Daniel Brunner	United States
	Commonwealth Fusion Systems' High-Field Path To Fusion	
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2316	Brian Grierson	United States
	Design And Technology Maturation Of General Atomics	
	Steady-State Advanced Tokamak Fusion Pilot Plant	
2248	Alain Becoulet	ITER Organization
	Pathways To Fusion Energy â" The ITER Contributions And	-
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Overview Of T And D-T Results In JET With ITER-Like Wall

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Target Gain >1 From Inertial Confinement Fusion Implosions At The National Ignition Facility

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Progress On ITER Manufacturing, Construction, Commissioning And Plans

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Overview Of Recent Experimental Results On EAST Tokamak

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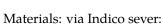
NSTX-U Research Advancing The Physics Of Spherical Tokamaks

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IAEA-CN-316-2157





Overview Of The KSTAR Experiments

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IAEA-CN-316-1885

DIII-D: Closing The Gaps To Future Fusion Reactors

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IAEA-CN-316-2344



DIII-D Research To Provide Solutions For ITER And Fusion Energy

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IAEA-CN-316-2027

Density Profiles In Stellarators: An Overview Of Particle Transport, Fueling And Profile Shaping Studies At TJ-II

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IAEA-CN-316-2223



Overview Of ASDEX Upgrade Results In Preparation Of ITER And DEMO

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IAEA-CN-316-1754

Experimental Research On The TCV Tokamak

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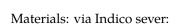
The Divertor Tokamak Test Project: Strengths And Critical Issues

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IAEA-CN-316-2139



Progress Of HL-2M Experiments

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IAEA-CN-316-2362



Twenty Years Of Research On The SUNIST Spherical Tokamak And The Design, Construction And First Operation Of The SUNIST-2 Spherical Tokamak

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IAEA-CN-316-2379

Eurofusion Technology Contributions To ITER Nuclear Operation

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Research Activities In Versatile Experiment Spherical Torus (VEST) For The Development Of Compact Fusion Reactor

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Overview Of The First Wendelstein 7-X Long Pulse Campaign With Fully Water-Cooled Plasma Facing Components

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Overview Of Experimental Results On The KTM Tokamak

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IAEA-CN-316-2075

Overview Of Large Helical Device Experiments On Basic Plasma Physics For Solving Future Issues In Nuclear Fusion Research

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IAEA-CN-316-1654



Progress On An Exhaust Solution For A Reactor Using Eurofusion Multi-Machine Capabilities

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Overview Of Physics Results From Mast Upgrade Towards Core-Pedestal-Exhaust Integration

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Overview Of EXL-50 Research Progress And Future Plan

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Overview Of High Temperature Plasmas In The ST40 Compact High-Field Spherical Tokamak

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Overview Of The Recent Experimental Research On The J-TEXT Tokamak

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The SPARC Toroidal Field Model Coil Project

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IAEA-CN-316-2001



An Overview Of KTX Reversed Field Pinch Upgrade Progress

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IAEA-CN-316-2348

[Ov Poster Twin] Overview Of T And D-T Results In JET With ITER-Like Wall

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IAEA-CN-316-2468



[Ov Poster Twin] Target Gain >1 From Inertial Confinement Fusion Implosions At The National Ignition Facility

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IAEA-CN-316-2471

[Ov Poster Twin] Progress On ITER Manufacturing, Construction, Commissioning And Plans

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[Ov Poster Twin] Overview Of Recent Experimental Results On EAST Tokamak

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[Ov Poster Twin] Confinement, Heating And Current Drive In Spherical Tokamak Globus-M2 With High Magnetic Field

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[Ov Poster Twin] Overview Of Large Helical Device Experiments On Basic Plasma Physics For Solving Future Issues In Nuclear Fusion Research

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IAEA-CN-316-2475

[Ov Poster Twin] Recent Progress Of JT-60SA Project Toward Plasma Operation

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IAEA-CN-316-2476



[Ov Poster Twin] Overview Of Multi-Scale Turbulence Studies Covering Ion To Electron Scales In Magnetically Confined Fusion Plasma

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IAEA-CN-316-2477



[Ov Poster Twin] Overview Of ASDEX Upgrade Results In Preparation Of ITER And DEMO

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IAEA-CN-316-2478



[Ov Poster Twin] Overview Of The KSTAR Experiments

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[Ov Poster Twin] The SPARC Toroidal Field Model Coil Project

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[Ov Poster Twin] DIII-D Research To Provide Solutions For ITER And Fusion Energy

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IAEA-CN-316-2481

[Ov Poster Twin] Experimental Research On The TCV Tokamak

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[Ov Poster Twin] Overview Of The First Wendelstein 7-X Long Pulse Campaign With Fully Water-Cooled Plasma Facing Components

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IAEA-CN-316-2483

[Ov Poster Twin] Overview Of High Temperature Plasmas In The ST40 Compact High-Field Spherical Tokamak

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IAEA-CN-316-2484



[Ov Poster Twin] Progress Of HL-2M Experiments

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IAEA-CN-316-2485

[Ov Poster Twin] West First Experiments With An ITER Grade Tungsten Divertor

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IAEA-CN-316-2486



[Ov Poster Twin] Overview Of Physics Results From MAST Upgrade Towards Core-Pedestal-Exhaust Integration

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[Ov Poster Twin] [Rapporteured] The Dones Programme: Status And Next Steps

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[Ov Poster Twin] [Rapporteur] Overview Of Achievements Of The IFMIF/EVEDA Project

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IAEA-CN-316-2592

Enhanced Plasma Performance In C-2W Advanced Beam-Driven Field-Reversed Configuration Experiments

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IAEA-CN-316-1627

Non-Linear MHD Modelling Of Transients In Tokamaks: Recent Advances With The Jorek Code

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Overview Of Physics Results From The ADITYA-U Tokamak And Future Experiments

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IAEA-CN-316-2125



The US Stellarator Program On The Path To A Fusion Pilot Plant

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First Tungsten Radiation Studies And Non-Linear Oscillations In DIII-DâS ITER Baseline DEMOnstration Discharges

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Impact Of Impurity Pellet Injection On The Transition Between Non-Mixing State And Mixing State Of Hydrogen Isotope Ions In LHD

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IAEA-CN-316-1664

Assessment Of Negative Triangularity As A Reactor Scenario In DIII-D

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IAEA-CN-316-2355



H-Mode Density Limit Studies With Pellets Vs Gas In JET-ILW

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Negative Triangularity Tokamak Operation In TCV

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Diamagnetic Dynamo Driven Current Transport In EAST Tokamak

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Negative Triangularity Scenarios: From TCV And AUG Experiments To DTT Predictions

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High-Speed Turbulence Spreading And Time-Scale Dependence On Propagation Velocity Of Turbulence And Heat Pulses

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IAEA-CN-316-1646

Susceptibility Of RMP-Driven, ELM-Crash-Suppression To Radiatively Controlled Scrape-Off-Layers (SOL), And Its Impact On Divertor

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IAEA-CN-316-1825



Wide Pedestal Quiescent H-Modes Without Power Degradation Of Energy Confinement: An Observation Understood By Transport Modelling

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Effect Of Higher Particle Flux On Detached Simulation Plasma In The Gamma 10/PDX Divertor Simulation Experimental Module

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Saturation Of Fishbone Instability By Self-Generated Zonal Flows In Tokamak Plasmas

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Time Evolution Of 2D Emission Profiles Of Detached Plasma During Hydrogen And Impurities Combined Gas Seeding In Gamma10/PDX

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Prediction Of Energetic Particle Confinement In ITER Operation Scenarios

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Experimental DEMOnstration Of Transient Chi Startup Using A New Electrode Configuration On QUEST

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Mitigation Of Toroidal Alfven Eigenmodes In Negative Triangularity Plasmas At TCV

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Role Of In-Plane Electric Field During Merging Formation Of Spherical Tokamak Plasmas

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Energy-Selective Confinement Of Alpha Particles During Benign Sawtooth Crashes In A Large Tokamak Plasma

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Fast Ion Effects On Internal Transport Barrier Formation In KSTAR Plasmas

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Influence Of Ar Injection On Shielding Layer Properties And Surface Protection From Transient High Heat Loads Under The QSPA Plasma Exposures

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Effect Of Hydrogen Plasma On Beryllium Under Operating Conditions Of A Fusion Reactor

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Toroidal Component Of Plasma Rotation Studies Carried Out In The TCABR Tokamak And Its Comparison With Neoclassic Theory

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Development Of A Combined Diagnostic System In Studies Of Plasma Parameters In The Radial Direction

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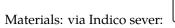
Momentum Transport Coefficient In The TCABR Tokamak

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ASME BPVC Section III Division 4 Fusion Construction Code Roadmap

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Progress And DEMOnstration Of The Pulse-Shape Based Discrimination For Radiations Measurement In Fusion Reactor Breeding Blanket Using A Single Crystal CVD Diamond Detector

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The Effect Of Oscillating Radial Electric Field On L-H Transition In A Compact Tokamak

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Advanced Control In DIII-D: Supervisory And Fail-Safe Algorithms For Future Reactor-Grade Tokamaks

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Recent Developments In Radiation Transport For Fusion Reactors And Validation Of JET DT Experiments

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Innovations In Detection And Control Of Helical Instabilities In Wall-Stablized Tokamak Plasma

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IAEA-CN-316-1620

NSTX-U Recovery Project Status And Plans

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Thermal-Hydraulic Simulation Of ITER Tungsten Divertor Monoblock For Loss Of Flow Transient

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IAEA-CN-316-1625

Contributions Of Terror Management Theory To Fusion EnergyâS Social License

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IAEA-CN-316-1631

Experimental Evaluation Of Unstructured Grid Neutron Transport Code

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IAEA-CN-316-1633

Evidence Of Bipolar Perturbations Of The Electron Distribution Function In High-Performance JET Plasmas

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Radiation Responses In A Neutral Beam Injector Guard Wall Of The ITER Using MCNP6 And GEANT4

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Progress Of Electrical And Nuclear Safety Design Of Dc 1 Mv Power Supply System For The ITER Neutral Beam Injector

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Application Of Transformation Super Plasticity For Reduced Activation Ferritic / Martensitic Steel

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IAEA-CN-316-1645

Topology Optimization For The Structural Design Of The Coil Support In Magnet System Of A Helical Fusion Reactor

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Completion Of All The ITER Toroidal Field Coil Structures

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Desing, Construction And First Operation Of Pilot Gamma PDX-SC Superconducting Mirror Device

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Development Of A Plasma Scenario For The EU DEMO Tokamak Reactor

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Study Of Edge-Localised Modes (ELMs) On The Spherical Globus-M2 Tokamak

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Towards A MPEX Digital Twin

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Development Of Mw Gyrotrons With Collaboration Research For Plasma Heating In Fusion Experimental Devices

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Role Of Fast Ions In Growth Of Spontaneous Neoclassical Tearing Modes

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Progress And Challenges In Commissioning Operation On JT-60SA Tokamak Device System

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IAEA-CN-316-1677

Dynamics Of Fast Electrons And Kinetic Modes In The Electron Cyclotron Heated QUEST Spherical Tokamak

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IAEA-CN-316-1682

Status And Issues Of High-Temperature And High-Pressure Water Corrosion Research Of Fusion Structural Materials

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Physics And Engineering Design Of Electron Cyclotron Current Drive System For JA DEMO

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Plasma Operation Scenario Development And Required Conditions In Ja DEMO

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Interaction Of Helium Plasma With Carbide Surface Layer Of Tungsten

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Safety Study And Environmental Assessment On The JA DEMO Reactor

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IAEA-CN-316-1697



Tritium Neutral Beam Injection On JET: Calibration And Plasma Measurements

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IAEA-CN-316-1709

Remote Operation Of The DIII-D National Fusion Facility

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IAEA-CN-316-1714



Conceptual Design Of A Modular EC System For EU-DEMO

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IAEA-CN-316-1717

Design And Manufacturing Of In-Vessel Components Of JT-60SA And Their Installation For First Plasma

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IAEA-CN-316-1727



Beam Commissioning Of Linear Ifmif Prototype Accelerator (Lipac) Toward High-Duty Operation At 5 Mev, 125 mA D+

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IAEA-CN-316-1741



Design And Development Study Of Large Superconducting Tf Coils To Withstand High Electromagnetic Forces For JA DEMO

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IAEA-CN-316-1747



Achievement Of High-Current Continuous-Wave Deuteron Injector For Linear IFMIF Prototype Accelerator (LIPac)

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IAEA-CN-316-1758



Progress In The Development Of The Fibre Optics Current Sensor For Magnetic Fusion Devices

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IAEA-CN-316-1765



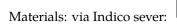
Combined Neutron And Gamma-Ray Spectrometry For ITER

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IAEA-CN-316-1786



CW Conditioning Of The High Power RFQ And Its RF Power Couplers For The Linear IFMIF Prototype Accelerator (LIPac)

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IAEA-CN-316-1790



Progress Of Engineering Design Activities For Fusion Neutron Source A-FNS

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IAEA-CN-316-1792



Optical Design And Prototype Tests Of The ITER Equatorial EC H&Cd Launcher

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IAEA-CN-316-1795



Development Of High-Power Long-Pulse Multi-Frequency Transmission Line For The JT-60SA ECH&CD System

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IAEA-CN-316-1799

Scenario Of Tritium Decontamination For Plasma Facing Areas In DEMO

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IAEA-CN-316-1806



Remote Maintenance Compatibility Design For JA DEMO

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IAEA-CN-316-1807

Radio Frequency Discharge Effects On Negative Ion Source For Neutral Beam Injector

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IAEA-CN-316-1809



Studies Of ETG Transport On NSTX Plasmas With Gyrokinetics And Reduced Transport Models

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IAEA-CN-316-1976

The Importance Of Phase Dynamics In Generation Of Coherent Structures

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IAEA-CN-316-1978



Rapid Model-Based Scenario Optimization Using Machine Learning: Reducing Computational Time While Preserving Prediction Accuracy By Surrogate Modeling

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IAEA-CN-316-1987

Nonlinear Gyrokinetic Modelling Of High Confinement Negative Triangularity Plasmas

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IAEA-CN-316-2000



Fusion Synthesis Engine: A Next Generation Framework For Integrated Design Of Fusion Pilot Plants

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IAEA-CN-316-2002



A Neoclassical Solver For The Transport Equations Of Phase Space Zonal Structures Of Energetic Particles

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IAEA-CN-316-2005



Nonlinearities In Magnetic Confinement, Ionospheric Physics And Population Explosion Leading To Profile Resilience

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IAEA-CN-316-2025

Phase Space Transport And Emulators In ITG Turbulence

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IAEA-CN-316-2037



How Coherent Structure Accelerates Turbulence Spreading: A 'Trapping-Hopping' Mechanism

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IAEA-CN-316-2056

A Gaussian Process Surrogate Model For The Properties Of Micro-Tearing Modes In Spherical Tokamaks.

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IAEA-CN-316-2064



Toroidal Modeling Of 3D Field Perturbations Generated By Biasing Current In SOL Region In H-Mode Discharge In HL-2A

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IAEA-CN-316-2114

Integrated Simulation Study On The Control Mechanisms Of Edge Localized Modes By Mixture Supersonic Molecular Beam Injection On HL-2A

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IAEA-CN-316-2191



Simultaneous Optimal Regulation Of Kinetic+Magnetic Scalar Plasma Properties For Robust Sustainment Of Advanced Scenarios In NSTX-U

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IAEA-CN-316-2198

Hybrid Model Predictive Control Of The Current Profile In NSTX-U

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IAEA-CN-316-2205



Reinforcement Learning For Plasma Control In Tokamaks

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IAEA-CN-316-2206



Nubeam Surrogate Models Based On MLP, CNN, And Parallel CNN-LSTM Neural Network Architectures

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IAEA-CN-316-2212



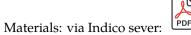
Conceptual Design Of An Innovative Set Of ELM Control Coils For The TCABR Tokamak

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IAEA-CN-316-2213



Simulations Of EDGE/SOL Characteristics Including Neutral Dynamics In Limiter Plasmas Of ADITYA-U Tokamak

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IAEA-CN-316-2230



Efficient X-I Eccd Non-Inductive Plasma Current Start-Up And Ramp-Up For Fusion Reactor

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IAEA-CN-316-2238

Toroidal Modeling Of Plasma Flow Damping And Density Pump-Out By Rmp During ELM Mitigation In HL-2A

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IAEA-CN-316-2246



Simulations Of Unmitigated And Mitigated ITER Disruptions With Improved Halo Model In TSC

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IAEA-CN-316-2253

Integrated Real-Time Control On The MAST Upgrade Tokamak

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IAEA-CN-316-2275



Suppression Of Drift Displacements Of The Pellet-Produced Plasmoid In The Presence Of Fast Electrons

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IAEA-CN-316-2276

Towards Density Profile Regulation Via Pellet Injection In Tokamaks Following A Hybrid Model Predictive Control Approach

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IAEA-CN-316-2291

First Stage Of Time-Dependent Plasma And Material Model Integration To Address Dynamic Recycling In Divertors

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IAEA-CN-316-2292

Comparison Of Divertor Heat Loads And Access To Detachment For N=3 And N=4 Toroidal Mode Rmp Scenarios In The ITER Pre-Fusion Power Operation Configuration

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IAEA-CN-316-2307



Predictive Acceleration Of Solps-ITER Simulations Of The Tokamak Plasma Boundary Using Data-Driven Projective Integration

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IAEA-CN-316-2311

European Edge Fluid Modelling Tools For Self-Consistent Reactor Relevant Conditions

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IAEA-CN-316-2319



Deep Neural Network Reconstruction Model Of Poloidal Flux With Measured Signals On EAST

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IAEA-CN-316-2341

Multi-Staged ERO2.0 Simulation Of Material Erosion And Deposition In Recessed Mirror Assemblies In JET And ITER

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IAEA-CN-316-2372



Calculation Of Alpha Particle Slowing Down For CFETR Plasma

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IAEA-CN-316-2380



Integral Approach To Plasma-Wall Interaction Modelling For EU-DEMO

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IAEA-CN-316-2409



Integration Of RF Sheath Modeling To Whole Device ICRF Actuator Simulation

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IAEA-CN-316-2416



Non-Linear Shattered Pellet Injection Simulations Based On ASDEX Upgrade Experiments

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IAEA-CN-316-2430



Overview Of Material Migration And Fuel Retention In The Full Tungsten Tokamak West After The First Phase Of Operation

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IAEA-CN-316-1821

West First Experiments With An ITER Grade Tungsten Divertor

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IAEA-CN-316-2392



Comprehensive Study Of Tritium Retention In Gaps Of Bulk Tungsten Lamellae Divertor Tiles And Castellated Beryllium Limiters From JET With ITER-Like Wall

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IAEA-CN-316-1706

Recent Progress Of JT-60SA Project Toward Plasma Operation

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IAEA-CN-316-1679



Recovery From Wall Saturation Using Temperature Control Of Plasma Facing Wall On QUEST

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IAEA-CN-316-1743

Confinement, Heating And Current Drive In Spherical Tokamak Globus-M2 With High Magnetic Field

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IAEA-CN-316-1638



Edge-Core Coupling Emerging From Neutral Particle Control By Divertor Pumping

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IAEA-CN-316-1798



Overview Of Multi-Scale Turbulence Studies Covering Ion To Electron Scales In Magnetically Confined Fusion Plasma

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IAEA-CN-316-1734



Electron And Ion Scale Gyrokinetic Turbulent Transport Studies In JET-ILW H-Mode Pedestals

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IAEA-CN-316-1842

[Rapporteur] Overview Of Achievements Of The IFMIF/EVEDA Project

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IAEA-CN-316-1681



[Rapporteured] The Dones Programme: Status And Next Steps

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IAEA-CN-316-2058

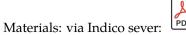
Impact Of Rotational Transform And Internal Magnetic-Islands On Electron Temperature Gradients And Plasma Confinement In Wendelstein 7-X

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IAEA-CN-316-1834



Relation Between Pedestal Evolution And Edge Particle Sourses In Tokamaks

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IAEA-CN-316-1867

Role Of Edge Turbulence In Pedestal Evolution And Collapse Of KSTAR H-Mode Plasmas

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IAEA-CN-316-1866



Physics Basis And Technology Development For The ITER Disruption Mitigation System

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IAEA-CN-316-2302

Impact Of Ionization And Transport On Pedestal Density Structure In DIII-D And C-Mod

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Lessons Learned From European And Japanese Productions Of ITER Toroidal Field Coils

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IAEA-CN-316-2365

Characterizing Core And Edge Turbulence Regimes With Fluctuation Imaging Diagnostics In Wendelstein 7-X

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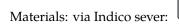
Lessons Learned From ITER Central Solenoid Manufacturing

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IAEA-CN-316-2308



Automated W7-X Sawtooth Crash Analysis And Characterization

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IAEA-CN-316-1789



Challenges And Lessons Learnt During Manufacturing, Transportation And Assembly Of The ITER Cryostat

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IAEA-CN-316-2192

Lessons Learned In The Management Of The Production Of The Poloidal Field Coils (And Other Coils)

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IAEA-CN-316-2390



Comparison Of MHD Onset Conditions In JET-ILW Experiments In D, T And D-T

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IAEA-CN-316-1833

Correction Coil And Magnet Feeder Lessons Learned

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IAEA-CN-316-2437



Application Of Non-Axisymmetric Magnetic Field For Control Of Alfv \tilde{A} ©n Eigenmodes In KSTAR

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IAEA-CN-316-1857

Turbulence-Driven Vortex-Flow: Island-Induced Internal Transport Barrier

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IAEA-CN-316-1634

Self-Consistent Predictions And Assessment Of Core Plasma Performance In The Flat Top Phase Of Burning Plasmas

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IAEA-CN-316-1655

Validation Of D-T Fusion Power Prediction Capability Against 2021 JET D-T Experiments

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IAEA-CN-316-1662



Nonlinear Equilibria And Phase Space Transport In Burning Plasmas

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IAEA-CN-316-1721

Plasma Beta Dependence Of Turbulent Transport Suggesting An Advantage Of Weak Magnetic Shear

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Stabilization Of Ion Gyroradius Scale Instabilities And The Isotope Effect Due To Electron Temperature Gradient Turbulence

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IAEA-CN-316-1729

Turbulent Particle Pinch In Gyrokinetic Flux-Driven Itg/Tem Turbulence

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IAEA-CN-316-1735



Emission Of Ion-Cyclotron-Range-Of-Frequency Wave In Electron-Cyclotron-Resonance-Heated Plasma On JT-60U

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IAEA-CN-316-1738

Development Of Integrated Turbulence Diagnostic Simulator And Its Application To Torus Device Measurements

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IAEA-CN-316-1739



A New Type Of Self-Sustained Divertor Oscillation Driven By Magnetic Island Dynamics In Large Helical Device

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IAEA-CN-316-1745

Optimization Of Fast Electron Generation For Efficient Lower-Hybrid Wave Plasma Start-Up On The TST-2 Spherical Tokamak

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IAEA-CN-316-1748

Divertor Enrichment Of Recycling Impurity Species (He, N 2 , Ne, Ar, Kr) In ASDEX Upgrade

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IAEA-CN-316-1750

Heat And Particle Exhaust In High-Performance Plasmas In Wendelstein 7-X

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IAEA-CN-316-1752

External Control Of Stiff Energetic-Ion-Profile With Alfven Eigenmode Activities

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IAEA-CN-316-1756

Electron Cyclotron Current Start-Up With Retarding Electric Field In The QUEST Spherical Tokamak

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IAEA-CN-316-1762



Behaviour Of Plasma Impurities In Long Pulse Scenarios At W7-X

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IAEA-CN-316-1764



Confinement Characterization Against Rotational Transform On The Heliotron J Configuration Control Experiment

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Detection Of Alpha Heating In JET-ILW DT Plasmas By A Study Of The Electron Temperature Response To ICRH Modulation

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IAEA-CN-316-1774

Geometry Meets Feedback Loops: Shearing And Turbulence Self-Regulation In Negative Triangularity Tokamaks

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IAEA-CN-316-1776



Theory Of Heat Load Broadening By Entrainment: Formulating A Cost-Benefit Analysis For Turbulent Pedestals

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Power Scaling Of The Density Limit And Particle Transport Events

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IAEA-CN-316-1778

Validation Of Plasma Response And Turbulence Simulation Across KSTAR Core Magnetic Islands.

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IAEA-CN-316-1781



Effects Of Magnetic And Electrostatic Fluctuations On ECH Supra-Thermal Electron Behavior And Toroidal Torque In Tokamak Plasma

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IAEA-CN-316-1783



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Turbulence Transition And Its Role In Isotope Effects Of LHD

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IAEA-CN-316-1788

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Detection Of High-Energy Fast Ions In LHD And Prospects For Quantitative Validation Of Neoclassical Fast-Ion Transport Calculations

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IAEA-CN-316-1808

A Numerically Validated Gyrokinetic Turbulent Transport Representation And Its Application To Trace Heavy Ion Transport

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IAEA-CN-316-1810



Development Of A Coil-Shaping-Based Optimization Code For Magnetic Fusion Device

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IAEA-CN-316-1811

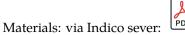
Origin Of Profile Constraint In Toroidal Plasmas With Different Magnetic Structures Leading To Transport Barrier

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IAEA-CN-316-1812



Effect Of Shaping On Confinement: An Analytical Model

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IAEA-CN-316-1813



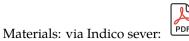
Gyrokinetic Simulations Of GAM-Turbulence Interplay In The FT-2 Tokamak Using GENE Simulations

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IAEA-CN-316-1827



Expansion Of Stable Operating Space For High Plasma Current Toward ITER-Relevant Regime In KSTAR

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IAEA-CN-316-1831



Observation Of Alpha Particles In D-T And T-Plasmas On JET

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IAEA-CN-316-1836

Prediction Of Transport In The JET DTE2 Discharges With The Tglf And Neo Models Using The Tgyro Transport Code

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IAEA-CN-316-1846



Core Performance Predictions With Nonlinear Gyrokinetics And Implications To Scope Burning-Plasma Tokamaks

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IAEA-CN-316-1847

On The Development Of An Operational Regime With High Normalized Density And Confinement For ITER And Attractive Fusion Pilot Plant

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IAEA-CN-316-1849



Observation Of Stationary Double Transport Barriers In KSTAR

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IAEA-CN-316-1851



Core Transport Modeling And Characterization For Compact Tokamak Reactor Scenarios

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IAEA-CN-316-1853



Preparation Of Lower Hybrid Fast Wave Current Drive Research On KSTAR

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IAEA-CN-316-1855

Toroidal Rotation Characteristics For Ohmic And Ech Plasmas In KSTAR

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IAEA-CN-316-1859



Bayesian Approach For Uncertainty Quantification And Data-Efficient Optimization In Fusion Research

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IAEA-CN-316-1861



Predictive Equilibrium Reconstruction Of DIII-D H-Mode Plasmas

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IAEA-CN-316-1864



Novel Numerical Methods For Gyrokinetic Whole Device Modelling Of Tokamak Plasma

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IAEA-CN-316-1874

Experiments On Plasma Detachment In A V-Shaped Slot Divertor

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IAEA-CN-316-1907



Evolution Of Intermittent Filaments In The Scrape-Off Layer Of NSTX

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IAEA-CN-316-1912

Divertor Detachment And Reattachment With Mixed Impurity Seeding On ASDEX Upgrade And JET

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IAEA-CN-316-1951

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Reducing Plasma-Material Interactions In The DIII-D Low-Z And High-Z Divertors With Impurity Powders

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IAEA-CN-316-1956

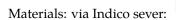
First Application Of The Island Divertor Configuration In The J-Text Tokamak

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IAEA-CN-316-1967



Variable Gas-Baffling In The TCV Divertor

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IAEA-CN-316-1979

Calorimetry Measurement For The Energy Balance And Energy Distribution In West For L-Mode Plasmas

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IAEA-CN-316-1981



Interpretive Modeling Using SOLPS-ITER For Pumping Experiments With A Closed Divertor

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IAEA-CN-316-1995

Development Of The Turbulence-Transport Coupling Simulation Framework For The Edge Plasma

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IAEA-CN-316-2232

Simulation Study Of The Influence Of EÃB Drift On Heat Flux Width

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IAEA-CN-316-2234

Simulations Of Inboard Limited Scrape Off Layer Plasma Operations In ADITYA-Upgrade Tokamak

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IAEA-CN-316-2242



Modelling Of The Effects Of Drifts On The Tungsten Impurity Transport And Core Accumulation On EAST By Developing A Kinetic Impurity Transport Code

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IAEA-CN-316-2254

Fast Ion Studies In The Extended High-Performance High $\hat{\mathbf{I}}'p$ Plasma On EAST

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IAEA-CN-316-2357



Progress On Physics And Engineering Of SCR-1 Stellarator

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IAEA-CN-316-2439

[Regular Poster Twin] First Tungsten Radiation Studies And Non-Linear Oscillations In DIII-DâS ITER Baseline DEMOnstration Discharges

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IAEA-CN-316-2493



[Regular Poster Twin] Negative Triangularity Scenarios: From TCV And AUG Experiments To Dtt Predictions

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IAEA-CN-316-2496

[Regular Poster Twin] Susceptibility Of Rmp-Driven, ELM-Crash-Suppression To Radiatively Controlled Scrape-Off-Layers (SOL), And Its Impact On Divertor

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IAEA-CN-316-2497

[Regular Poster Twin] Negative Triangularity Tokamak Operation In TCV

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IAEA-CN-316-2498

[Regular Poster Twin] Assessment Of Negative Triangularity As A Reactor Scenario In DIII-D

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IAEA-CN-316-2499



[Regular Poster Twin] Energy-Selective Confinement Of Alpha Particles During Benign Sawtooth Crashes In A Large Tokamak Plasma

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IAEA-CN-316-2501

[Regular Poster Twin] Fast Ion Effects On Internal Transport Barrier Formation In KSTAR Plasmas

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IAEA-CN-316-2502



[Regular Poster Twin] Saturation Of Fishbone Instability By Self-Generated Zonal Flows In Tokamak Plasmas

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IAEA-CN-316-2503



[Regular Poster Twin] Mitigation Of Toroidal Alfven Eigenmodes In Negative Triangularity Plasmas At TCV

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IAEA-CN-316-2504



[Regular Poster Twin] Prediction Of Energetic Particle Confinement In ITER Operation Scenarios

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IAEA-CN-316-2505

Role Of Turbulent Separatrix Tangle In The Improvement Of The Integrated Pedestal/Heat-Exhaust Issue For Stationary Operation In ITER And Fusion Reactors

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IAEA-CN-316-2299



A Detailed Study Of The Interaction Between The High Harmonic Fast Wave And The Scrape-Off Layer Region In NSTX/NSTX-U Plasmas

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IAEA-CN-316-1841

Kinetic Simulations Of Pedestal Fueling Asymmetry And Implication For Scrape-Off Layer Flows

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IAEA-CN-316-2384



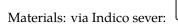
Linear Modelling Of Electron Bernstein Current Drive In Step

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IAEA-CN-316-1613



Theoretical Scaling Of The Operational Density Limit In Tokamaks And Comparison To Experimental Data

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IAEA-CN-316-1994



Broadening Of EC Power Deposition And Driven Current Profiles Caused By Dissipative Propagation

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IAEA-CN-316-1680

A Gyrokinetics-Based Model For Predicting Pedestal Width Scaling At Arbitrary Aspect Ratio

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IAEA-CN-316-2325



Tokes Simulations Of First Wall And Divertor Damage During Unmitigated Disruptions On ITER

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IAEA-CN-316-2152

On The Possibility Of X-Point Radiation Regime For ITER-Like Tokamaks

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IAEA-CN-316-1635



Validation Of The Ero2.0 Code Using W7-X And JET Experiments And Predictions For ITER Operation

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IAEA-CN-316-2059



Effects Of Plasma Shape On The Intrinsic Rotation Generation By Parity Change

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IAEA-CN-316-1920



Compression Of Solid Spherical Fuel For Fast Ignition Based Inertial Fusion Energy

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IAEA-CN-316-1736

Plasma Profile Prediction In NSTX Discharges Using The Updated Multi-Mode Anomalous Transport Module

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IAEA-CN-316-1957



Diagnosing Inertial Confinement Fusion Ignition

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IAEA-CN-316-2347

The Importance Of The Polarization Drift For Turbulent Transport In Tokamak Devices

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IAEA-CN-316-1884



Predictions Of Performance Variations In Inertial Confinement Fusion Experiments At The National Ignition Facility

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IAEA-CN-316-1616

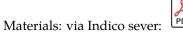
Deep Learning-Based Acceleration Of Multi-Species Fokker-Planck-Landau Collision Operator For Fusion Plasma Simulation

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IAEA-CN-316-1886



80 Beams, 270 kJ ICF Implosions On LMJâPETAL

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IAEA-CN-316-2358



Results From The Eurofusion Enabling Research Project âAdvancing Shock Ignition For Direct-Drive Inertial Fusion"

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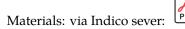
Electromagnetic Instabilities In High ð. Tokamaks

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IAEA-CN-316-1942



Wave-Particle Interactions In Tokamaks

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IAEA-CN-316-1602



Destabilization Of Geodesic Acoustic-Like Mode In The Presence Of A Poloidally Inhomogeneous Source In A Tokamak Plasmas

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IAEA-CN-316-1607

Kinetic-Magnetohydrodynamic Hybrid Simulation Study Of Energetic-Particle Driven Off-Axis Fishbone Instability In Tokamak Plasmas

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IAEA-CN-316-1657

Investigation Of Alpha Particle Transport Induced By Alfv $\tilde{\mathbf{A}}$ ©n Eigenmodes In CFETR

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IAEA-CN-316-1675

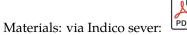
Non-Linear Benchmark Between HYMAGYC, MEGA, ORB5 And XTOR-K Codes Using The NLED-Aug Test Case To Study Alfvénic Modes Driven By Energetic Particles

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IAEA-CN-316-1701



Stability Analysis Of Plasma Waves Driven By Runaway Electrons In Tokamak Hot Plasmas

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IAEA-CN-316-1702

Anomalous Power Deposition In Second Harmonic ECRH Experiments Due To Parametric Decay Instability

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IAEA-CN-316-1803



Recent Advanced Of CFQS Stellarator Construction And Predictive Studies Towards Proof-Of-Principle Of Magnetic Configuration Embedded With Magnetic Symmetry Of Tokamak

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IAEA-CN-316-1815

Maasive Parametric Study For Prospective Design Space Of A Compact Tokamak Fusion Reactor

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IAEA-CN-316-1816



Performance Of The Wendelstein 7-X ECRH Plant During The Second Operational Phase

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IAEA-CN-316-1818

Recent Linear IFMIF Prototype Accelerator (LIPAc) Maintenance And Reliability Improvements And Future Lipac Upgrades

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IAEA-CN-316-1822



Integrated Modelling Of Anisotropic Neutron Yields Of Classical And Spherical Tokamaks

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IAEA-CN-316-1824

Qualification Of EUROFER97 And Design Rule Validation For ITER TBM: EUROfusion Contribution

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IAEA-CN-316-1826



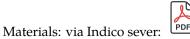
First Operation And Validation Of Simulations For The Divertor Cryo-Vacuum Pumps In W7-X

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IAEA-CN-316-1830



Fusion Decommissioning And Regulation Tech-L&S (UK-STEP Perspectives)

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IAEA-CN-316-1832



Overview Of The Final Design Of The Visible And Infrared Wide Angle Viewing System Diagnostic For ITER In Equatorial Port 12

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IAEA-CN-316-1835

Recent Breakthrough In Modeling Transport Processes In A Liquid Metal Blanket

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IAEA-CN-316-1844



High Technologies Developed For ITER Divertor Thomson Scattering And Their Experimental Testing

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IAEA-CN-316-1845

On The Validation Of Neutron-Irradiation Simulation In W

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IAEA-CN-316-1860



Helium Cooling System For DEMO R & D

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IAEA-CN-316-1869



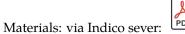
Systematic Analysis Of Turbulence: Component Extraction Of The Density Fluctuations And Study Of Their Dynamics For Different Regimes

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IAEA-CN-316-1870



The Step Microwave Heating And Current Drive System

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IAEA-CN-316-1876



A Validation Study Of A Turbulence Simulation Model With Bounce-Kinetic Electrons Using A KSTAR L-Mode Plasma

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IAEA-CN-316-1878



Analysis Of Fusion Alphas Interaction With RF Waves In D-T Plasma At JET

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IAEA-CN-316-1881

Beam Optics Of RF Ion Sources In View Of ITER'S NBI Systems

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IAEA-CN-316-1882



EU-DEMO Magnets Cryogenics And Thermohydraulics Analyses: Strategy, Status And Comparison

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IAEA-CN-316-1883

Plasma Characterisation And Wall Conditioning Studies On The Tomas Device

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IAEA-CN-316-1890



High-Fidelity Performance Predictions For Tokamaks And Stellarators: From Existing Devices To Burning Plasma Experiments

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IAEA-CN-316-1892

Characterization Of ECRH Plasmas In Tomas

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IAEA-CN-316-1894



Progress In Modeling D/T Component Flows In Tokamak-Based FNS Fueling System

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IAEA-CN-316-1899

Fusion Reaction Rate And Fast Ion Distribution Functions Studied With Nuclear Radiation Spectroscopy In The Three Ion D-(DNBI)-3He Scenario At JET

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IAEA-CN-316-1902



Progress Toward Continuous Pellet Injection Systems For Fueling Of Long Pulse Stellarators And Tokamaks

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IAEA-CN-316-1903

Development Of JT-60SA TF Feeder Model With Tactics Tool For Support To Thermal-Thermohydraulic Analyses Of Terminal Joint Temperature Margin

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IAEA-CN-316-1904

Impact Of Cold Spray Parameters On Deuterium Trapping In Tantalum Coatings

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IAEA-CN-316-1905

Improvement And Validation Of Plasma Initiation Model For Versatile Experiment Spherical Torus

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IAEA-CN-316-1906



Decaf Cross-Device Exploration Of Disruption Characterization Indicated By Abnormalities In Plasma Current And Vertical Position

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IAEA-CN-316-1909

Global Gyrokinetic Simulations Of Turbulent Transport In Stellarators With Kinetic Electrons

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IAEA-CN-316-1911



Origin Of The Up-Down Asymmetric Dependence Of Edge-Localized Mode Control In ITER-Like Resonant Magnetic Perturbation Configuration

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IAEA-CN-316-1916

ExB Vortex Dynamics And Its Influence On Turbulence In A Magnetic Island

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IAEA-CN-316-1923

Correlation Study Between Edge Kink-Like Mode And Density Pump-Out By RMP In KSTAR

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IAEA-CN-316-1924

Latest Insights From EU-DEMO Activation Assessments

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IAEA-CN-316-1928



Hydrogen Isotopic Ratio By Residual Gas Analysis During The JET DT Campaigns

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IAEA-CN-316-1931

UKAEAâs Irradiated Superconductor And Magnet Materials Testing

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IAEA-CN-316-1933



Feasibility Of DEMO Dust DE-Tritiation To Refabrication Or Safety Disposal

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IAEA-CN-316-1934



Advanced Transport Models For Energetic Particles

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IAEA-CN-316-1937



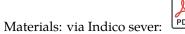
Developments Towards High-Beta, Long-Pulse Scenarios In TCV And MAST-U

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IAEA-CN-316-1939



Control Of Plasma Density And Isotope Mix By Peripheral Fuelling Pellets In JET D-T Experiments

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IAEA-CN-316-1940



Benign Termination Of Runaway Electron Beams In The Eurofusion Tokamak Exploitation Workprogram

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IAEA-CN-316-1947

Modelling And Development Of Ceramics For Tritium Breeding In Fusion Systems

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IAEA-CN-316-1949



MHD Islands Tracking Via Oblique ECE

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IAEA-CN-316-1950

Helicon Wave Physics On Linear And Toroidal Basic Plasma Physics Devices

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IAEA-CN-316-1959



A New Design Tool For Startup In Large Tokamaks With Superconducting Coils

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IAEA-CN-316-1963

Pre-Ionization And Plasma Startup Experiments Relevant To Fusion Devices Using Spiral Antenna In Appel-Device

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IAEA-CN-316-1964



Integrated Numerical Analysis Of The Impurity Transport And Source In DT JET-ILW Discharges

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IAEA-CN-316-1966

Surface Temperature Measurement From Infrared Synthetic Diagnostic In Preparation For ITER Operations

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IAEA-CN-316-1968



Unravelling The Effects Of Surface Roughness On Sputtering: New Insights For Conventionally Rough And Nano-Structured Topographies

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IAEA-CN-316-1970

Implications Of T Loss In First Wall Armor And Structural Materials On T-Self-Sufficiency In Future Burning Fusion Devices

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IAEA-CN-316-1971



First Hibp Measurement Of Plasma Potential Evolution In Co-NBI Heated Tuman-3M Plasma

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IAEA-CN-316-1973

Computational Models For Massive Material Injection In Tokamaks, Recent Developments In The JOREK Code

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IAEA-CN-316-1977



200 kW, 1 Mhz Dual Directional Coupler: Design And Characterization

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IAEA-CN-316-1980

The Isotope Effect On Core Heat Transport In JET-ILW Ohmic Plasmas In Hydrogen, Deuterium And Tritium

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IAEA-CN-316-1982



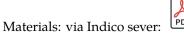
Active Control Of Alfvén Eigenmodes By Externally Applied 3D Magnetic Perturbations

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IAEA-CN-316-1984



Development Of Preventive And Active Protection Systems For Paschen Discharge Mitigation For JT-60SA

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IAEA-CN-316-2004



Influence Of Confinement Magnets On Negative Ion Source Performance

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IAEA-CN-316-2009

Overview Of The OLMAT High Heat Flux Facility Activities Testing Liquid And Solid Metal Targets For Their Use As Divertor Materials

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IAEA-CN-316-2012



Multiobjective Lifecycle Budget Allocation For Fusion Power Plant Installation

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IAEA-CN-316-2017

Realization Of Beam Line Components For ITER DNB System-Lessons Learnt

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IAEA-CN-316-2019



UKAEA Collaborations On Extreme Scale Computing For Fusion

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IAEA-CN-316-2028

Leveraging The SPARC Experience To Establish Appropriate Regulatory Treatment For Future Fusion Power Plants

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IAEA-CN-316-2032



Actuator-Sharing Algorithm For Simultaneous Regulation Of Multiple Plasma Properties With Coupled Dynamics

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IAEA-CN-316-2113

The M3D-C1 Code As A Tool For Design Validation And Whole-Device Modeling

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IAEA-CN-316-2151



Runaway Electron Dynamics In ITER Disruptions With Shattered Pellet Injection

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IAEA-CN-316-2158

Excitation Of Compressional Alfvén Eigenmodes In Tokamak Disruptions And Impact On Runaway Electron Transport

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IAEA-CN-316-2176



[Regular Poster Twin] Challenges And Lessons Learnt During Manufacturing, Transportation And Assembly Of The ITER Cryostat

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IAEA-CN-316-2508



[Regular Poster Twin] Physics Basis And Technology Development For The ITER Disruption Mitigation System

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IAEA-CN-316-2509



[Regular Poster Twin] Lessons Learned From ITER Central Solenoid Manufacturing

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IAEA-CN-316-2510

[Regular Poster Twin] Lessons Learned From European And Japanese Productions Of ITER Toroidal Field Coils

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IAEA-CN-316-2511



[Regular Poster Twin] Lessons Learned In The Management Of The Production Of The Poloidal Field Coils (And Other Coils)

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IAEA-CN-316-2512

[Regular Poster Twin] Correction Coil And Magnet Feeder Lessons Learned

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IAEA-CN-316-2513



Overview Related To Manufacturing, Testing And Installation Of The Full Tungsten Actively Cooled ITER-Like Divertor In The West Tokamak

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IAEA-CN-316-1989

The Divertor Tokamak Test Facility: Engineering And Technology Integration Challenges

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IAEA-CN-316-2071



Origin Of The L-H Threshold Isotope Effect In DIII-D Hydrogen And Deuterium Plasmas

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IAEA-CN-316-2105

Progress In A US-Based Liquid Metal Plasma-Facing Component Design Activity For A Fusion Nuclear Science Facility

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IAEA-CN-316-2334



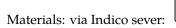
Development Of Integrated Plasma Scenarios In MAST-U

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IAEA-CN-316-2015



Progress In Design And Experimental Activities For The Development Of An Advanced Breeding Blanket

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IAEA-CN-316-2089



Impact Of Impurity Injection On Core Confinement In ST40

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IAEA-CN-316-2145



Development And Manufacturing Of Beryllium-Armoring ITER Enhanced Heat Flux Fw Towards Series Production In China

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IAEA-CN-316-2226



RFX-mod2 Facility Upgrades And Diagnostic Capability Enhancements For The Exploration Of Multi-Magnetic-Configurations

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IAEA-CN-316-2061

Development Of Monolithically Additive Manufactured Lower Hybrid Current Drive Launchers And RF Systems

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IAEA-CN-316-1722



Magnetohydrodynamic Instability Induced Runaway Electron Transport

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IAEA-CN-316-2128

New Diagnostics Developments And Results In Support Of Runaway Electron Studies At European Devices

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IAEA-CN-316-2013



Recent Progress In Runaway Electron Research At TCV

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IAEA-CN-316-2078



L-H Transition Physics Results From Recent Tritium And Deuterium-Tritium Campaigns At JET

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IAEA-CN-316-1837



Experimental Investigation Of The Physics & Performance Of The MAST-Upgrade Super-X Divertor

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IAEA-CN-316-2103

Improved Pedestal Performance Utilizing Resonant Magnetic Perturbations And Edge Localized Electron Cyclotron Current Drive

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IAEA-CN-316-1585

Enhancement Of Plasma Boundary Stochastization And Its Profound Impacts On Access Of Divertor Detachment In High-Beta Plasmas On W7-X And LHD

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IAEA-CN-316-2068

Recent Progress Of The Reactor-Relevant Intrinsically ELM-Stable Quiescent H-Mode On The DIII-D Tokamak

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IAEA-CN-316-1992



Enhanced Cross-Field SOL Transport In JET Tritium Plasma And Its Impact On Machine Operation

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IAEA-CN-316-2041

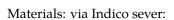
Overview Of EDA H-Mode Experiments And Studies In ASDEX Upgrade

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IAEA-CN-316-1804





Identification Of Plasma Conditions Affecting MHD Phenomena In QH-Mode And ELMy H-Mode Plasmas In DIII-D

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IAEA-CN-316-1672

Real-Time ELM Onset Prediction With Deep Neural Networks And High-Bandwidth Edge Fluctuation Measurements

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IAEA-CN-316-2153



Helium Plasma Operations On ASDEX Upgrade And JET In Support Of The Non-Nuclear Phases Of ITER

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IAEA-CN-316-1659

Overview Of Fast Particle Experiments In The First MAST-U Experimental Campaigns

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IAEA-CN-316-2104



Nonlinear Inverse Bremsstrahlung Absrption In Magnetized Laser Fusion Plasma

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IAEA-CN-316-1594

Resistive Wall Tearing Modes In ITER Disruptions

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IAEA-CN-316-1612



Physics-Informed Meta-Instrument For Fusion Energy

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IAEA-CN-316-1640

Advantageous Features Of kJ Petawatt Laser Light For Fast Ignition Scheme Of Laser Fusion

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IAEA-CN-316-1686



Impacts Of 3D Equilibrium On RMP ELM Mitigation In JT-60SA

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IAEA-CN-316-1711



Baseline Design Of The Laser Fusion Research Reactor With A MW Class Laser Facility

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IAEA-CN-316-1713



A Novel Scheme Of Laser-Driven Proton-Boron Fusion Under An Ultra-Strong Magnetic Field

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IAEA-CN-316-1716

Simulation Of Resistive Drift-Ballooning Mode Driven ELM Crash In Full Annular Tokamak

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IAEA-CN-316-1725



Second Harmonics Mixed Heating Laser For Fast Ignition Inertial Confinement Fusion

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IAEA-CN-316-1726

Horizontal Homing Laser For High Repetitive Inertial Fusion

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IAEA-CN-316-1728



Formation Of High Areal Density Fuel Core Using An Efficient And Robust Implosion Method For Fast Ignition

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IAEA-CN-316-1740

Non-Linear Gyro-Kinetic Ion Temperature Gradient And Trapped Electron Modes Turbulence Modelling In X-Point Geometry With 3D Fields, Edge Localized Modes And At Negative Or Positive Triangularity Shapes.

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IAEA-CN-316-1769



Present Status Of Counter Illuminating Fast Ignition Scheme Experiments Using KJ-Class Ultra-Intense Laser LFEX

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IAEA-CN-316-1796

Sawteeth Dynamics In JET Baseline Discharges With Mixtures Of Isotopes

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IAEA-CN-316-1887



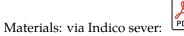
Plasma Control For The Step Power Plant

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IAEA-CN-316-1895



Innovative Delta-f PIC Algorithm For Efficient Homogeneous Simulation Of Fusion Plasmas From Core To Edge

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IAEA-CN-316-1908



Simulation Of DIII-D Disruption With Pellet Injection And Runaway Electron Beam

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IAEA-CN-316-1914

Wall Heating By Subcritical Energetic Electrons Generated By The Runaway Electron Avalanche Source

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IAEA-CN-316-1945



Design Development Of Nuclear Grade Vacuum Vessel For Diagnostic Neutral Beam Of ITER

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IAEA-CN-316-1974

Alpha Particle Loss Measurements And Analysis In JET DT Plasmas

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IAEA-CN-316-1991



Investigations Of Alfven Eigenmode Stability Via Active Antenna Excitation In JET Hydrogen, Deuterium, Tritium, DT, And Helium Plasmas

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IAEA-CN-316-1996

Observation Of Microscopic Damage Of Tungsten And Molybdenum Surfaces Due To Helium Glow Discharge Cleaning

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IAEA-CN-316-2010



The Lower Hybrid Frequency Range Wave Emission In The Ohmic Discharge Of The FT-2 Tokamak

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IAEA-CN-316-2018

Comprehensive Approach To Analysis Of Beryllium Limiter Damage By Unmitigated Disruptions And Runaway Electrons In The JET Tokamak With Metal Walls

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IAEA-CN-316-2022



Fundamental ICRF Heating Of Deuterium Ions In JET-DTE2

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IAEA-CN-316-2036

Tungsten Gross Erosion And Plasma Impurity Contamination In West Phase I: A Statistical Comparison Of LH And ICRF-Heated L-Mode Plasmas

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IAEA-CN-316-2045

Shattered Pellet Injection Method Using Multi-Injection System In KSTAR

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IAEA-CN-316-2054

A Modern Framework To Support Disruption Studies: The Eurofusion Disruption Database

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IAEA-CN-316-2057



Simulation Studies Of Lower Hybrid Waves To Understand Lhcd Experiments In SST1 Tokamak

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IAEA-CN-316-2073

Effects Of Neutral Transport And Negative Triangularity On Plasma Scrape-Off Layer Turbulence In Gyrokinetic Simulations

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IAEA-CN-316-2100



Drift-Fluid Simulations Of Tokamak Edge Turbulence With Energy Conservation

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IAEA-CN-316-2101

Complex Spatial Structures Of Fishbone Instabilities Inferred With Multiple Diagnostics In Mast/-U

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IAEA-CN-316-2109

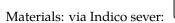
Atomic And Molecular Collisional-Radiative Models Associated With The Eirene Neutral Gas Module

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IAEA-CN-316-2110



First High-Power Helicon Results From DIII-D

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IAEA-CN-316-2111



Software For Fusion Reactor Design: Excalibur Project Neptune -Towards Exascale Plasma Edge Simulations

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IAEA-CN-316-2132

The Impact Of Magnetic Islands On The Bootstrap Current In Large Stellarators

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IAEA-CN-316-2183



Integrated Modelling Of Heating And Current Drive Sources And Diagnostics For ITER

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IAEA-CN-316-2184

Predicting Radio Frequency Heating And Current Drive Profiles With Fast Surrogate Models Powered By Machine Learning

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IAEA-CN-316-2188



Optimization Of Lithium Vapor Box Divertor Evaporator Location On NSTX-U Using SOLPS-ITER

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IAEA-CN-316-2203

Control Of Edge And Sol Plasma Turbulence Using Impurity Seeding And External Bias

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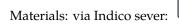
Physics Of Plasma Blob Formation And Experimental Validation

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IAEA-CN-316-2227



HB11 â" Understanding Hydrogen-Boron Fusion To Progress Towards Novel Energy Sources

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IAEA-CN-316-2286



Comparisson Between Non-Linear Control Systems Of Position And Shape Of The Plasma Column In An Ultra-Low-Aspect Ratio Tokamak

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IAEA-CN-316-2310

Regulation Of Alfven Eigenmodes By Microturbulence In Fusion Plasmas

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IAEA-CN-316-2312

Reduction Of Plasma Self-Driven Current By Magnetic Island Perturbations In Tokamaks

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IAEA-CN-316-2313

Flexible, Predictive Modeling Of Tokamak Stability, Transport, Equilibrium, And Pedestal Physics

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IAEA-CN-316-2314



Integration Of Critical-Gradient Model Alfvén Eigenmode-Driven Energetic Ion Transport Predictions Into Whole-Device Modeling Workflows For Fusion Devices

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IAEA-CN-316-2327



Effects Of Alpha Particles On The Turbulent Transport And Zonal Flow Driven By CTEM Turbulence In Burning Plasmas

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IAEA-CN-316-2359



On The Modulation Behaviour And A Possible Existence Criterion For Geodesic Acoustic Modes In Tokamaks

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IAEA-CN-316-2369

SARAS: A Workflow-Based Multi-Physics Simulator For Tokamak Physics And Reactor Design

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IAEA-CN-316-2374

The Relationship Between Normal Field Errors And Physics Quantities In Stellarator Coil Design

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IAEA-CN-316-2396

Efficient Computation Of Multi-Fluid And Gyrokinetic Landau Collisions

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IAEA-CN-316-2399

Tokamak Transport Under Flat Temperature Scenarios Using Global Gyro-Kinetic Simulations

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IAEA-CN-316-2401

Fast Flexible Stellarator Optimization And Analysis With The Desc Code Suite

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IAEA-CN-316-2403



AI-Machine Learning-Enabled Tokamak Digital Twin

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IAEA-CN-316-2406

Trapped Electron Coupled ITG Turbulence Simulation For ADITYA-U

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IAEA-CN-316-2414



3D Tokamak Plasma Equilibrium With N=1 Toroidal Asymmetry

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IAEA-CN-316-2422

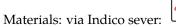
[Regular Poster Twin] Predictions Of Performance Variations In Inertial Confinement Fusion Experiments At The National Ignition Facility

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IAEA-CN-316-2549



[Regular Poster Twin] On The Possibility Of X-Point Radiation Regime For ITER-Like Tokamaks

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IAEA-CN-316-2550

[Regular Poster Twin] Compression Of Solid Spherical Fuel For Fast Ignition Based Inertial Fusion Energy

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IAEA-CN-316-2554



[Regular Poster Twin] Theoretical Scaling Of The Operational Density Limit In Tokamaks And Comparison To Experimental Data

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IAEA-CN-316-2559



[Regular Poster Twin] A Gyrokinetics-Based Model For Predicting Pedestal Width Scaling At Arbitrary Aspect Ratio

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IAEA-CN-316-2563



[Regular Poster Twin] Diagnosing Inertial Confinement Fusion Ignition

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IAEA-CN-316-2565

[Regular Poster Twin] 80 Beams, 270 kJ ICF Implosions On LMJâPetal

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IAEA-CN-316-2566



[Regular Poster Twin] Kinetic Simulations Of Pedestal Fueling Asymmetry And Implication For Scrape-Off Layer Flows

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IAEA-CN-316-2567

[Regular Poster Twin] Role Of Turbulent Separatrix Tangle In The Improvement Of The Integrated Pedestal/Heat-Exhaust Issue For Stationary Operation In ITER And Fusion Reactors

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IAEA-CN-316-2581



[Regular Poster Twin] Results From The Eurofusion Enabling Research Project âAdvancing Shock Ignition For Direct-Drive Inertial Fusion"

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IAEA-CN-316-2582

Turbulence Spreading Into Edge Stochastic Magnetic Layer Induced By MHD Activity And Its Impact On Divertor Heat Load

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IAEA-CN-316-1647



Quantitative Study Of Influx, Recycling And Particle Balance With Different Wall Conditioning In ADITYA-U Tokamak

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IAEA-CN-316-2259

Turbulence, Transport And Confinement Dependence On Isotope Mass In Dimensionally Similar H-Mode Plasmas On DIII-D

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IAEA-CN-316-2332



MHD Activity Induced Excitation Of Gam-Like Mode In ADITYA-U Tokamak

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IAEA-CN-316-2324

Electron-Scale Turbulence Characteristics In LHD Plasma

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IAEA-CN-316-1802



Characterization Of Mutual Interactions Between Filaments By Ultra-Fast Passive Imaging And Machine Learning

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IAEA-CN-316-2237

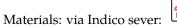
Performance And Transport In ITER: Multi-Channel Validation In DIII-D ITER-Like Conditions And Predictions Of ITER Burning Plasmas Via Nonlinear Gyrokinetic Profile Prediction

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IAEA-CN-316-2194



Progress On Understanding The Nature Of Edge And Scrape-Off Layer Turbulence Using AB-INITIO Simulations In Diverted Geometry

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IAEA-CN-316-2352

From Data Mining To Physical Interpretation And Theory Testing: Observation Of Spontaneous Confinement Transitions In W7-X

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IAEA-CN-316-2181

Influence Of Sawtooth Oscillations On Fast Ions In A Stellarator

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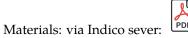
Interpreting Ion Heat Transport In Wendelstein 7-X Experiments Using An Empirical Transport Model To Find Routes To Optimum Performance Plasmas

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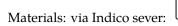
Development Of A Novel Optimization Scheme For Plasma Equilibrium Control With Superconducting Coil In JT-60SA

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IAEA-CN-316-1650



Additional Ecrh Mitigates Thermal Quenches Induced By Tungsten Tespel Injection In LHD

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IAEA-CN-316-2177



Adaptive Control Of Safety Factor Profile And Normalized Beta For JT-60SA Using Reinforcement Learning

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IAEA-CN-316-1643

Plasma Potential Measurements In The SOL/EDGE Region Of ADITYA-U Tokamak Using Laser Heated Emissive Probe

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IAEA-CN-316-2262



Optimization And Feeback Control Of The C-2W Field Reversed Configuration

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IAEA-CN-316-2115

Radiation Dependence Of Divertor Leg Length In Detachment On DIII-D

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IAEA-CN-316-2317



Closed Loop RMP ELM Suppression With Minimized Confinement Degradation Using Adaptive Control DEMOnstrated In DIII-D And KSTAR

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IAEA-CN-316-1961

Tailoring Error Field Of Tokamak To Control Plasma Instability And Transport

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IAEA-CN-316-1962



Examining Divertor Profile Broadening And Detachment In High Parallel Heat Flux DIII-D Discharges

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IAEA-CN-316-2333



Analysis And Design Of Fast Flow Liquid LI Divertor For Fusion Nuclear Science Facility (FNSF) Using SOLPS-ITER

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IAEA-CN-316-1592



On The Similarity Principals And The Self-Verification Of Edge Plasma Codes

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IAEA-CN-316-1593

Time-Dependent SOLPS-ITER Simulations Of The Tokamak Plasma Boundary For Model Predictive Control

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IAEA-CN-316-1595



Advances In Plasma-Wall Boundary Conditions For Gyrokinetic And Fluid Simulations

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IAEA-CN-316-1615

A Hybrid Gyrokinetic Ion â" Fluid Electron Model For Edge Plasma Simulations

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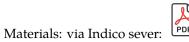
Stellarator Divertors

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IAEA-CN-316-1628



Comparison Of Different Seeding Impurities (N, Ne, Ar, Kr) Compression Effectiveness In Divertor By SOLPS-ITER Modeling

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IAEA-CN-316-1630



Data-Driven Models In Fusion Exhaust: AI Methods And Perspectives

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IAEA-CN-316-1665

Self-Consistent Simulations Of ICRF-Induced Alfvén Eigenmodes In Magnetically Confined Plasmas

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IAEA-CN-316-1705



On The Nonlinear Dynamics Of Fishbones And Energetic Particle Modes

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IAEA-CN-316-1719

Close Coupling Of The Peeling Ballooning Mode To The External Kink One Through Its Peak Mode-Number Shift To n=1 In Plasmas With Strong Shape And Large Pedestal Width

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IAEA-CN-316-1723



Analysis Of Berk-Briezman Energetic Particle Nonlinear Model Using Entropy Approach

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IAEA-CN-316-1730



Nonlinear Excitation Of Energetic Particle Driven Geodesic Acoustic Mode By Alfvén Eigenmode In ASDEX-Upgrade

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IAEA-CN-316-1749



Density Pedestal Prediction Model For Tokamak Plasmas

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IAEA-CN-316-1773



Impurity Parallel Velocity Gradient Instability

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IAEA-CN-316-1829



Development Of Collision Detection Algorithms For Fusion Digital Twin With Simulation Capabilities

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IAEA-CN-316-1868

Overview Of Interpretive Modelling Of Fusion Performance In JET DTE2 Discharges With Transp

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Modeling Of The Density Decrease In The KSTAR Double-Null Transition Discharge

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IAEA-CN-316-1921

The Bifurcation Behaviour Of Rmp Control Of ELMs In The Presence Of Plasma Flow: A Nonlinear Simulation Study

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IAEA-CN-316-1922



First Principle Gyrokinetic Simulations Of Frequency Chirping Alfvén Modes In Fusion Plasmas

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IAEA-CN-316-1927

The Nonlinear Simulations On The Plasma Response And ELM Control By The Multi Toroidal Mode Number Of RMP On EAST

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IAEA-CN-316-1929



Numerical Analysis Of The ASDEX Upgrade Impurity Seeding Discharges Using European Transport Simulator

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IAEA-CN-316-1936

Roles Of ECH System In DTT Plasma Operations

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IAEA-CN-316-1952



Generative Modeling Of Pedestal Plasmas In JET And AUG

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IAEA-CN-316-2020

Integrated Design And Optimization Of The Advanced Tokamak Path Toward The Steady-State Fusion Pilot Plant

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IAEA-CN-316-2033

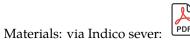


Influence Of Wall On Plasma Transport Across Magnetic Filter Field In A Negative Ion Source: A 2D-3V PIC MCC Simulation Study

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Dissimilar Material Joints At Cryogenic Temperature For Superconducting Fusion Application

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IAEA-CN-316-2039



Upgraded IR-IECF Device As A Promising Compact Source For The Future Nuclear Fusion Research

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IAEA-CN-316-2040

An ITER-Relevant First Mirrors Unit With Integrated Mirror Cleaning System Utilizing A Capacitive Coupled Radio Frequency Discharge

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Axisymmetric Magnetic Control In ITER For PFPO-1

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IAEA-CN-316-2047

Studies On The Retarded Recrystallization Of Tungsten In Cimple-PSI, At Extreme Target Temperature And He+-Fluence

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IAEA-CN-316-2048



Development Of Lead Lithium (Pb-16Li) Alloy Production System And Characterization Of The Produced Alloy

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IAEA-CN-316-2051

Aabhas: A 3 Sided Fully Immersive Virtual Reality Cave Facility For Design, Operations & Maintenance Of Nuclear Machines

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IAEA-CN-316-2053



Inspecting The Aftermath Of Vertical Displacement Events By Integrating The Jorek-Starwall Plasma Simulation Code Into A Remote Maintenance System

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IAEA-CN-316-2070

Irradiation-Induced Stress At Reactor Component Scale

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IAEA-CN-316-2072



Decoupling Beam Power And Beam Energy On ASDEX Upgrade NBI With An In-Situ Variable Extraction Gap System

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IAEA-CN-316-2074

Porcelain Based 100 kV Feedthrough For Prototype ITER DNB At INTF

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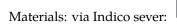
IAEA-CN-316-2077

ICRF Operations During The JET Tritium And DTE2 Campaigns

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How UKAEAâS Fuel Cycle Loop Will Address Key Challenges In Tritium Management For Fusion Power

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IAEA-CN-316-2091



Effects Of Electromagnetic Transients On DTT In-Vessel Coils

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Developing Integrated Cost Models For Fusion Power Plants

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IAEA-CN-316-2095



Development And Validation In Neutron-Irradiated Water Of Fluned, An Open-Source Tool For Fluid Activation Calculations

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IAEA-CN-316-2096

Development Of DIII-D High Field Side Lower Hybrid Current Drive Launcher

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IAEA-CN-316-2108

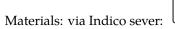


Operational Experience Of SST-1: Lesson Learned

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Protection Of The Divertor And The First Wall In The West Tokamak In View Of ITER

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IAEA-CN-316-2137



W-Hydra: A New Experimental Platform For The Water-Cooled Lead Lithium Breeding Blanket

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IAEA-CN-316-2142

R&D For The Development Of Compact HTS Coils

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IAEA-CN-316-2144



Experimental And Simulation Study On SST-1 PF#3 Vacuum Barriers Arcing Incidences And Mitigation Techniques

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IAEA-CN-316-2147

Real Time Vertical Position Estimation Of Plasma Column Using Fast Imaging In ADITYA-U Tokamak

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IAEA-CN-316-2159



Impact Of Breech Geometry And Propellant Flow On The Release Of Large Pellets For The ITER Disruption Mitigation System

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IAEA-CN-316-2161

Phase-Space Measurements Of MHD-Induced Fast-Ion Transport In The ASDEX Upgrade Tokamak

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IAEA-CN-316-2165



Research And Development Progress Of The Tritium Breeding Functional Materials And Pebble Bed Technology For The Solid Breeding Blanket At SWIP

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IAEA-CN-316-2166

Progress Towards ELM-Less H-Mode Operations In KSTAR Long Pulses With Resonant Magnetic Perturbations

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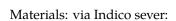


Instantaneous Risk Monitoring Method For Fusion Reactors Based On Level Three Probabilistic Safety Assessment

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Development And Application Of Hineg Series High Intensity Steady Neutron Generators

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IAEA-CN-316-2170



ENN'S Roadmap For Proton-Boron Fusion Based On Spherical Torus

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Materials: via Indico sever:



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Regulation Of Fusion Power Plants And International Harmonization

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IAEA-CN-316-2179



Actively Cooled Carbon Armoured Divertor (ACD) For JT-60SA

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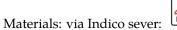


Use Of Oscar Fusion V.1.4 Code For A Preliminary Assessment Of The ACPS Contamination Within The Main ITER Water-Cooled Circuit

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Cad-Based Software For Assessment Of Tokamak Componentsâ Heat And Particle Loads

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Early Detection Of Tearing Modes And Its Impact On Understanding The MHD Stability Of High-Qmin Plasmas In DIII-D

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Development And Application Of TopMC In Fusion Shielding

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IAEA-CN-316-2197

Development And Plasma Tests Of The Quasy-Stationary Lithium Protection Of The First Wall On The T-11M Tokamak

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IAEA-CN-316-2199



Visible Imaging-Based Plasma Boundary Realization For ADITYA-U Tokamak Operations.

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IAEA-CN-316-2220

Disruption Prediction On ADITYA/ADITYA-U Using Future Sequence Based Time Series Neural Network

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IAEA-CN-316-2221



Experimental And Numerical Investigation Of The Doppler-Shifted Resonance Condition For High Frequency Alfvén Eigenmodes On ASDEX Upgrade

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IAEA-CN-316-2244

Experimental Evidence Of A New Type Of Self-Generated Plasma Current Observed In KSTAR

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IAEA-CN-316-2250



Ion Driven Hydrogen Implantation And Retention Studies Into Structural And Plasma Facing Materials As A Function Of Damage

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IAEA-CN-316-2263

Real-Time Plasma Equilibrium Reconstruction And Shape Control For The Mast Upgrade Tokamak

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IAEA-CN-316-2289



Plasma-Wall Self-Organization In Magnetic Fusion

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IAEA-CN-316-2303

Experiment On Alfvén Eigenmode Excitation By Alpha Particles In DTE2 Plasmas On JET

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IAEA-CN-316-2305



Core-Edge Integrated Neon-Seeded Scenario In Deuterium-Tritium At JET

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IAEA-CN-316-2322

Studies Of Power Load With Localised Neon Injection In HL-2M

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IAEA-CN-316-2376



Assessment Of The Scrape Off Layer Width And Target Heat Loads In ST40

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IAEA-CN-316-2412

Physics Basis For The Divertor Tokamak Test Facility

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IAEA-CN-316-2419



[Regular Poster Twin] Improved Pedestal Performance Utilizing Resonant Magnetic Perturbations And Edge Localized Electron Cyclotron Current Drive

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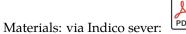
IAEA-CN-316-2548

[Regular Poster Twin] Helium Plasma Operations On ASDEX Upgrade And JET In Support Of The Non-Nuclear Phases Of ITER

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[Regular Poster Twin] Identification Of Plasma Conditions Affecting MHD Phenomena In QH-Mode And ELMy H-Mode Plasmas In DIII-D

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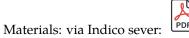
IAEA-CN-316-2552

[Regular Poster Twin] Development Of Monolithically Additive Manufactured Lower Hybrid Current Drive Launchers And RF Systems

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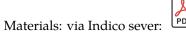


[Regular Poster Twin] Overview Of Eda H-Mode Experiments And Studies In ASDEX Upgrade

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[Regular Poster Twin] L-H Transition Physics Results From Recent Tritium And Deuterium-Tritium Campaigns At JET

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IAEA-CN-316-2556



[Regular Poster Twin] Overview Related To Manufacturing, Testing And Installation Of The Full Tungsten Actively Cooled ITER-Like Divertor In The West Tokamak

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[Regular Poster Twin] Recent Progress Of The Reactor-Relevant Intrinsically ELM-Stable Quiescent H-Mode On The DIII-D Tokamak

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IAEA-CN-316-2558

[Regular Poster Twin] The Divertor Tokamak Test Facility: Engineering And Technology Integration Challenges

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IAEA-CN-316-2560

[Regular Poster Twin] Progress In Design And Experimental Activities For The Development Of An Advanced Breeding Blanket

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[Regular Poster Twin] Development And Manufacturing Of Beryllium-Armoring ITER Enhanced Heat Flux Fw Towards Series Production In China

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IAEA-CN-316-2562

[Regular Poster Twin] Progress In A Us-Based Liquid Metal Plasma-Facing Component Design Activity For A Fusion Nuclear Science Facility

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Overview Of Alpha Particle And Fast Ion Studies In JET DTE2 Plasmas

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Effect Of Impurity Seeding On Toroidal Rotation In ADITYA-U Tokamak

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IAEA-CN-316-2371



Fire Mode: A New Fast Ion Regulated Regime For High-Performance, Steady-State Operation

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IAEA-CN-316-1925

Radiation Asymmetry Studies In ADITYA-U Tokamak Using Bolometer Tomography

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Controlling Performance Bifurcations In Large Stellarators

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IAEA-CN-316-1820

Impurity Dynamics In Linear And Saturated Ohmic Confinement Regimes In ADITYA Tokamak

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IAEA-CN-316-2353



Impurity Powder Injection Experiments In The Large Helical Device

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IAEA-CN-316-2029

Runaway Seed Formation And Growth In Low Density Tokamak Scenarios At The Madison Symmetric Torus (MST)

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IAEA-CN-316-2388



A Quasi-Isodynamic Stellarator Configuration Optimized For Fast-Ion Confinement And Turbulent Transport

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IAEA-CN-316-1840

Investigation Of Quasi-Helical State (QSH) On Keda Torus Experiment (KTX)

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IAEA-CN-316-2398



Realization Of High Energy Confinement Plasmas With I-Mode And Ion Itb Regimes In The HL-2A Tokamak

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IAEA-CN-316-2340

Effect Of External Magnetic Perturbation On Edge Em Instabilities In ADITYA-U Plasma

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IAEA-CN-316-2346

Effect Of Magnetic Divertor Geometry On Plasma Exhaust And Core Compatibility In TCV

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IAEA-CN-316-1972



H-Mode Sol Profiles And Transport Dependence On Separatrix Operational Space

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IAEA-CN-316-1955



JET Machine Operations In Tritium & D-T

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Preliminary Divertor Plasma Operation In ADITYA-U Tokamak

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IAEA-CN-316-2351



Understanding Tritium Inventory And Permeation In Materials For Fusion Reactors: A Coupled Experimental And Modelling Approach

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IAEA-CN-316-1969



Effect Of Impurities And Wall-Conditioning Techniques On Edge Plasma Fluctuations In ADITYA-U Tokamak

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IAEA-CN-316-2421



Demonstration Of Triple-Frequency Gyrotron For ITER And Development Of Gyrotron Operation Technology

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IAEA-CN-316-1787

Radiated Power By Molecular Deuterium In The Tokamak Divertor

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IAEA-CN-316-2343

High Frequency Dielectric Lined Waveguides To Enable Future ECH / ECE In Fusion Energy Development

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IAEA-CN-316-1848

ITER Materials Irradiation Within The Dâ"T Neutron Environment At JET: Post-Irradiation Analysis Outcomes And Recommendations

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IAEA-CN-316-1839

Detachment Control Innovations Used To Support Long-Pulse Detachment Studies On The KSTAR Tokamak

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IAEA-CN-316-2342

High-Dose Neutron Irradiation Of Beryllium And Titanium Beryllide: Summary And Outlook

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IAEA-CN-316-1872



Heat And Particle Flux To Primary And Secondary Divertors For Various ELM Types And Its Implications For Future Machines

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IAEA-CN-316-1609

Applicability Of Large-Current HTS Simply-Stacked Conductor (STARS) For Fusion Reactors And Next-Generation Fusion Experimental Devices

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IAEA-CN-316-1700

Integrated Process For RMP-Based ELM-Less Operation With Enhanced Plasma Performance In KSTAR Tokamak

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IAEA-CN-316-1856

Simulation Studies Of Power And Helium Exhaust For Japanese And European DEMO Divertors By Sonic Divertor Code

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IAEA-CN-316-1704



Tritium Production In A Fusion-Fission Hybrid Reactor Based On A Spherical Tokamak Neutron Source

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IAEA-CN-316-1708



Theoretical Survey Of The Conditions For Successful Pre-Ionization By Inductive Field In Tokamaks

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Emission Of High Rovibrational Hydrogen Molecules Under Detached Plasma By Recycling On Tungsten Wall

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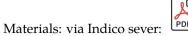
Neutron Radiation Damage In The Materials Of A Compact Hybrid Fusion Neutron Source With A Homogeneous Heavy-Water Blanket

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IAEA-CN-316-1759



A Concept Of DD Muon Catalyzed Fusion For Driving -Thorium Subcritical Hybrid Reactor

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IAEA-CN-316-1763



Optimization Of The MHD Stability In Inwards Shifted LHD Plasmas: Neutral Beam Current Drive, Plasma Density And NBI Operational Regime

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Disruption Runaway Electron Generation And Mitigation In The Spherical Tokamak For Energy Production

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IAEA-CN-316-1770

Neutral Exhaust Studies In Detached Wendelstein 7-X Discharges Using EMC3-EIRENE

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Energetic Particle Transport In ITER Driven By Alfvénic Turbulence

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Passive, Automatic Stabilization Of Magnetic Islands Using Radio Frequency Wave Heating And Current Drive

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IAEA-CN-316-1782



Effects Of Kinetic Thermal Ions On Beta Limit Due To Infernal Modes In Tokamak Plasmas

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IAEA-CN-316-1791

Turbulence Spreading And SOL Width Broadening In Small/Grassy Regime

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IAEA-CN-316-1801



Modeling Of Radiation Transport Effects In Lithium Divertors

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Materials: via Indico sever:



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Advances In RMP ELM Suppression Towards High Pedestal Pressures Harnessing The Super H-Mode Regime

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IAEA-CN-316-1915



Influence Of Gas Injection Loci On Highly Shaped Plasmas With Tungsten Divertor In KSTAR : Case Study

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Progresses In Understanding The Effects Of ICRF/NBI Fast-Ions On Core Turbulence And Alfv \tilde{A} ©n Activity On ASDEX Upgrade

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IAEA-CN-316-1938



Modeling Impurity Sources, Transport And Screening In Edge Tokamak Plasmas: Comparison With West Experiments And Application To ITER Scenarios

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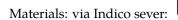
IAEA-CN-316-1954

Evolution Of ITER Like Tungsten Divertor Plasma Facing Components Under West Plasma Exposure Crack Initiation â" Pre-Damage Evolution - Microstructure

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Plasma Fueling Due To Thermal Charge Exchange Neutrals On DIII-D And Future Reactors

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IAEA-CN-316-1998

Manipulating Density Pedestal Structure To Improve Core-Edge Integration Towards Low Collisionality

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IAEA-CN-316-1999



MAST-U Thomson Scattering In The Core, Divertor And X-Point

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IAEA-CN-316-2065

Limiting Factors For Achieving Peeling-Limited Pedestals In Present Devices

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IAEA-CN-316-2112



The Plasma Scenarios For The Spherical Tokamak For Energy Production (STEP) And Their Technical Implications

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IAEA-CN-316-2148

Theory Of Turbulence Measurements Using Short Pulse Reflectometry With Application To The TCV Tokamak

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IAEA-CN-316-2149



Error Field Detection And Correction Studies Towards ITER Operation

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Integration Of TRANSP Into The IMAS Framework And Its Application To The Development Of ITER Non-Active Operation Scenarios

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IAEA-CN-316-2164

High-Fidelity Nonlinear MHD Modeling For Advanced Stellarators

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IAEA-CN-316-2171

Machine Learning For Plasma Shape Control On MAST-U

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IAEA-CN-316-2189



Energy Dependent Alpha Particle Redistribution In ITER Like Plasmas With A Helical Core

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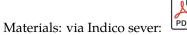
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Development Of Basic Thermonuclear Technologies Of The Fusion-Fission Hybrid Facility For Testing Materials And Component

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Coupling Of Free-Boundary-Equilibrium And Transport Solvers To Enable Model-Based Scenario Optimization And Integrated Control

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Electrostatic Turbulence In EAST Plasmas With Internal Transport Barrier

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Simulated Equilibrium Of Plamsas With Negative-Triangularity In Tokamak ADITYA-U Using The IPREQ MHD Code

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IAEA-CN-316-2247

Predictive Modelling Of Hot-Ion Mode Plasmas In ST40

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RFP-SSR Hybrid Reactor Model For Actinides Transmutation And Tritium Breeding Studies

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GSFIT: An Open Source, Python Based, Equilibrium Reconstruction Algorithm

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Reconstruction Of Magnetic Fields Via Field Neural Network

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Physics Based Routes To Increased Confinement

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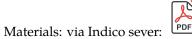


Validation Of The TGLF Model On ST40 Ohmic And Hot Ion Plasmas

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Improving The Accuracy And Speed Of Equilibrium Reconstructions Of Tokamak Plasmas Using Machine Learning

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IAEA-CN-316-2306



Isotope Impact On Alfvén Eigenmodes And Fast Ion Transport In DIII-D

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IAEA-CN-316-2318

Validity Of Fluid Closures In The Scrape-Off Layer

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IAEA-CN-316-2326



Study Of MHD Instabilities And Electrostatic Oscillations Using Fast Visible Imaging Diagnostic In ADITYA-U Tokamak

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IAEA-CN-316-2345

Anomalous Runaway Electron Loss In ADITYA And ADITYA-U Tokamak And Its Correlation With Edge Fluctuations

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IAEA-CN-316-2349



SOLPS-ITER Assessment Of The Impact Of Fuelling And Seeding Puff Locations On Divertor Impurity Retention In STEP

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IAEA-CN-316-2363

Various Experiments On Runaway Electron Generation And Mitigation In The ADITYA-U Tokamak

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IAEA-CN-316-2364



Stabilization Of Sawtooth Instability By Short Gas Pulse Injection In ADITYA-U Tokamak.

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Can The Runaway Electrons Be Mitigated By Whistlers - A Laboratory Case Study

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Observations Of Toroidal Radiation Asymmetry During Disruption In ADITYA-U Tokamak

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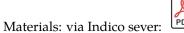
IAEA-CN-316-2382

[Regular Poster Twin] Turbulence Spreading Into Edge Stochastic Magnetic Layer Induced By MHD Activity And Its Impact On Divertor Heat Load

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[Regular Poster Twin] Turbulence, Transport And Confinement Dependence On Isotope Mass In Dimensionally Similar H-Mode Plasmas On DIII-D

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[Regular Poster Twin] Electron-Scale Turbulence Characteristics In LHD Plasma

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IAEA-CN-316-2571



[Regular Poster Twin] Performance And Transport In ITER: Multi-Channel Validation In DIII-D ITER-Like Conditions And Predictions Of ITER Burning Plasmas Via Nonlinear Gyrokinetic Profile Prediction

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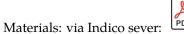
IAEA-CN-316-2572

[Regular Poster Twin] Progress On Understanding The Nature Of Edge And Scrape-Off Layer Turbulence Using Ab-Initio Simulations In Diverted Geometry

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IAEA-CN-316-2573



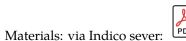
[Regular Poster Twin] Development Of A Novel Optimization Scheme For Plasma Equilibrium Control With Superconducting Coil In JT-60SA

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IAEA-CN-316-2574



[Regular Poster Twin] Adaptive Control Of Safety Factor Profile And Normalized Beta For JT-60SA Using Reinforcement Learning

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IAEA-CN-316-2575



[Regular Poster Twin] Optimization And Feeback Control Of The C-2W Field Reversed Configuration

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IAEA-CN-316-2576

[Regular Poster Twin] Closed Loop Rmp ELM Suppression With Minimized Confinement Degradation Using Adaptive Control DEMOnstrated In DIII-D And KSTAR

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IAEA-CN-316-2577



[Regular Poster Twin] Tailoring Error Field Of Tokamak To Control Plasma Instability And Transport

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IAEA-CN-316-2578

DEMOnstration Of Real-Time Predictive Plasma Control In LHD By Data Assimilation System ASTI

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IAEA-CN-316-1651



Resistive And 3D Effects In ELM-Suppressed H-Mode With Resonant Magnetic Perturbations In ASDEX Upgrade

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IAEA-CN-316-1828

Investigation Of RMP-Induced Ion-Scale Turbulence In The Pedestal And Its Role In Accessing The Optimized High-Confinement ELM-Free State

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IAEA-CN-316-1958

Recent Highlights Of The ASDEX Upgrade Control Research

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Integration Of RMP ELM Control With Divertor Detachment In The DIII-D Tokamak

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Internal Magnetic Turbulence Measurements Link To Confinement Factor In DIII-D L-, ELMy H-, Quiescent H-, And I-Mode Plasmas

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IAEA-CN-316-1985

Runaway Electron Prevention By A Passive 3D Coil In Disruption Simulations Of The SPARC And DIII-D Tokamaks

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IAEA-CN-316-1611



Mesoscopic Turbulent Transport Events With Long-Radial-Range Correlation In Low Flow Shear H-Mode Plasmas On DIII-D

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IAEA-CN-316-2031

Achievement Of ELM Suppression With N=4 Rmp In EAST Towards ITER Baseline Scenario

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IAEA-CN-316-1854



Observation Of Avalanche-Like Transport In Heliotron J And JT-60U Plasmas

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IAEA-CN-316-1656



Development Of High-Performance Long-Pulse Discharge In KSTAR

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IAEA-CN-316-1919



Validation Of Low-Z Impurity Transport Theory Using Perturbation Experiments At ASDEX Upgrade

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IAEA-CN-316-1710

Status And Prospects For DEMO Related Developments In Europe

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IAEA-CN-316-1993

Assessing The Technological And Physics Maturity Required For The Design Space Of The K-DEMO

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IAEA-CN-316-1917

Towards Real-Time Control Of Alfvén Eigenmodes At DIII-D Using Data-Driven Models And High-Resolution Diagnostics

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Progress Of Basic Conceptual Design Of JA DEMO

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IAEA-CN-316-1751

Observation Of Tungsten Emission Spectra Up To W46+ Ions In The Large Helical Device And Prospects For High-Z Impurity Transport Control In Fusion Plasmas

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IAEA-CN-316-1642



Contributions Of The Extended Elise And Batman Upgrade Test Facilities To The Roadmap Towards ITER NBI

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Progress On Long-Pulse And ITER-Relevant-Intensity Negative Ion Beam Accelerations For ITER Neutral Beam Injector

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IAEA-CN-316-1691



Accessing And Maintaining Robust H-Mode In ITER Pre-Fusion Power Operation (PFPO) Plasmas

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IAEA-CN-316-2236

Study Of Helically-Trapped Beam Ion Behaviour In Neutral-Beam And Ion Cyclotron Range Of Frequency Wave-Heated Deuterium Plasmas Of The Large Helical Device Using Compact Neutron Emission Spectrometers

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Detachment-Compatible Small-ELM Regime At Low Q95 With Neon SMBI On EAST In A Metal Wall Environment

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IAEA-CN-316-1599

Investigation Of Local Current Sheet Formation During Forced Magnetic Reconnection Process In EAST 1000 Second Plasma With Te-ITB

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IAEA-CN-316-1606

Deuterium-Tritium Isotope Scaling Of Particle And Heat Transport In JET Core L-Mode Plasma

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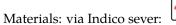
The Competition Between W Nanostructure Formation And W Annealing, W Erosion And Low-Z Co-Deposition In The Divertor Of Metallic Fusion Devices

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IAEA-CN-316-1666



The Root Cause Of Disruptive Ntms And Paths To Stable Operation In DIII-D ITER Baseline Scenario Plasmas

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IAEA-CN-316-1669

Observation Of Energetic Ion Anisotropy Using Neutron Diagnostics In The Large Helical Device

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IAEA-CN-316-1683



Ion Heating/Transport Characteristics Of Merging Startup Plasma Scenario In The TS-6 Spherical Tokamak

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IAEA-CN-316-1695

Q-Profile Optimisation And Torque Variation In Advanced Tokamak Scenarios On ASDEX Upgrade

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IAEA-CN-316-1712



Study Of The Tae-Induced Transport And Losses Mechanisms Of Energetic Particles At The Globus-M/M2 Spherical Tokamaks

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Tritium Plasma Divertor Power Load Characteristics In JET

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IAEA-CN-316-1761



Heat And Particle Exhaust With The Island Divertor In Wendelstein 7-X

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IAEA-CN-316-1767

Core Density Peaking By Control Of Energetic Ion Anisotropy In LHD

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IAEA-CN-316-1793



Variable-Spectrum Mode Control Of High Poloidal Beta Discharges

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IAEA-CN-316-1843

Compatibility Of Argon-Seeded Detachment With Rmp-Induced ELM Control In KSTAR

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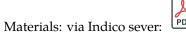
The Quasi-Continuous Exhaust Operational Space On ASDEX Upgrade And ITER

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Integration Of ELM Control With Divertor Detachment Via Boron Injection In EAST

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IAEA-CN-316-1960



Robust L-Mode Edge Behavior In High Performance Negative Triangularity Plasmas: From Experiments To Reactors

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IAEA-CN-316-1997

High Accuracy, Multi-Device Physics-Based Tokamak Disruption Prediction And Forecasting With First Real-Time Demonstration

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IAEA-CN-316-2038



Mitigation And Suppression Of Energetic Particles Driven Instabilities By Radio-Frequency Waves On The HL-2A Tokamak

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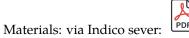
Investigation On Energetic Ion Losses Induced By Long-Lived Saturated Internal Mode With Energetic Particle Diagnostics In The HL-2A Tokamak

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IAEA-CN-316-2052



The Stability Of The H-Mode Entry In The ITER Baseline Scenario Investigated In AUG And TCV

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IAEA-CN-316-2060

First Solps-ITER Predictions Of The Impact Of Cross-Field Drifts On Divertor And Scrape-Off Layer Conditions In Double-Null Configuration Of Step

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IAEA-CN-316-2067



Analysis Of Weakly Coherent Modes In The I-Mode Experiment On EAST And The Comparison With Drift Alfven Wave Theory

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IAEA-CN-316-2069

Global Impurity Recirculation Patterns In Soledge3X-EIRENE Simulations Of West Discharges And Modeling Uncertainties On The Parallel Particle Balance

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Features And Effects Of Energetic-Ion Driven Instabilities In HL-2A High-Î'n Plasmas

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Gyrokinetic Simulations Of The Effect Of Fast Ions On Turbulence And Zonal Flows In HL-2A ITB Plasmas

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IAEA-CN-316-2081



Global Simulations Of The Flat-Top And Exit Phase Of ITER 15MA Baseline Scenario Fully Predictive Jintrac Simulations With Consistent Treatment Of D And T In The Whole Plasma

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IAEA-CN-316-2083



Cheap Training Sets For Gyrokinetic Surrogate Models With High Dimensionality For STEP Ramp-Up Scenarios

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Modelling The Path To Q = 10 In The ITER 15Ma Baseline Scenario With JINTRAC

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IAEA-CN-316-2086

First Full Plasma ITER Integrated Modelling Studies With Separated Deuterium And Tritium And Optimal Tritium Usage - Overview Of Jintrac Simulations Of The Entire ITER 15MA/5.3T Dt Q=10 Scenario

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Global Gyrokinetic Simulations Of Alfvén Eigenmodes In ITER And ASDEX Upgrade And The Effect Of Energetic Particle Distribution Functions On Stability

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IAEA-CN-316-2088

A Fast, Machine Learning-Based Emulator Of Scrape-Off Layer And Divertor Simulations For The MAST-U Tokamak: Towards Deep Reinforcement Learning Detachment Control

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IAEA-CN-316-2090



Progress On Neoclassical Tearing Mode Stabilization By Electron Cyclotron Current Drive In KSTAR

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Gyrokinetic Simulations On The Triggering And Self-Sustaining Of Internal Transport Barrier In HL-2A Tokamak Plasmas

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IAEA-CN-316-2118



Neoclassical Tearing Mode Stabilization By Electron Cyclotron Current Drive In EAST Tokamak Experiment

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IAEA-CN-316-2119

Avoidance Of Runaway Current Plateau Formation By High-Z Impurity Seeding During Disruptions In The HL-2A Tokamak

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IAEA-CN-316-2120



Assessment Of The Burning-Plasma Operational Space In ITER By Using A Control-Oriented Solps Parameterized Core-Edge Model

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IAEA-CN-316-2123

Energetic Particle Marginal Stability Profile For HL-2M Integrated Simulation Based On Neural Network Module

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IAEA-CN-316-2124



Turbulent Transport Of Impurity Ions With Hollow Density Profiles In Fusion Devices

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IAEA-CN-316-2129

Global Gyrokinetic Simulation Of Electrostatic Microturbulent Transport In ADITYA-U Tokamak

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IAEA-CN-316-2133



RFX-mod2 As Flexible Device For Reversed-Field-Pinch And Low-Field Tokamak Research

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Hybrid Scenario Prediction For HL-2M Megampere Plasma By Cronos

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IAEA-CN-316-2138

Confinement Of Fusion Alpha-Particles And Alfven Eigenmode Stability In Step

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IAEA-CN-316-2143

Impact Of The Impurity Seeding Over The Runaway Electron For The Ohmically Heated ADITYA-U Tokamak Plasma

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Non-Disruptive Tokamak Operation Far Beyond Traditional Safety Factor And Density Limits

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IAEA-CN-316-2172

Experiment And Simulation Results Of Interactions Between Energetic Ions And Tearing Modes On HL-2A Tokamak

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Comparison Of Nitrogen And Neon Seeded Detachment In The HL-2A Closed Divertor Geometry

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IAEA-CN-316-2219

How Turbulent Transport Broadens The Heat Flux Width: Local Sol Production Or Edge Turbulence Spreading?

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IAEA-CN-316-2222



Recent Advances In Energetic-Electron Driven Alfvén Instabilities In The EAST Tokamak

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IAEA-CN-316-2241

Self-Consistent Integrated Modeling Of The Pedestal, Scrape-Off Layer, And Divertor

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IAEA-CN-316-2267



Disentangling H-Mode Pedestal Structure And Neutral Ionization Source

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IAEA-CN-316-2298

Developing Predictive Pedestal Transport Models Based On Validated Nonlinear Gyrokinetic Simulations

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IAEA-CN-316-2320

Radiation Pressure On Plasma Turbulence By Radio Frequency Waves

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IAEA-CN-316-2329

Role Of Zonal Flows In Trapped-Electron Mode Turbulence

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IAEA-CN-316-2336



Kinetic Theory Of Parametric Decay Instabilities In Plasmas And Its Application In Different Ridio Frequency Regimes

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IAEA-CN-316-2368

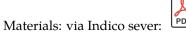
Understanding The Kinetic Physics Of RMP Penetration In Tokamak Edge Plasma With High-Fidelity Gyrokinetic Simulations

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IAEA-CN-316-2385



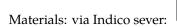
Full Nonlinear Simulations Of Gaes In NSTX-U

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IAEA-CN-316-2393



Unraveling The Physics Of Tungsten Sourcing And Leakage From A Slot Divertor Configuration On DIII-D

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IAEA-CN-316-2428



[Regular Poster Twin] Applicability Of Large-Current Hts Simply-Stacked Conductor (STARS) For Fusion Reactors And Next-Generation Fusion Experimental Devices

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IAEA-CN-316-2535

[Regular Poster Twin] High-Dose Neutron Irradiation Of Beryllium And Titanium Beryllide: Summary And Outlook

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IAEA-CN-316-2536



[Regular Poster Twin] ITER Materials Irradiation Within The Dâ"T Neutron Environment At JET: Post-Irradiation Analysis Outcomes And Recommendations

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IAEA-CN-316-2537

[Regular Poster Twin] High Frequency Dielectric Lined Waveguides To Enable Future ECH / ECE In Fusion Energy Development

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IAEA-CN-316-2538



[Regular Poster Twin] DEMOnstration Of Triple-Frequency Gyrotron For ITER And Development Of Gyrotron Operation Technology

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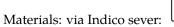
[Regular Poster Twin] Understanding Tritium Inventory And Permeation In Materials For Fusion Reactors: A Coupled Experimental And Modelling Approach

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IAEA-CN-316-2540



$[Regular\ Poster\ Twin]\ JET\ Machine\ Operations\ In\ Tritium\ \&\ D-T$

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IAEA-CN-316-2541



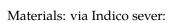
[Regular Poster Twin] Realization Of High Energy Confinement Plasmas With I-Mode And Ion Itb Regimes In The HL-2A Tokamak

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IAEA-CN-316-2542



[Regular Poster Twin] A Quasi-Isodynamic Stellarator Configuration Optimized For Fast-Ion Confinement And Turbulent Transport

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IAEA-CN-316-2543

[Regular Poster Twin] Impurity Powder Injection Experiments In The Large Helical Device

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IAEA-CN-316-2544



[Regular Poster Twin] Controlling Performance Bifurcations In Large Stellarators

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IAEA-CN-316-2545

[Regular Poster Twin] Fire Mode: A New Fast Ion Regulated Regime For High-Performance, Steady-State Operation

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IAEA-CN-316-2546



[Regular Poster Twin] Overview Of Alpha Particle And Fast Ion Studies In JET DTE2 Plasmas

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IAEA-CN-316-2547



Compass Upgrade: A High Field Tokamak For ITER- And DEMO-Relevant Research

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IAEA-CN-316-1891



Non-Linear MHD Investigations Of High-Confinement Regimes Without Type-I ELMs In ASDEX Upgrade And JT-60SA

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Prediction Of Pellet Mass Thresholds For ELM Triggering In Low-Collisionality, ITER-Like Discharges

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IAEA-CN-316-1605



Enhanced Plasma Performance After Pellet Injection In The Stellarator T-II

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IAEA-CN-316-1875

Toroidal Modeling Of Interactions Between Internal Kink Instability And Energetic Ions In HL-2M

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IAEA-CN-316-2079



Globally Self-Organized Weak Transport Barriers In KSTAR Plasmas

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IAEA-CN-316-1817

Bifurcated Merging Operations Of Two Spherical Tokamak Plasmas For Reconnection Heating And Helicity Injection

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IAEA-CN-316-1707



Confinement Improvement By Low Hybrid Wave Heating In High Beta H-Mode Plasmas

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IAEA-CN-316-2321

Modelling Of Runaway Electron Dynamics In Tokamak Disruptions

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IAEA-CN-316-2174



Streamer Dynamics In Heavy Impurity Transport In HL-2A Plasmas

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Mechanisms Of The Global Force Reduction In Disruptions - Experimental Validation Of Mitigated And Unmitigated Vdes With The MHD Code JOREK

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IAEA-CN-316-1694

Isotope Effects Of Multiple Transport Channels In TCV Ohmic Discharge

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IAEA-CN-316-1760

Transport And Microinstability Properties Of High Performance ST40 Plasmas

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IAEA-CN-316-1900



Observation Of The Reversal Of Turbulence Phase Velocity Direction Causing Ion Temperature Stiffness In The HL-2A Tokamak

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IAEA-CN-316-2210

The JET Hybrid Scenario In D, T And D-T

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IAEA-CN-316-1880



The Role Of Enhanced Turbulence Spreading And Collapsed Shear Flow In The Density Limit Of Tokamak

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IAEA-CN-316-2235

Tritium-Rich Scenario For High Fusion Power In JET DTE2

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IAEA-CN-316-1935



Nonlinear Interactions Between Multi-Scale Trapped-Electron-Modes In Presence Of High-Z Impurities

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IAEA-CN-316-2003

Development Of High Current Baseline Scenario For High Deuterium-Tritium Fusion Performance At JET

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IAEA-CN-316-1943

Long Pulse High Li Steady State Scenario On KSTAR

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IAEA-CN-316-2257

Sustainment Of High Qmin, High Î'n Plasmas On DIII-D Towards Steady-State Advanced Tokamak Fusion

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IAEA-CN-316-1965



The Transition Of The Magnetic Field Structure With The Formation Of The Transport Barrier Measured By The 2D Density Fluctuation Measurement

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IAEA-CN-316-1698



Radio-Frequency Heating Schemes In JET Deuterium-Tritium Plasmas In Preparation Of ITER

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IAEA-CN-316-1930



Gyrokinetic Simulations Of Effects Of Magnetic Shear On Turbulence In EAST High Î'p Discharge

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IAEA-CN-316-2049

Evidence Of RF Sheath Mitigation In ICRF Via Insulating Antenna Structures On The Lap

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IAEA-CN-316-1626



Parity Transition In Radial Structure Of Instability In Helical Plasmas

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IAEA-CN-316-1688

Improved Fast Plasma Position Control By Frequency-Separated Fast Plasma Boundary Controller For In-Vessel Coils On JT-60SA

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IAEA-CN-316-1692



Hydrogen Removal By Neon Gas Electron Cyclotron Wall Conditioning And Its Impact On Start-Up Of Tokamak Plasmas On QUEST

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IAEA-CN-316-1731

High-Flux Frc Formation And Its Flow Drive By Spheromak Merging And Center-Solenoid Flux Injection

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IAEA-CN-316-1732



Neutral Beam Experiments With Upgraded Power On Wendelstein 7-X

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IAEA-CN-316-1742

Icrh-Related Impurity Source And Control Across Experiments In H, D, T Plasmas At JET-ILW

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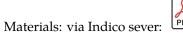
ICRF Plasma Production And Heating In LHD

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IAEA-CN-316-1901



Development And Construction Of An ICRH System Adapted To The 3D Plasma Boundary Of Wendelstein 7-X

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IAEA-CN-316-1932



First Wall Erosion Induced By Charge-Exchange Neutrals On EAST

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IAEA-CN-316-1953

3D Numerical Evaluation Of The DTT Divertor Pumping Performance

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IAEA-CN-316-1975



Divertor Geometry Effects On The Steady State Operation Of The PST Tokamak Using SOLPS 5.0

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IAEA-CN-316-2007

Design Of The Divertor For The DTT Facility Optimized For Power Exhaust Experiments

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IAEA-CN-316-2062



Methods And Simulations Of ELMs In Tokamak Plasmas With A 3D Nonlinear Hybrid Kinetic-MHD Code

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IAEA-CN-316-2098



Non-Thermal Fusion Burning Processes, Relevant Collective Modes And Gained Perspectives

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IAEA-CN-316-2106



Access To Edge Transport Barriers And Projections Of Pedestal Performance In The SPARC Tokamak

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A Method Of Localized Wall Cleaning By Varying Ec Resonance In ADITYA-U Torus.

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Low-Frequency Alfven Modes At DIII-D: Theoretical Interpretation Of Experimental Observations

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IAEA-CN-316-2135

Achievement Of The Closed Divertor Detachment Compatible With Sustained High Confinement Core Plasma In The HL-2A Tokamak

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IAEA-CN-316-2141

Physics Basis, Design And Commissioning Of The SMall Aspect Ratio Tokamak (SMART)

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IAEA-CN-316-2155



Projection Of Alfvén Eigenmode Stability In JET From D To DT Plasmas Through Integrated Modeling

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Heat Flux Control Experiments By Divertor Biasing On The HL-2A Tokamak

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IAEA-CN-316-2185

Fast-Ion Physics In The TJ-II Stellarator: Experiments And Model Validation Activities

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IAEA-CN-316-2186

Gyrokinetic Low-Recycling Edge Physics Of The Lithium Tokamak Experiment- \tilde{A} (Ltx- \tilde{A})

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IAEA-CN-316-2195

Virtual Prototyping System For Design And Optimization Of The Tritium Breeding Blankets For Fusion Power Plant

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IAEA-CN-316-2200



Progress Of HTS Conductor For Compact Fusion Reactor At Swip

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IAEA-CN-316-2209



Advances In The Edge Particle Control By SMBI Towards Large Devices: Fueling, Pedestal, And Divertor Impact

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IAEA-CN-316-2214



Next-Step Low-Aspect-Ratio Tokamak Design Studies

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IAEA-CN-316-2215

Research On Redundant Manipulator With Hydraulic And Motor Drive Used In Vessel Vacuum Of Tokamak Device

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IAEA-CN-316-2218



MCINO: Multi-Physics Coupling And Intelligent Neutronic Optimization Code For Tritium Breeding Blankets Of Fusion Reactors

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IAEA-CN-316-2225

Design Development Of Drift Duct For Diagnostic Neutral Beam System Of ITER

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IAEA-CN-316-2229

Runaway Simulation In ADITYA-U Tokamak Parameter Regime Using Vlasov Maxwell Model

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IAEA-CN-316-2231

Successful Commissioning & DEMOnstration Of ITER Relevant Rf Performance (1MW At 170 GHz) At ITER-India Gyrotron Test Facility

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IAEA-CN-316-2239



Proof-Of-Principle Of Parametric Stellarator Neutronics Modeling Using SERPENT2

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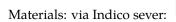
Advances In Real-Time Tokamak Control Research On TCV

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IAEA-CN-316-2243



Effect Of Zonal Structures Excited By Alfvén Modes, On Turbulence

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IAEA-CN-316-2249

Interaction Of Resonant Magnetic Perturbations With Energetic Particle Modes In KSTAR Plasmas

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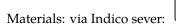
EMC3-Eirene Simulations Of Main Chamber Recyling On ITER

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IAEA-CN-316-2256



Speeding-Up Tokamak Edge Plasma Turbulence Simulations Using Generative Adversarial Networks In BOUT++

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IAEA-CN-316-2258



Burn-Up Fraction In DEMO Operation With The Direct Internal Recycling

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IAEA-CN-316-2260

Fourier Neural Operator For Plasma Modelling Across Simulation And Experiment

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IAEA-CN-316-2264



Fast Tools For Heat Flux Prediction Applied To W7-X Island Divertor Optimization

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IAEA-CN-316-2265

Dose Rate Estimation In IFMIF-DONES Lithium Loop Heat Exchanger Oil With Regard To The Different Beryllium-7 Trapping Efficiency

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IAEA-CN-316-2266

Transport And Losses Of Fusion-Born Alpha Particles In The Presence Of MHD Instabilities

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IAEA-CN-316-2269



Valuing Fusion Plants As Part Of A Future Decarbonized Electric Grid

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IAEA-CN-316-2272

Optimisation Of The Poloidal Field System For Advanced Divertor Configurations In Step

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IAEA-CN-316-2274

The New Layout And Regulation Of The âPulsatingâ Power Conversion System Of EU DEMO Well For An Effective And Safe Control Of Pulse-Dwell Transition And Increase Of Plant Efficiency

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IAEA-CN-316-2281

Subjective Scientific Readiness Levels (SSRL) For Fusion Research And Their Application To Tokamak Exploitation

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IAEA-CN-316-2290

Heuristic Predictions Of Rmp Configurations For ELM Suppression In ITER Burning Plasmas And Implications For Divertor Performance

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IAEA-CN-316-2296

A Staged Approach To Indian DEMO And Technology Roadmap

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IAEA-CN-316-2297

Geometrical And Plasma Effects On Exhaust Asymmetries In Tokamaks

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IAEA-CN-316-2300

Plasma Modification And Wall Conditioning Through Boron Particulate Injection In The Full Tungsten Environment Of WEST

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IAEA-CN-316-2304

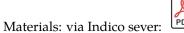
Support Laboratory For Testing And Developing Shattered Pellet Injection Components For The ITER Disruption Mitigation System

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IAEA-CN-316-2309



Fast Ion Relaxation In ITER Mediated By Alfv \tilde{A} \otimes n Instabilities Using Reduced Models

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IAEA-CN-316-2315

Turbulent Suppression Of Bursty Fast-Ion-Driven Instabilities In High-Field ST40 Experiments

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IAEA-CN-316-2328



Design Novelties In DTT Power Supply And Electrical Systems

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IAEA-CN-316-2330

First Observation Of Whistler Waves And Ion Cyclotron Emission With A Frequency Ω Higher Than Ωci In The Ohmically Heated Plasmas In The TUMAN-3M Tokamak

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IAEA-CN-316-2331

Theretical & Experimental Fusion Platform

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IAEA-CN-316-2335



High Heat Flux Testing Technology For The Qualification Of ITER Enhanced Heat Flux First Walls

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IAEA-CN-316-2337



Significance Of Precise And Accurate Isotope Ratio Measurement Of Lithium

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IAEA-CN-316-2350

Overview Of Thermonuclear Fusion Proliferation Risks

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IAEA-CN-316-2361



IAEA-INPRO Interdisciplinary Study On âLegal And Institutional Issues Of Prospective Deployment Of Fusion Facilitiesâ. Current Status

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IAEA-CN-316-2367

MHD Pressure Drops Of Liquid Metal Flows Through Multiple Electrically Coupling Ducts With U-Turn Bends In Fusion Blankets

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IAEA-CN-316-2370

The Concept Design Of The Step Heating And Current Drive System

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IAEA-CN-316-2377



Experimental Results And Plan For The Optimisation Of The ITER Neutral Beam Injector Prototypes

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Design And Development Of An Electron Bernstein Wave Heating And Current Drive System For MAST-U

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IAEA-CN-316-2386

Simulation Of Blanket Drop Accident In A Fusion Tokamak Reactor

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IAEA-CN-316-2387

EUROfusion Work Programme On Socio Economic Studies

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IAEA-CN-316-2389



Variance Reduction Methods For Nuclear Data Uncertainty Propagation

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IAEA-CN-316-2394



Latest Progress On The Design And Development Of China ITER Helium Cooled Ceramic Breeder (HCCB) TBM System

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IAEA-CN-316-2402

Isotopic Modelling Software For New Build And Fusion Fuel Applications

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IAEA-CN-316-2405



Engineering Design Of An Advanced Tritium Facility

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IAEA-CN-316-2410



Uk Fusion Regulation Compliance

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IAEA-CN-316-2411



Regulatory Challenge On The Implementation Of Artificial Intelligence For Controller In Nuclear Fusion Technology: In Case Of Indonesia

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IAEA-CN-316-2415



Performances Of The ITER Pressure Suppression System During Unstable Steam Condensation Regimes

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IAEA-CN-316-2420



Fermi: Fusion Energy Reactor Models Integrator

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IAEA-CN-316-2427



Nuclear Fusion Technology Investments, Cost Competitive And Commercial Viability

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IAEA-CN-316-2432



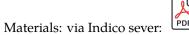
Impact Of Helium Ion Implantation On The Performance Of Silicon Carbide Composites For Breeder Blanket Applications

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IAEA-CN-316-2434



Challenges Of Integration Of Diagnostics Into Nuclear Environment

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IAEA-CN-316-2436



Activation Solver Developments Within FISPACT-II, Producing New Insights Into Nuclear Data

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IAEA-CN-316-2438

[Regular Poster Twin] Progress On Long-Pulse And ITER-Relevant-Intensity Negative Ion Beam Accelerations For ITER Neutral Beam Injector

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IAEA-CN-316-2525

[Regular Poster Twin] Contributions Of The Extended Elise And Batman Upgrade Test Facilities To The Roadmap Towards ITER NBI

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IAEA-CN-316-2526

[Regular Poster Twin] Progress Of Basic Conceptual Design Of JA DEMO

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IAEA-CN-316-2527



[Regular Poster Twin] Assessing The Technological And Physics Maturity Required For The Design Space Of The K-DEMO

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IAEA-CN-316-2528

[Regular Poster Twin] Status And Prospects For DEMO Related Developments In Europe

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IAEA-CN-316-2529



[Regular Poster Twin] Achievement Of ELM Suppression With N=4 Rmp In EAST Towards ITER Baseline Scenario

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IAEA-CN-316-2530

[Regular Poster Twin] Runaway Electron Prevention By A Passive 3D Coil In Disruption Simulations Of The SPARC And DIII-D Tokamaks

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IAEA-CN-316-2531

[Regular Poster Twin] Integration Of Rmp ELM Control With Divertor Detachment In The DIII-D Tokamak

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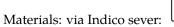
[Regular Poster Twin] Investigation Of Rmp-Induced Ion-Scale Turbulence In The Pedestal And Its Role In Accessing The Optimized High-Confinement ELM-Free State

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IAEA-CN-316-2533



[Regular Poster Twin] Resistive And 3D Effects In ELM-Suppressed H-Mode With Resonant Magnetic Perturbations In ASDEX Upgrade

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IAEA-CN-316-2534

First Observation Of Edge Impurity Behavior With N=1 Rmp Application In EAST L-Mode Plasma

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IAEA-CN-316-2116



The Compact Radiative Divertor In ASDEX Upgrade And EU-DEMO, Experiments & Simulation

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IAEA-CN-316-1757

Impact Of H, D, T And D-T Hydrogenic Isotopes On Detachment In JET ITER-Like Wall Low-Confinement Mode Plasmas

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IAEA-CN-316-2021



Edge Fluctuation-Induced Inward Particle Flux Caused By The Sawtooth Crash In The HL-2A NBI Heated Plasmas

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IAEA-CN-316-2233

Interpretative Modelling Of MAST-U Super-X And Conventional Divertor Configurations

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IAEA-CN-316-2063



Ti/Te Effects On Transport And Turbulence In EAST Low Q_95 Plasmas

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IAEA-CN-316-2211

2D Characterization Of Radiative Divertor Regimes With Impurity Seeding In DIII-D H-Mode Discharges

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Core Electron Temperature Turbulence And Transport During Sawtooth Oscillations In The DIII-D Tokamak

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IAEA-CN-316-2190

Overview Of Plasma-Wall Interactions Studies In JET-ILW H D, T And DT Campaigns

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IAEA-CN-316-1896

A New Plasma Control System And Its Appilication In First 1MA Operation On HL-2M

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IAEA-CN-316-2134

Preliminary Compact Torus Injection Experiments On Keda Torus Experiment Reversed Field Pinch

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IAEA-CN-316-2360



Scaling Of Intrinsic Toroidal Rotation With Stored Energy In Ohmic Plasmas Of ADITYA-U Tokamak

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IAEA-CN-316-2130

Gyrokinetic Study Of Fast Ion Effects On Alfvenic Modes And Microturbulence In KSTAR Plasmas

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Experimental And Gyrokinetic Studies Of Turbulence And Transport Under The Stepping-Up Of NBI Power On EAST

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IAEA-CN-316-1652

A Neural Network-Based Semi-Empirical Turbulent Transport Model Dekanis For Integrated Simulations Of Upcoming Fusion Devices

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IAEA-CN-316-1800



The Effect Of Intermittent Divertor Filaments On The Divertor Heat Flux In NSTX

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IAEA-CN-316-2278

[Rapporteured] Successful Prediction Of Tokamak Transport In The L-Mode Regime

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IAEA-CN-316-1598



[Rapporteur] The L-Mode Tokamak Confinement, From Full-Radius Integrated Modelling Validation On ASDEX Upgrade To Reactor Predictions

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IAEA-CN-316-1879



Hydrogen Isotope Effects On Microturbulence And Linear To Saturated Ohmic Confinement Transition

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IAEA-CN-316-1690



Power And Isotope Effects On The ITER Baseline Scenario With W And W-Equivalent Radiators In DIII-D

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IAEA-CN-316-2604

Modelling Of Plasma Facing Component Erosion, Impurity Migration, Dust Transport And Melting Processes At JET-ILW

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IAEA-CN-316-2245



First Results Of Laser-Induced Desorption â" Quadrupole Mass Spectrometry (LID-QMS) At JET-ILW

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IAEA-CN-316-2606

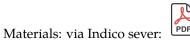
Enhancement In Plasma Performance And Impurity Control Using Argon-Hydrogen Fueled Glow Discharge Wall Conditioning In ADITYA-U Tokamak

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IAEA-CN-316-2127



Equilibrium, Stability, And Disruption Calculations Supporting The Design And Assembly Of The SPARC Tokamak

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IAEA-CN-316-1586

Effects Of System Nonuniformity On Toroidal Alfvén Eigenmodes Nonlinear Saturation

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IAEA-CN-316-1590



J-TEXT'S Recent Efforts On Machine Learning Cross Tokamak Disruption Prediction

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IAEA-CN-316-1618

Towards Burning Plasmas: Theory And Simulations

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Plasma Rotation Effects On The Resistive Wall Modes In The Negative Triangularity Tokamaks

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IAEA-CN-316-1632

Upgrade Of Relax Machine For Studying Both Low Aspect Ratio Circular Tokamak And Reversed-Field Pinch Plasmas

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IAEA-CN-316-1676



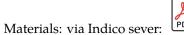
Helical FusionâS Pathway To Fusion

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IAEA-CN-316-1744



Collisional-Radiative Simulation Of Impurity Assimilation, Radiation And MHD Response After ITER Shattered Pellet Injection

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IAEA-CN-316-1746



Whole Device Modeling Of The FuZE Sheared-Flow-Stabilized Z Pinch

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IAEA-CN-316-1779

Demonstration Of Refueling/Refluxing Of FRC Core Via Axial Plasmoid Injection

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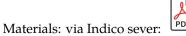
Recent Advances In The Understanding Of Fluctuation Activities Of High-Beta Plasma In RT-1

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IAEA-CN-316-1797



Progress In Muon-Catalyzed Fusion Research

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IAEA-CN-316-1805



Planning Study On Korea Fusion Engineering Advanced Test Complex

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IAEA-CN-316-1862

Development Of Virtual KSTAR For The Acceleration Of Fusion Research

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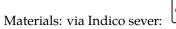
Recent Results From, And Plans For, LTX-Beta

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IAEA-CN-316-1910



The Harmonia Project: A Joint Effort To Study The Interplay Between Heavy Impurity Transport And The Current Density Profile Driven By The Lower Hybrid Wave In The West Tokamak

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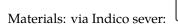
Impact Of An Electron-Cyclotron Source On Tokamak Turbulence

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IAEA-CN-316-2008



Neutral Beam Efficiency In A Thermonuclear Neutron Source Tokamak

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IAEA-CN-316-2011



Path To Commercial Fusion Energy Based On Sheared-Flow-Stabilized Z Pinches

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IAEA-CN-316-2030

Progress Towards Fast Ion Study In Thailand Tokamak-1

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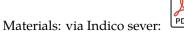
A Public-Private Development Path For The High-Field Compact Magnetic Mirror Approach To Fusion

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Accelerating Fusion Energy Toward A Viable Fusion Power Plant: Kyoto Fusioneering'S Pathway To Commercialisation

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IAEA-CN-316-2154



Helicon And High Harmonics Fast Waves (HHFW) In FRC Configurations

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The High-Field Axisymmetric Magnetic Mirror Approach To Fusion

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Exploring The Negative-Triangularity Pathway To Fusion With Manta

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IAEA-CN-316-2283

Inter-ELM Pedestal Turbulence And Edge Current Density Dynamics

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IAEA-CN-316-2285



The Physics Basis For A Centrifugal Mirror Machine

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IAEA-CN-316-2323



Integrated Plasma And Engineering Design And Assessment For Tokamak Reactor Components

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IAEA-CN-316-2339



Stellarator Fusion Power Plant Enabled By Arrays Of Planar Coils

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IAEA-CN-316-2381



Reimagining The Design Of Fusion Energy Systems In Support Of A Just Energy Transition

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IAEA-CN-316-2395



Using The Sociotechnical Readiness Level Framework To Inform The Design And Development Of Fusion Power Plants

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IAEA-CN-316-2400

Technological Advances Towards A Possible Liquid Lithium PFC-Based Pathway To More Economically Attractive Magnetic Fusion Reactors

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IAEA-CN-316-2413



The Global Fusion Industry In 2023 â" Results Of The Fusion Industry Association Survey Providing An Overview Of The Plans, Timelines, And Investment In Commercial Fusion

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The Princeton Field Reversed Configuration (PFRC) For Compact Nuclear Fusion Power Plants

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IAEA-CN-316-2418



An Assessment Of The Future Commercial Viability Of Selected Raw Materials Including Beryllium, Tungsten And Zirconium For Use In A Global Fleet Of Fusion Reactors

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IAEA-CN-316-2429



Construction And Preliminary Results Of Huazhong Field Reversed Configuration Device

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IAEA-CN-316-2433



Fusion Studies In Small And Tabletop Devices Based On Scalability Properties Of Plasma Focus And Exploration Of New Operational Regimes

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Towards Visualising Digital Twins For Accelerating Fusion Research

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Development Of Advanced Steels For High Temperature Breeder Blanket Applications

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Investigating Tritium Retention In Tungsten Plasma-Facing Wall Components At The Joint European Torus (JET)

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Fusion Energy: Prosperity, Challenge And Evolution

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IAEA-CN-316-2593



Technology Readiness Level Assessment Of Magnetic Confinement Fusion Based On The Tokamak Principle

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Public Engagement And Workforce Development At Pppl

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Multiobjective Lifecycle Budget Allocation For Fusion Power Plant Installation

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Plasma Net: A Community For Engagement And Workforce Development In The Us

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Experimental Conditions To Access High-Performance H-Mode Plasmas With Small ELMs At Low Collisionality In JET-ILW

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Surrogates Of The 3D Edge Turbulence Code Storm Via Neural PDE Solvers

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Constrained Multi-Concept Bayesian Optimization For Fusion Applications

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First Integration Of Negative Triangularity Plasmas With High Core Radiation Fraction

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IAEA-CN-316-2608

The ITER ICRF System: Latest Technological Developments, Coupling Studies And Compatibility With High Z Wall

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Fundamental Data Activities At The Iaea In Support Of Fusion Energy Research

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IAEA-CN-316-2610



[Regular Poster Twin] Hydrogen Isotope Effects On Microturbulence And Linear To Saturated Ohmic Confinement Transition

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IAEA-CN-316-2488

[Regular Poster Twin] A Neural Network-Based Semi-Empirical Turbulent Transport Model Dekanis For Integrated Simulations Of Upcoming Fusion Devices

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[Regular Poster Twin] Gyrokinetic Study Of Fast Ion Effects On Alfvenic Modes And Microturbulence In KSTAR L-Mode Plasmas

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[Regular Poster Twin] Overview Of Plasma-Wall Interactions Studies In JET-ILW H D, T And DT Campaigns

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[Regular Poster Twin] 2D Characterization Of Radiative Divertor Regimes With Impurity Seeding In DIII-D H-Mode Discharges

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[Regular Poster Twin] Interpretative Modelling Of MAST-U Super-X And Conventional Divertor Configurations

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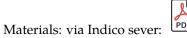
[Regular Poster Twin] Impact Of H, D, T And D-T Hydrogenic Isotopes On Detachment In JET ITER-Like Wall Low-Confinement Mode Plasmas

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[Regular Poster Twin] The Compact Radiative Divertor In ASDEX Upgrade And EU-DEMO, Experiments & Simulation

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IAEA-CN-316-2506

[Regular Poster Twin] Radio-Frequency Heating Schemes In JET Deuterium-Tritium Plasmas In Preparation Of ITER

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[Regular Poster Twin] Sustainment Of High Qmin, High Î'n Plasmas On DIII-D Towards Steady-State Advanced Tokamak Fusion

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[Regular Poster Twin] Long Pulse High Li Steady State Scenario On KSTAR

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[Regular Poster Twin] Tritium-Rich Scenario For High Fusion Power In JET DTE2

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IAEA-CN-316-2516

[Regular Poster Twin] The JET Hybrid Scenario In D, T And D-T

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[Regular Poster Twin] Mechanisms Of The Global Force Reduction In Disruptions - Experimental Validation Of Mitigated And Unmitigated Vdes With The MHD Code Jorek

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[Regular Poster Twin] Modelling Of Runaway Electron Dynamics In Tokamak Disruptions

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[Regular Poster Twin] Bifurcated Merging Operations Of Two Spherical Tokamak Plasmas For Reconnection Heating And Helicity Injection

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[Regular Poster Twin] Toroidal Modeling Of Interactions Between Internal Kink Instability And Energetic Ions In HL-2M

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[Regular Poster Twin] Prediction Of Pellet Mass Thresholds For ELM Triggering In Low-Collisionality, ITER-Like Discharges

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[Regular Poster Twin] Non-Linear MHD Investigations Of High-Confinement Regimes Without Type-I ELMs In ASDEX Upgrade And JT-60SA

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[Regular Poster Twin] Development Of High Current Baseline Scenario For High Deuterium-Tritium Fusion Performance At JET

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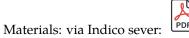
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[Regular Poster Twin] The L-Mode Tokamak Confinement, From Full-Radius Integrated Modelling Validation On ASDEX Upgrade To Reactor Predictions

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[Regular Poster Twin] Successful Prediction Of Tokamak Transport In The L-Mode Regime

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[Pd Poster Twin] Power And Isotope Effects On The ITER Baseline Scenario With W And W-Equivalent Radiators In DIII-D

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[Pd Poster Twin] First Results Of Laser-Induced Desorption â" Quadrupole Mass Spectrometry (LID-QMS) At JET-ILW

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[Regular Poster Twin] Commonwealth Fusion Systems' High-Field Path To Fusion Energy

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[Regular Poster Twin] Design And Technology Maturation Of General Atomics Steady-State Advanced Tokamak Fusion Pilot Plant

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[Regular Poster Twin] Pathways To Fusion Energy â" The ITER Contributions And Views

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[Regular Poster Twin] The European Path Towards Fusion Electricity

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[Regular Poster Twin] Pathways To Fusion Energy At The QST

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[Regular Poster Twin] The High Field Stellarator Direct Path To Fusion Energy

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[Regular Poster Twin] Ex-Fusion: Advancing High Power High Repetition Laser As A Platform For Laser Fusion Power

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Commonwealth Fusion Systems' High-Field Path To Fusion Energy

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Design And Technology Maturation Of General Atomics Steady-State Advanced Tokamak Fusion Pilot Plant

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Pathways To Fusion Energy â" The ITER Contributions And Views

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The European Path Towards Fusion Electricity

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Pathways To Fusion Energy At The QST

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The High Field Stellarator Direct Path To Fusion Energy

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Inertial Fusion Energy With High-Gain Proton Fast Ignition

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Ex-Fusion: Advancing High Power High Repetition Laser As A Platform For Laser Fusion Power

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[Regular Poster Twin] Reimagining The Design Of Fusion Energy Systems In Support Of A Just Energy Transition

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