

FEC2025

30th IAEA FUSION ENERGY CONFERENCE

13-18 OCTOBER **2025**

O CHENGDU, PEOPLE'S REPUBLIC OF CHINA

PROGRAMME AND CONFERENCE MATERIAL



Organized by the:



Hosted by the People's Republic of China through the China Atomic Energy Authority (CAEA)



30th IAEA Fusion Energy Conference 13th - 18th October 2025 Chengdu People's Republic of China

Programme & Conference Material

Introduction

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

The 30th IAEA Fusion Energy Conference (FEC 2025) aims to provide a global forum for the exchange of scientific and technical results in fusion energy research and development on a range of themes, including experiments and theory for magnetic, inertial, and innovative confinement concepts, fusion technology and materials, and potential pathways to fusion energy.

According to the IAEA's Fusion Device Information System (FusDIS), as of 2025, there are almost 150 experimental fusion devices and testing facilities operating, under construction or being planned, and more than 20 fusion plant designs under development. Recent scientific and technical advances, coupled with a dynamic private sector, and the pressing concerns of climate change and energy security, have shifted the focus to addressing the remaining challenges. These include demonstrating the technological feasibility of fusion power and ensuring its safety and economic viability as a sustainable energy source.

The scope of FEC 2025 is, therefore, intended to reflect the priorities of this new era in fusion energy research, development, demonstration, and preparation to deployment. The conference aims to serve as a platform for sharing the results of research and development efforts in both the public and private sector, that have been shaped by these new priorities, and to thereby help in pinpointing worldwide advances in fusion experiments, theory, technology, engineering, materials, advanced concepts, safety, socioeconomics, and commercialization pathways. The conference will thus help in defining the way forward.

With the participation of international organizations as well as more than 50 countries and a great number of research organisations, academia, and private companies, 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 30th IAEA Fusion Energy Conference is being hosted by the China Atomic Energy Authority (CAEA) from 13 to 18 October 2025. 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) London, United Kingdom (2023).

Programme Committee

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Local Organisation:

Ning Shen Haoyue Chen Li Yang Yang Chen Southwestern Institute of Physics Chengdu, People's Republic of China

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.

This book contains all synopses accepted for the conference, including their associated pre-print, presentation and poster. Synopses 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

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.

Individuals 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 July 28, 2025)

- 1 Keynote presentations
- 23 Overview talks
- 99 Regular talks
- 4 Rapporteur/Rapporteured talks
- 44 Overview posters
- 691 Regular posters
- 2 Post deadline talks
- XX 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" after the paper number.

Participation in an IAEA Scientific Meeting

Topics

OV - Overview

Device overview, programme overview, topic overview

EX - Magnetic Fusion Experiments including Validation

Experimental plasma physics including validation

EX-C - Confinement

Confinement and transport, including scenario development

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, 3D-physics

EX-M - Material Interactions

Materials-plasma interactions

EX-P - Pedestal, Core-edge, Turbulence

Pedestal physics and core-edge integration, turbulence, L-H transition

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

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, 3D-physics

TH-M - Material Interactions

Materials-plasma interactions

TH-P - Pedestal, Core-edge, Turbulence

Pedestal physics and core-edge integration, turbulence, L-H transition

TH-H - Heating & Current Drive

Heating and current drive physics, antenna-plasma interactions

TEC - Fusion Energy Technology

Not plasma interaction

TEC-MTL - Material Developments

Material Developments

TEC-IVC - In Vessel Components

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 & technology research

TEC-CTL - Control

Control software and hardware, control algorithms and theory, control demonstration, Aldriven control

TEC-R - Robotics and Remote Maintenance

Robotics and Remote Maintenance

TEC-T - Tritium

Tritium

IFE - Inertial Fusion Energy

IFE - Inertial Fusion Energy

Experiments, theory and modelling, materials, power plant design, targets, drivers

IAC - Innovative and Alternative Fusion Concepts

IAC - Innovative and Alternative Fusion Concepts

Experiments, theory and modelling, linear, non-magnetic, magneto-inertial, hybrid concepts

PWF - Pathway to Fusion

PWF - Pathway to Fusion

Fusion plants (e.g., DEMO, pilot plants), timelines, roadmaps, supporting facilities, partnership frameworks, commercialization, supply chains, education and training, socioeconomic and environmental aspects, licensing

Conference Location

The 30th Fusion Energy Conference (FEC2025) will be held at Tianfu International Conference Center in Chengdu, People's Republic of China. The Conference will be organized by the IAEA and hosted by the People's Republic of China through the China Atomic Energy Authority (CAEA).



FEC Programme 2025

Day		Day	Wedn	esday	Day	Thursday		Day		Friday		Day	Saturda	ıy
Date	October 14, 2025	Date	October	15, 2025	Date	October 16, 2	2025	Date	Oc	etober 17, 2025		Date	October 18,	2025
09:00 - 11:00	O/1 Opening	08:30 – 10:35	OV Stellarator, Spherical	Theory &	08:30 – 10:10	EX/3 Long Pulse	P3 Posters	08:30 – 10:10	TH/6 Next Generation Modelling	TEC/3 Operation Control	P5 Posters	08:30- 10:10	EX/11 Transport Barriers	P7 Posters
11:00 - 11:30	FEC Technical Programme	10:35 – 11:05	Coffee Break	P1	10:10- 10:40				Coff	ee Break				
11:30 - 12:20	OV/I Overview: Fusion Science &Technology	11:05 – 12:45	TEC/1 ITER Technology	Posters	10:40 – 12:20	IFE/1 Inertial Fusion Energy	P3 Posters	10:40 – 12:40	EX/8 TH/7 & PD/1 Scenarios & Control	TH/8 & EX/9 Burning Plasma	P5 Posters	10:40 - 13:10	OV/5 Innovative Facilities and Technologies	P7 Posters
12:20 -	Lunch	12:45 – 14:00	Lui	nch	12:20 - 14:00	Lunch		12:40 - 14:00		Lunch		13:10 - 14:20	Lunch	
14:00	Lunch	12:45 – 14:00	Lunch	Event	12:20 – 14:00	Lunch Eve	ent	12:40 – 14:00		Lunch Event		13:10- 14:20	Lunch Ev	vent
14:00 -	O V/2	14:00 -	TH/1 & EX/1	P2	14:00 –	EX/4 & TH/4 & TH/3 EX/5	P4	14:00 -	TH/9 & PD/2	TEC/4	P6	14:20	PWF/I	1
16:05	Overview: Tokamak Progress 1	15:40	Exhaust	Posters	15:40	Disruption & RE Pedesta	l Posters	15:40	Disruption, RE & Stellarator	Fusion Nuclear Technology	Posters	16:00	Pathways to	Fusion
16:05 - 16:35	Coffee Break	15:40 - 16:10		Coffee Break 16:00- 16:30					Coffee Br	eak				
16:35 -	OV/3	16:10 –	EX/2 & TH/2	P2	16:10 –	EX/6 TH/5 & TEC/2 & IAC/1	P4	16:10 –	TH/10 & EX/10	TEC/5 & IAC/2	P6	16:30	Closing	
18:40	Overview: Tokamak Progress 2	17:50	Core-edge Integration	Posters	18:10	Exhaust & PFC & Control Material	Posters	18:10	Tungsten	Enabling Technologies	Posters	17:30	Ciosing	5

Tuesday 14 October 2025

O/1		FEC Technical Programme	(11:00-11:30)
11:00	O/1-1	TBC Technical Programme Presentation	ТВС

Overview 1: Fusion Science and Tech-OV/1 nology

Chairperson: Xuru Duan (China) (11:30-12:20)

Co-Chairperson: IAEA

11:30	OV/1-1		China
		Overview of CRAFT project progress	
11:55	OV/1-2	P. Barabaschi	ITER
		Progress of ITER and its value for fusion	

Overview 2: Tokamak Progress 1 OV/2

Chairperson: Fernanda Rimini (UK) Co-Chairperson: IAEA (14:00-16:05)

14:00	OV/2-1	N. Vianello Results from the last DD and DT JET campaigns in the framework of the EUROfusion Tokamak Exploitation activ-	Italy
14:25	OV/2-2	ity A. Moser Overview of DIII-D research towards ITER and future Fusion Power Plants	USA
14:50	OV/2-3	X. Gong Overview of recent experimental results on EAST in support of ITER new research plan	China

15:15	OV/2-4	J. Bucalossi Overview of WEST contributions to the new ITER baseline	France
15:40	OV/2-5	and fusion power planst J. Garcia First JT-60SA plasma operation and plans in view of ITER and DEMO	France

OV/3 Overview 3: Tokamak Progress 2

Chairperson: Rui Ding (China) (16:30-18:30)

Co-Chairperson: IAEA

16:30	OV/3-1	Y. Nam	Korea
		Overview of KSTAR experiments and future plan	
16:55	OV/3-2	T. Pütterich	Germany
		Overview of ASDEX Upgrade results	Ĭ
17:20	OV/3-3	W. Zhong	China
		HL-3 research towards high-performance plasma and	
		power exhaust solution	
17:45	OV/3-4	C. Theiler	Switzerland
		Progress and innovations in the TCV tokamak research pro-	
		gramme	
18:05	OV/3-4	J. Hillesheim	USA
		Overview of Preparation for SPARC Q>1 and Retiring	
		Physics Risks For ARC	

Wednesday 15 October 2025

OV/4 Overview 4: Stellarator, Theory and Spherical Tokamak

Chairperson: Francesca Poli (ITER Organization) (08:30-10:35)

Co-Chairperson: IAEA

08:30 OV/4-1 **O. Grulke** Germany

		Overview of Wendelstein 7-X high-performance operation	
08:55	OV/4-2	K. Tanaka	Japan
		Recent advances in plasma control and physics research in	-
		the large helical devices	
09:20	OV/4-3	R. Churchill	USA
		Overview of stellarator physics and engineering simulation	
		and modelling for fusion pilot plant design and optimiza-	
		tion	
09:45	OV/4-4	F. Jenko	Germany
		Towards Digital Twins of fusion systems	•
10:10	OV/4-5	J. Harrison	UK
		Overview of the MAST Upgrade physics programme testing	
		novel concepts at low aspect ratio to inform future devices	

TEC/1 ITER Technology

Chairperson: Hiroyasu Tanigawa (Japan)	(11:05-12:45)
Co-Chairperson: IAEA	

11:05	TEC/1-1	S. Yoon	Korea
		The 2024 new baseline ITER research plan	
11:25	TEC/2-3	A. Loarte	ITER
		Change of wall material from beryllium to tunsgten in the	
		new ITER Baseline: Physics basis, implications for research	
		plan and wall designs for its operational phases	
11:45	TEC/2-2	J. Reich	ITER
		ITER Core Machine Assembly Progress	
12:05	TEC/2-5	C.H. Noh	ITER
		Recovery of ITER sector modules from critical issues	
12:25	TEC/2-4	D. Marcuzzi	Italy
		Achievement at the ITER Neutral Beam Test Facility and	·
		prospects for the R& D activities within the ITER research	
		plan	

TH/1 & Exhaust EX/1

(14:00-15:40) Chairperson: Fulvio Militello (UK)

Co-Chairperson: IAEA

14:00	TH/1-1	B. Zhu	USA
		DivControlNN: A Game-Changer for Real-Time Divertor	
		Plasma Detachment Control in Magnetic Fusion Devices	
14:20	EX/1-1	K. Verhaegh	UK
		The physics basis for implementing Alternative Divertor	
		Configurations on reactors	
14:40	TH/1-3	H. Bufferand	France
		Hierarchy of turbulent transport models with the	
		SOLEDGE3X code	
15:00	TH/1-2	W. Zholobenko	Germany
	,	Validated, global edge-SOL turbulence simulations in vari-	J
		ous ELM-free regimes	
15:20	TH/1-4	A. Shukla	USA
10.20	111/11	Direct comparison of gyrokinetic and fluid scrape-off layer	0011
		simulations	
		om control of the con	

EX/2 & TH/2 **Core-edge Integration**

Chairperson: Alessandro Bortolon (USA) Co-Chairperson: IAEA (16:10-17:50)

16:10	Ex/2-2	C. Giroud	UK
		High performance ELM-free semi-detached scenario sus-	
		tained at high-current in JET DTE3	
16:30	EX/2-1	M. Dunne	Germany
		The physics of ELM-free regimes in EUROfusion tokamaks	
16:50	EX/2-3	D. Ernst	USA
		Advances in core-edge integration of low collisionality qui-	
		escent H-mode regimes relevant to burning plasmas	
17:10	EX/2-4	F. Scotti	USA
		Pathways to improved core-edge integeration for negative	
		triangularity scenarios in the DIII-D Tokamak	
17:30	TH/2-1	M. Schneider	France
		Integrated Modelling activities in support of the ITER re-	
		baseline	

Thursday 16 October 2025

EX/3	Long Pulse	

Chairperson: Masaki Osakabe (Japan) Co-Chairperson: IAEA (08:30-10:10)

08:30	EX/3-1	S. Bannmann Attaining Tokamak level performance through plasma den-	Germany
08:50	EX/3-4	sity profile shaping at Wendelstein 7-X R. Dumont WEST Long-pulse achievements in support of next-step fu-	France
09:10	EX/3-3	sion devices G. Xu	China
09:30	EX/3-2	Long pulse ELM-FREE H-Mode regime with feedback- controlled detachment under boronized metal wall in EAST J. Huang	China
		Development of steady-state operation scenarios with full tungsten limiter/divertor in ITER-relevant configuration on EAST	
09:50	EX/3-5	H. Kim Development of high-performance long-pulse discharge in KSTAR	Korea

Inertial Fusion Energy IFE/1

Chairperson: Sylvie Jacquemot (France) Co-Chairperson: IAEA (10:40-12:20)

10:40	IFE/1-1	Y. Arikawa High gain fusion burning in inertial confinement fusion	Japan
11:00	IFE/1-2	plasma S. Le Pape Foams as a Pathway to Energy from Inertial Fusion (FoPIFE): overview of recent results	France

11:20	IFE/1-3	N. Borisenko	Russia
		Targets developed in the 21st century at the P.N. Lebe-	
		dev Physical Institute of RAS to study the extreme matter	
		physics using high-power laser facilities	
11:40	IFE/1-4	F. Wu	China
		Prediction of the implosion dynamics via AI enhanced sim-	
		ulations for the Double-Cone Ignition Scheme	
12:00	IFE/1-5	J. Ogino	Japan
		Development of innovative repeatable power laser for laser	. 1
		fusion	

EX/4 & Disruption and RE TH/3

Chairpe Co-Chai	(14:00-15:40)		
-			
14:00	EX/4-1	S. Sabbagh	USA
		First demonstration of disruption avoidance by real-time	
		physics-based disruption event characterization and fore- casting on KSTAR	
14:20	EX/4-2	L. Zheng	China
		Thermal quench dynamics and heat flux distribution during	
1.4.40	EN /4 0	massive-impurity-injection triggered disruption in EAST	TICA
14:40	EX/4-3	E. Hollman Characterization of runaway impact on instrumented sacri-	USA
		ficial limiters on DIII-D	
15:00	TH/3-1	C. Liu	China
		Analysis and simulation of effective runaway electron miti-	
15:20	EV /4.4	gation using a passive coil in J-TEXT Tokamak	USA
13:20	EX/4-4	J. Levesque Changes in disruption dynamics during the first operation	USA
		of a Runaway Electron Mitigation Coil (REMC) on a toka-	
		mak	

TH/4 & EX/5

Pedestal

Chairperson: Philip Snyder (USA) Co-Chairperson: IAEA (14:00-15:40)

14:00	TH/4-1	J.K. Park New understanding of resonant layer response via extended	Korea
14:20	TH/4-2	drift MHD N. Lil Transition from Bursting ELMs to Continuous Turbulence	USA
14:40	EX/5-1	Fluctuations in High SOL Density Regimes S. Liu	China
		First edge-localized mode suppression with lower hybrid waves on the EAST Tokamak	
15:00	EX/5-2	J. Kumar Non-Inductive current drive at zero loop voltage using HCD PAM laucher on ADITYA-U	India
15:20	EX/5-3	T. Odstrcil Observation of pedestal ion temperature screening of high- Z impurities in the hybrid scenario on DIII-D	USA

EX/6

Exhaust and Control

Chairperson: Alex Creely (USA) (16:10-18:10)

Co-Chairperson: IAEA

16:10	EX/6-1	C. Killer	Germany
		Drift flows impact island divertor operation in Wendelstein	·
		7-X	
16:30	EX/6-2	C. Byun	USA
		Real-time feedback control of radiation front position for de-	
		tachment in multi-device studies: application of machine	
		learning on DIII-D and KSTAR	
16:50	TH/5-1	E. Kaveeva	Russia
		First SOLPS-ITER wide grid simulations of the ITER burn-	
		ing plasma scrape-off layer	
17:10	EX/6-3	E. Tonello	Switzerland

		Modelling divertor solutions for power exhaust: in-depth experimental validation in TCV	
17:30	TH/5-2	X. Ma	USA
		SOLPS-ITER Simulations of an X-point Radiator in the DIII-	
		D High-beta Hybrid Plasmas	
17:50	IAC/1-1	H. Gota	USA
		Breakthrough in Field-Reversed Configuration Formation	
		and Sustainment via Neutral-Beam Injection in C-2W	

TEC/2 & EX/7

PFC and Materials

Chairpei Co-Chai	(16:10-18:10)		
16:10	TEC/2-1	V. Lamaison WEST operation - reliability and availability of a long pulse fusion tokamak	France
16:30	TEC/2-2	M. Richou Actively cooled plasma facing components design for W7-X and JT-60SA in support of the ITER divertor	France
16:50	TEC/2-3	J. Coburn Advancing Plasma-Facing Materials for Fusion Pilot Plants at DIII-D	USA
17:10	TEC/2- 4a	G.M. Polli	Italy
		The Divertor Tokamak Test Facility: Machine design construction and commissioning	
	TEC/2- 4b	S. Rocella	Italy
		Design and qualification activity of the first divertor of the DIVERTOR TOKAMAK TEST FACILITY	
17:30	TEC/2-5	J. Du Performance evaluation of tungsten fiber-reinforced tung- sten composites developed at SWIP for application in nu- clear fusion reactors	China
17:50	EX/7-1	D. Matveev Analysis of fuel retention and recovery in JET with BE-W wall	Germany

Friday 17 October 2025

Next Generation Modelling TH/6

Chairperson: Eisyung. Yoon (Korea) Co-Chairperson: IAEA (08:30-10:10)

08:30	TH/6-1	N. Aiba H-mode operation scenarios in JT-60SA initial research phase predicted by integrated core-pedestal-SOL/divertor simulation	Japan
08:50	TH/6-2	H. Meyer	UK
09:10	TH/6-3	UK STEP towards a fusion power plant plasma D. Kennedy A TALE OF TWO (VISCO)CITIES Electromagnetic Turbulence and Transport Bifurcations: Implications for Next-Generation Fusion Power Plants	UK
09:30	TH/6-4	R. Zhao Globall dispersion and nonlinear dynamics in plasmas modeled for JT-60U strongly reversed magnetic shear configuration exhibiting a signature of ITBS from L-Mode characteristics	Japan
09:50	TH/6-5	K. Kim Integrated Modeling of DIII-D Super H-Mode using Improved Pedestal Physics and Integrated Core-Pedestal-Boundary Physics to Optimize Fusion Performance	USA

TEC/3 **Operation Control**

Chairperson: Michael Porton (UK) (08:30-10:10)

Co-Chairperson: IAEA

08:30	TEC/3-1	Y. Morishita Development of a data assimilation system ASTI toward	Japan
08:50	TEC/3-2	DIGITAL TWIN control of fusion plasma M. Kostuk Automatic Between-shot Kinetic Equilibria and Neutral	USA
09:10	TEC/3-3	Beam-Heat Load on DIII-D Using Supercomputers E. Kolemen	USA

		Artificial Intelligence for tokamak fusion: Advancements in	
		diagnostics, control, and scenario optimization	
09:30	TEC/3-4	S. Jachmich	ITER
		ITER disruption mitigation system design and application	
		strategy	
09:50	TEC/3-5	A. Krasilnikov	Russia
		TRT plasma control complexes conceptual design on the	
		base of the ITER fusion technology development	

Scenarios and Control

Chairperson: Wulyu. Zhong (China) Co-Chairperson: IAEA (10:40-12:40)

10:40	EX/7-1	T. Wakatsuki	Japan
		Development of Low Inductive Electric Field Plasma Start- up in JT-60SA	
11:00	TH/7-1	H. Kim	Korea
		Multi-machine validation of plasma initiation modelling	
11:20	EX/7-2	and prospects for future devices S. Inoue	Japan
	•	Development of equilibrium control simulattor and experi-	<i>y</i> 1
		mental validation of advanced ISO-Flux equilibrium control during the first operational phase of JT-60SA	
11:40	EX/7-3	T. Kinoshita	Japan
		Direct control of turbulence for improved plasma confine-	
12:00	EX/7-4	ment M. Baruzzo	Italy
12.00	EX/7-4	Plasma control experiments in JET deuterium-tritium plas-	italy
		mas	
12:20	PD/1-1	TBC	TBC
		TBC	

TH/8 & EX/8

Burning Plasma

Chairperson: Alexander Melnikov (Russia) (10:40-12:40)

Co-Chairperson: IAEA

10	0:40	TH/8-1	J. Wang Comprehensive Simulations of Bursting and Non-Bursting	Japan
1	1:00	TH/8-1	Alfvén Waves in ICRF Heated Tokamak Plasmas F. Zonca	Italy
_		111,01	Theory and simulation of phase space transport in burning	1001)
1	1:20	EX/8-2	plasma S. Sharapov	UK
			Fusion alpha-particle -driven Alfen eigenmodes in JET DT plasmas: experiments and theory	
1	1:40	TH/8-3	A. Könies Turbulence, zonal flows, and global modes in burning plas-	Germany
			mas: code development and simulations	
12	2:00	EX/8-2	F. Turco Simulation of alpha power dynamics in DIII-D	USA
1	2:20	EX/8-3	G. Xiao	China
			Advancing Tritium Fueling for DT Fusion in HL-3: Innovations in SMBI Techniques and Physics-Based Tritium Fuel-	
			ing Strategies	

TH/9 & PD/2

Disruption, RE, Stellarator

Chairperson: Murakami Sadayoshi (Japan) (14:00-15:40)

Co-Chairperson: IAEA

14:00	TH/9-1	D. Hu IOPEV simulation of injection assimilation and radiation	China
		JOREK simulation of injection assimilation and radiation asymmetry during ITER H-mode dual SPIs	
14:20	TH/9-2	H. Bergström	Germany
		Hybrid kinetic-MHD studies of runaway electron beam ter-	
		mination events	
14:40	TH/9-3	Y. Lee	Korea

		Modelling of mildly relativistic runaway electrons - development of reduced-kinetic model and validation in KSTAR	
		ohmic startup	
15:00	TH/9-4a	C. Zhu	China
		A novel method to optimize omnigenity like quasisymmetry	
		for stellarators	
	TH/9-4b	J.L.V. Garasa	Spain
		Piecewise omnigenous fields: a radically new family of op-	•
		timized magnetic fields for stellarator reactors	
15:20	PD/2-1	TBC	TBC
		TBC	

Fusion Nuclear Technology TEC/4

Chairperson: Moises Weber (Spain) Co-Chairperson: IAEA (14:00-15:40)

14:00	TEC/4-1	R. Villari Neutronics for ITER nuclear phase: insights and lessons	Italy
14:20	TEC/4-2	learnt from JET DT operation E. Bernard Anticipating tritium impact and transfer in fission and fu-	France
14:40	TEC/4-3	sion power plants I. Palermo Overview of the DCLL breeding blanket for HELIAS 5-B and	Spain
15:00	TEC/4-4	further steps towards a novel QI device Y.H. Park Experimental study on tritium release from LI2TIO3 peb-	Korea
15.20	TECHE	bles as tritium breeder through international collaboration between KOREA and CHINA	T
15:20	TEC/4-5	T. Akagi Accomplishment of high duty cycle beam commissioning of Linear IFMIF Prototype Accelerator (LIPAc) at 5 MeV, 125 mA D+	Japan
		IIII DT	

TH/10 & EX/9

Tungsten

(16:10-18:10) Chairperson: Marco Wischmeier (Germany)

Co-Chairperson: IAEA

16:10	TH/10-1	D. Fajardo	Germany
		Theory-based integrated modelling of tungsten transport:	•
		validation in present-day tokamaks and predictions for	
		ITER	
16:30	EX/9-1	Y. Corre	France
		Testing tungsten plasma facing components in WEST and	
		AUG tokamaks: Lessons for ITER	
16:50	TH/10-2	S.G. Baek	USA
		Numerical modelling and experimental assessment of RF	
		sheath generation due to far-field RF electric field	_
17:10	TH/10-3	H. Kumpulainen	Germany
		Simulation of tungsten erosion and edge-to-core transport	
		in neon-seeded JET plasmas	_
17:30	EX/9-2	J. Hobirk	Germany
		Tungsten limiter Start-up experiments in different boroniza-	
		tion states in support of ITER	
17:50	EX/9-3	S. Kim	USA
		Developing long pulse hybrid scenario in DIII-D and KSTAR	
		for W-compatible steady-state operation toward ITER	

TEC/5 & IAC/2

Enabling Technologies

Chairperson: Ge Zhuang (China) Co-Chairperson: IAEA (16:10-18:10)

16:10	TEC/5-1	R. Skilton	UK
		Overview of recent results in research tacking remote main-	
		tenance challenges of future fusion energy devices	
16:30	TEC/5-2	B. Sorbom	USA
		Qualification, Fabrication, and Commissioning of High-	
		Temperature Superconducting Magnets for Compact Fusion	
16:50	TEC/5-3	K. Tsuchiya	Japan

		Performance of JT-60SA superconducting magnet operation in integrated commissioning test	
17:10	TEC/5- 4a	T. Shinya	Japan
		First performance test of multi-frequency gyrotron for ITER and fusion devices	
	TEC/5- 4b	H. Yamazaki	Japan
		Results of electron cyclotron heating and current drive system operation in the integrated commissioning phase on JT-60SA	>
17:30	TEC/5-5	A. Jha Progress towards development of prototype radio frequency source of ITER ion cyclotron resonance heating system	India
17:50	IAC/2-1	Y. Xu Construction Progress of Chinese First Quasi-axisymmetric Stellarator (CFQS) and Preliminary Results in the CFQS- Test Device	China

Saturday 18 October 2025

EX/11 Transport Barriers

Chairpei Co-Chai	(08:30-10:10)		
08:30	EX/11-1	C. Maggi Core and edge transport of scenario with internal transport barrier in tritium and deuterium-tritium plasmas in JET	UK
08:50	EX/11-2	with BE/W wall A.M. Garofalo Achievement of a high-density, high-confinement, and high beta tokamak plasma regime for ITER and FPP	USA
09:10	EX/11-3	Y. Jeon Development of high poloidal beta scenario for long-pulse operation in collaboration between DIII-D and KSTAR	Korea
09:30	EX/11-4	L. Frassinetti Peeling limited pedestals in JET, MAST-U and TCV: effect of density and isotope mass in deuterium and tritium-rich plasma on pedestal structure and stability and validation of pedestal predictions for ITER.	Sweden
09:50	EX/11-5	T. Wilks	USA

High Pedestal Pressure Path to High Fusion Performance Leveraging the New "Shape and Volume Rise" Divertor on DIII-D

OV/5 Innovative Facilities and Technologies

Chairperson: Hidenobu Takenaga (Japan) (10:40-13:10) Co-Chairperson: IAEA

UK

10:40	OV/5-1	R. Lawless
		Overview of UKAEA's integrated fusion technology p
		grammes, emphasising a digital first strategy

44.05	OV.	Overview of UKAEA's integrated fusion technology programmes, emphasising a digital first strategy	1101
11:05	OV/5-2	J. Rapp	USA
		Raising fusion readiness by addressing plasma-material in-	
		teractions and fusion nuclear science with linear plasma de-	
		vices, an overview	
11:30	OV/5-3a	A. Ibarra	Spain
		Overview of the DONES Experimental Programme	•
	OV/5-3b	K. Hasegawa	Japan
	,	Overview of achievements and outlook of the	, 1
		IFMIF/EVEDA project	
11:55	OV/5-4	O. Asunta	UK
		Overview of ST40 results and future: expanding the physics	
		basis of high-field spherical tokamaks	
12:20	OV/5-5	N. Bakharev	Russia
		Recent advances at the Globus-M2 tokamak	
12:45	OV/5-6	Y. Sentoku	Japan
12.10	2.750	Strategic plan to demonstrate heatwave-driven laser fusion) a P air
		with fast ignition scheme	
		with fast ignition scheme	

PWF/1 Pathways to Fusion

Chairperson: Takashi Inoue (Japan) (14:20-16:00)

Co-Chairperson: IAEA

14:20 PWF/1-1 **F. Warmer** Germany

		Towards a Stellarator Fusion Reactor: Achievements of the	
		European Stellarator Program	
14:40	PWF/1-2	H. Wilson	UK
		STEP: Driving a pathway to accelerated fusion delivery	
15:00	PWF/1-3	S. McNamara	UK
		Tokamak Energy's high temperature superconducting mag-	
		net spherical tokamak fusion pilot plant concept	
15:20	PWF/1-4	J. Kang	Korea
		Establishment and Progress of K-DEMO Design Activi-	
		ties: A Coordinated National Approach for Future Fusion	
		Demonstration Reactor	
15:40	PWF/1-5	H. Takenaga	Japan
		Fusion research and development strategy for JA DEMO in-	
		vestigated in QST	

C/1 Closing

	son: Elisabe person: IAl	eth Wolfrum (Germa EA	any)	(16:30-17:30)
16:30	C/1-1	TBC	-2025 Speeches	

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	ing Plasma-Material Interactions And Fusion Nuclear Science With Linear Plasma Devices, An Overview.	
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	Programme: Testing Novel Concepts At Low Aspect Ratio To Inform Future Devices	
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	And Future Fusion Power Plants	
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3400	pher Holcomb, Jinping Qian, Juan Huang, Rajesh Maingi, Richard Pitts, Tom Wauters, Wilkie Choi, Xianzu Gong	China
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	On EAST In Support Of ITER New Research Plan	
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	[Ov Poster Twin] Progress And Innovations In The TCV Tokamak Research Programme	
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Overview Of Craft Project Progress

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Progress Of Iter And Its Value For Fusion

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Results From The Last DD And DT JET Campaigns In The Framework Of The Eurofusion Tokamak Exploitation Activity

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Overview Of DIII-D Research Towards ITER And Future Fusion Power Plants

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[Ov Poster Twin] Progress Of ITER And Its Value For Fusion

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Overview Of Recent Experimental Results On EAST In Support Of ITER New Research Plan

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[Ov Poster Twin] Raising Fusion Readiness By Addressing Plasma-Material Interactions And Fusion Nuclear Science With Linear Plasma Devices, An Overview.

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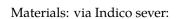


Overview Of WEST Contributions To The New ITER Baseline And Fusion Power Plants

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[Ov Poster Twin] Overview Of The MAST Upgrade Physics Programme: Testing Novel Concepts At Low Aspect Ratio To Inform Future Devices

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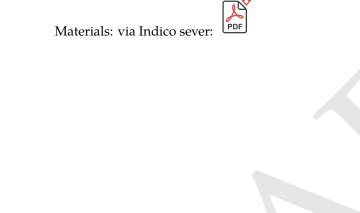


First JT-60SA Plasma Operation And Plans In View Of ITER And DEMO

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[Ov Poster Twin] Overview Of The KSTAR Experiments And Future Plan

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[Ov Poster Twin] First JT-60SA Plasma Operation And Plans In View Of ITER And DEMO

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[Ov Poster Twin] Overview Of UKAEAâS Integrated Fusion Technology Programmes, Emphasising A Digital First Strategy

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Overview Of The KSTAR Experiments And Future Plan

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[Ov Poster Twin] Overview Of DIII-D Research Towards ITER And Future Fusion Power Plants

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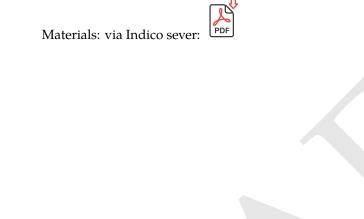


Overview Of Asdex Upgrade Results

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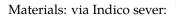


[Ov Poster Twin] Overview Of Recent Experimental Results On EAST In Support Of ITER New Research Plan

A. M. Garofalo, Alberto Loarte, Annika Ekedahl, Christopher Holcomb, Jinping Qian, Juan Huang, Rajesh Maingi, Richard Pitts, Tom Wauters, Wilkie Choi, Xianzu Gong

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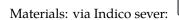


Hl-3 Research Towards High-Performance Plasma And Power Exhaust Solution

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[Ov Poster Twin] Recent Advances In Plasma Control And Physics Research In The Large Helical Device

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Progress And Innovations In The TCV Tokamak Research Programme

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[Ov Poster Twin] Results From The Last DD And DT JET Campaigns In The Framework Of The Eurofusion Tokamak Exploitation Activity

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Overview Of Preparation For Sparc Q>1 And Retiring Physics Risks For Arc

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[Ov Poster Twin] Strategic Plan To Demonstrate Heatwave-Driven Laser Fusion With Fast Ignition Scheme

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[Ov Poster Twin] Progress And Innovations In The TCV Tokamak Research Programme

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[Ov Poster Twin] Recent Advances At The Globus-M2 Tokamak

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[Ov Poster Twin] Towards Digital Twins Of Fusion Systems

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IAEA-CN-316-3390



[Ov Poster Twin] Overview Of Achievements And Outlook Of The Ifmif/Eveda Project

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[Ov Poster Twin] Overview Of Asdex Upgrade Results

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[Ov Poster Twin] Overview Of The Dones Experimental Programme

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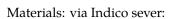


[Ov Poster Twin] Overview Of WEST Contributions To The New ITER Baseline And Fusion Power Plants

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[Ov Poster Twin] Overview Of Stellarator Physics And Engineering Simulation And Modeling For Fusion Pilot Plant Design And Optimization

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[Ov Poster Twin] Overview Of Wendelstein 7-X High-Performance Operation

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IAEA-CN-316-3399



[Ov Poster Twin] Overview Of St40 Results And Future: Expanding The Physics Basis Of High-Field Spherical Tokamaks

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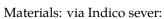


[Ov Poster Twin] Overview Of Preparation For Sparc Q>1 And Retiring Physics Risks For Arc

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[Ov Poster Twin] Hl-3 Research Towards High-Performance Plasma And Power Exhaust Solution

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IAEA-CN-316-3403



Spherical Tokamak Physics Research In Preparation For The Operation Of Nstx-U

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Towards High Performance Operation Of The Hsx Stellarator

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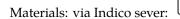


An Overview Of The First Experimental Results With Divertor Configuration Discharges In The Ktm Tokamak

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JOREK Contributions To The Predictive Understanding Of Transient Phenomena In Future Tokamaks And Stellarators

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IAEA-CN-316-2679

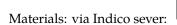


The Divertor Tokamak Test Project: Progress Towards The Initial Operation

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STEP Exhaust System â" Architecture And Technology Development Overview

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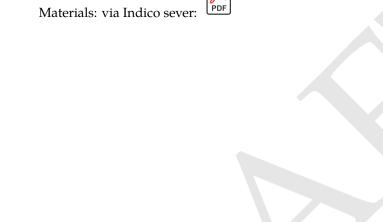
Transport In High-Performance Plasmas Of The Tj-Ii Stellarator: From First-Principles Simulations To Experimental Validation

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Upgrading DIII-D To Close The Gaps To Future Fusion Reactors

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Overview Of Ex1-50U Experiments: Addressing Key Physics Issues For Future Spherical Torus Reactors

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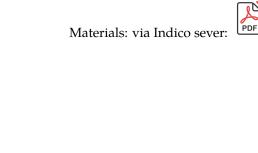


Early Neutron Source Ifmif-Dones: Status And Validation Activities Phase

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Progress Of Research On The Ktx Reversed Field Pinch

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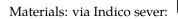


Overview Of R&D Activities Within Iferc In Support Of Fusion Development In The Context Of The Broader Approach Agreement Phase Ii

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Progress Of Proton-Boron Research For Fusion Energy In China

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T-15Md: Mission And Recent Experimental Results

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Structural Design Of The Negative Triangularity Spherical Tokamak (Ntst)

Xuesong Ma, Tengfei Shi, Yuxi Wang, Qinglei Jia, Tianle Zhang, Jinping Lu, Xianglei Yang, Le Zhang, Binbin Wang, Shouzhi Wang, Yi Tan, Rui Chen

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IAEA-CN-316-3200



Overview Of The CFETR Prototype Tf Coil

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IAEA-CN-316-3275



Advances In Physics And Applications Of 3D Magnetic Perturbations On The J-Text Tokamak

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The Divertor Tokamak Test Facility Research Plan

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Recent Progress On The Sunist-2 Spherical Tokamak

Binbin Wang, Long Zeng, Menghua Yang, Rui Chen, Shouzhi Wang, Tao Xin, Tingzhi Chang, Ximan Li, Yi Tan, Yuhang Luo, Yunxiao Wei, Zhe Gao, Zhengbo Cheng, Zichong Song

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Controlled Nuclear Fusion For The Energy Transition, Health, And Industry

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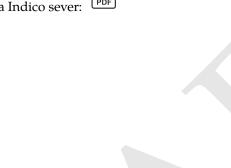
Global Fluid Turbulence Simulations Of Pedestal Relaxation Events In The I-Mode Regime With Grillix

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Research At The Kurchatov Institute In Support Of The Creation Of A Hybrid Fusion-Fission System

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IAEA-CN-316-3011



Confinement Property In The JT-60SA First Operational Phase

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Gyrokinetic Studies On The Stabilization Of High Field Axisymmetric Magnetic Mirrors

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Effects Of Lithium-Coating Wall Conditions On Turbulent Transport In EAST Electron Heating Dominant Plasmas

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Impurity Accumulation And Radiation Dynamics In Advanced Scenarios In W7-X

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Simulations Of The Interactions Between Elms And Edge Turbulences On Fusion Reactor Scale Facilities

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Validating Physics-Based (Astra/Transp), Data-Driven (D3D+Aug), And Physics+Data Hybrid Models For Quantitatively Accurate Yet Generalizable Guidance For ITER Operators

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Nondimensional Confinement Scaling In Similar Negative Triangularity Plasmas On The DIII-D And TCV Tokamaks

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Three-Dimensional Nonlinear Modeling Of Elm Dynamics With Biasing In The Hl-3 Tokamak

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Experimental Study On Configuration Dependence Of Turbulent Transport On LHD

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IAEA-CN-316-2712



Extracting The Nearest Canonical Equilibrium Distribution Via Natural Gradient Descent Method

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Fusion Studies With Small And Tabletop Plasma Focus Devices: Investigations On New Operational Regimes, Non-Equilibrium Thermodynamics, Extreme Material Conditions, And Biological Effects

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Multi-Machine Studies Of Low-Z Benign Termination Of Runaway Electron Beams And Extrapolation To ITER

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Experimental Identification Of Coexisting Local And Non-Local Turbulence

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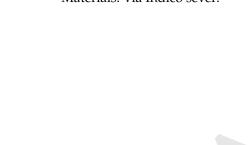
Exploring Enhanced Plasma Performance After Pellet Injections Via Rotational Transform Modulation In The Tj-Ii Stellarator

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Investigation Of Plasma Parameters In Sawtooth Oscillation By Absolute Intensity Of Soft X-Ray Emission In JT-60SA Integrated Commissioning Phase

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Interpreting Structures Observed In Pellet Ablation Profiles In The Stellarator Tj-Ii

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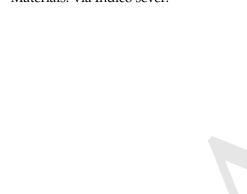
Applications Of In-Shot Continuous NBI Control System To Fire Mode In KSTAR

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IAEA-CN-316-2741



Investigation Of The Magnetic Flux Pumping Effect In MAST Upgrade

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IAEA-CN-316-2794



Validation Of Gkeyll Gyrokinetic Turbulence Simulations Against TCV Experimental Data And Triangularity Physics

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IAEA-CN-316-3174



Overview Of Wham Diagnostic Techniques And Realta Fusion Digital Validation Efforts

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Tungsten (W) Impurity Reduction By Icrh In A High Power And High Performance H-Mode Discharge On EAST

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First Results From Wham And The Realta Fusion Tandem Mirror Development Path

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Numerical Analysis Of Electron Distribution Function Under Electron Cyclotron Heating During Tokamak Start-Up

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Linear AndâQuasi-LinearâToroidal Modeling Of Resonant Magnetic Perturbations During Elms Mitigation In Hl-3

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IAEA-CN-316-3206



Ntst, A Negative Triangularity Spherical Tokamak

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Comparison Between Gyrokinetic Simulations And Experiments In The Lithium Tokamak Experiment- \tilde{A} (Ltx- \tilde{A})

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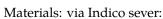


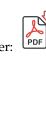
Self-Organized Frc Formation In Mirror Field Orthogonal To The Axis Of Counter-Injected Plasmoids

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Neutron-Physical Characteristics Of Blanket Of Hybrid Fusion Neutron Source Based On Solution Of Thorium Nitrate And Minor Actinides In Heavy Water

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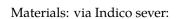


Novel Soft X-Ray Multi-Energy Camera To Study Thermal Plasmas At WEST

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Impact Of Impurities On Energy Confinement Bifurcation At Density Above The Greenwald Limit In DIII-D High-Betap Plasmas

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IAEA-CN-316-2643



Advanced Magnetic Plasma Control Enabled By Reinforcement Learning

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IAEA-CN-316-2645



Development Of Predictive Rotation Models For ITER-Relevant Plasma Conditions On The Asdex Upgrade And DIII-D Tokamaks

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Turbulence And Flow Dynamics Approaching The Density Limit In L-Mode Plasmas At DIII-D

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Regime Of Electron Internal Transport Barrier In High-Density NBI Heated Plasmas Of Heliotron J

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IAEA-CN-316-2696



Pulse Design Simulator For JT-60SA

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

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IAEA-CN-316-2724



Bifurcated Particle Transport States Driven By Regulatory Energetic Ions In LHD Plasmas

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A Low-Cost Gyrokinetic Code For Interpretive Transport Analysis Of Tokamak Experiments

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Cql3D-M, A 3D Nonlinear, Bounce-Averaged Fokker-Planck Collision Model Coupled With Neutrals For Magnetic Mirrors, With Fusion Applications

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Gyrokinetic Linear Simulation Of Hot Ion Mode In Globus-M2 Spherical Tokamak

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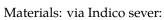


Plasma-Nneutral Interaction Studies With Openmc

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Discovery Of Cross-Scale Nonlinear Interaction And Bifurcation In Multi-Scale Turbulence In LHD Plasma

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IAEA-CN-316-2778



Progress In Multiple-Mirror Plasma Confinement At The Gol-Nb Facility

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IAEA-CN-316-2800



Measurements Of Toroidal Rotation Velocity In Tuman-3M Tokamak In NBI And H-Mode Regimes

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IAEA-CN-316-2809



Utilizing A Visible Camera In The First Operation Phase(S) Of A Fusion Device

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JET Hybrid Scenario Development In D-T For Impurity Screening Study

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IAEA-CN-316-2814

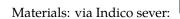


Dimensional Isotope Scaling Of Heat And Particle Transport Between JET Deuterium And Tritium L-Mode Plasmas

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Operating Beyond The Greenwald Density Limit In Negative Triangularity Plasmas On DIII-D Tokamak

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IAEA-CN-316-2823



Density Limit Disruption Induced By Core-Localized Alfvenic Ion Temperature Gradient Instabilities In A Toroidal Plasma

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IAEA-CN-316-2831



Observation Of Fluctuation-Induced Particle Transport Phenomena In The Rt-1 Levitated Dipole

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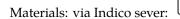


Pumping Requirements For Core Plasma Performance In STEP Using Jintrac

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Overview Of The Physics Design Of The Ehl-2 Spherical Torus For Proton-Boron Fusion

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IAEA-CN-316-2989



Investigation Of High Q L-Mode Plasma Operation Sustained By Enhanced Pellet Fueling In ITER

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Developing Machine Learning Facilitated Pedestal Models

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Non-Ideal And Shaping Effects In Extended-MHD Simulations Of ELM-Free Tokamak Plasmas

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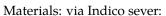
IAEA-CN-316-3042



Lawson Machine 26: An Update On Recent Magnetized Target Fusion Compression Results

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Progress In First-Principles Boundary Simulations Of Plasma Turbulence And Neutral Dynamics With The Gbs Code

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Coupled Particle-MHD Simulations Of Interations Between Edge Loacalized Modes And Neutrals And Impurities Using JOREK Code

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IAEA-CN-316-3148



Mitigation Of Elm By 3D Magnetic Perturbations In Hl-3/Hl-2A Tokamaks

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IAEA-CN-316-3160



Kinetic Modeling Of Tungsten Transport Induced By Low-N X-Point Mode

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Observation Of MHD Stabilized Operation During NBI-Sustained Discharge In 17 T Axisymmetric Mirror

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IAEA-CN-316-3222



Simulation Of Effect Of Poloidal Injection Geometry On Li-Pellet Triggered Elm Under Bout++ Framework

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IAEA-CN-316-3261



Influence Of Ion Temperature On The Dynamics Of Unidirectional Current Carrying Filamentary Elm Blobs In The Edge Region Of A Tokamak

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Simulation Study Of The Effect Of Impurities On The Nonlinear Dynamic Process Of Edge-Localized-Modes

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IAEA-CN-316-3292



Turbulence-Transport Coupling Simulation Study Of The Elm Dynamics From High Recycling Attached Regime To Impurity Seeded Detachment Regime Within Edge Plasma Coupling Simulation (Epcs) Framework

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Bout++ Simulation Study Of The Effect Of Resonant Magnetic Perturbation On The Turbulence Transport

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IAEA-CN-316-3356



Overview Of The MAST Upgrade Physics Programme: Testing Novel Concepts At Low Aspect Ratio To Inform Future Devices

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IAEA-CN-316-2808



[Regular Twin Poster] Breakthrough In Field-Reversed Configuration Formation And Sustainment Via Neutral-Beam Injection In C-2W

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IAEA-CN-316-3440



[Regular Twin Poster] Construction Progress Of Chinese First Quasi-Axisymmetric Stellarator (Cfqs) And Preliminary Results In The Cfqs-Test Device

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IAEA-CN-316-3494



The 2024 New Baseline ITER Research Plan

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IAEA-CN-316-3144



[Regular Twin Poster] High Pedestal Pressure Path To High Fusion Performance Leveraging The New "Shape And Volume Rise" Divertor On DIII-D

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ITER Core Machine Assembly Progress

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IAEA-CN-316-3368



[Regular Twin Poster] Peeling Limited Pedestals In JET, MAST-U And TCV: Effect Of Density And Isotope Mass In Deuterium And Tritium-Rich Plasma On Pedestal Structure And Stability And Validation Of Pedestal Predictions For ITER.

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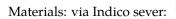


Change Of Wall Material From Beryllium To Tungsten In The New ITER Baseline: Physics Basis, Implications For Research Plan And Wall Designs For Its Operational Phases

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[Regular Twin Poster] Core And Edge Transport Of Scenario With Internal Transport Barrier In Tritium And Deuterium-Tritium Plasmas In JET With Be/W Wall

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Achievement At The ITER Neutral Beam Test Facility And Prospects For The R&D Activities Within The ITER Research Plan

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IAEA-CN-316-3020



[Regular Twin Poster] Achievement Of A High-Density, High-Confinement, And High Beta Tokamak Plasma Regime For ITER And FPP

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Recovery Of ITER Sector Modules From Critical Issues

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IAEA-CN-316-2875



[Regular Twin Poster] Development Of High Poloidal Beta Scenario For Long-Pulse Operation In Collaboration Between DIII-D And KSTAR

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Simulating The Oxygen Emission From ADITYA-U Tokamak Using Various Spectroscopic Models

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IAEA-CN-316-3234



Current Rearrangement In Merging Start-Up Of Spherical Tokamak Plasmas

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IAEA-CN-316-2713



Adaptive Energy-Sensitive X-Ray Technology For Long-Pulse Operation Of Magnetically Confined Thermal And Nonthermal Plasmas

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IAEA-CN-316-2644



Investigation Of Broadband Fluctuation-Induced Inward Transport At The Edge Of Hl-2A NBI Heated Plasma

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IAEA-CN-316-2840



Determination Of W Characteristics In WEST By Means Of Extreme Uv Emission And Artificial Intelligence

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IAEA-CN-316-2746



The Physics Basis For Implementing Alternative Divertor Configurations On Reactors

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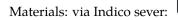


[Regular Poster Twin] Change Of Wall Material From Beryllium To Tungsten In The New ITER Baseline: Physics Basis, Implications For Research Plan And Wall Designs For Its Operational Phases

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Divcontrolnn: A Game-Changer For Real-Time Divertor Plasma Detachment Control In Magnetic Fusion Devices

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[Regular Poster Twin] Recovery Of ITER Sector Modules From Critical Issues

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IAEA-CN-316-3406



Validated, Global Edge-Sol Turbulence Simulations In Various Elm-Free Regimes

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IAEA-CN-316-3241



[Regular Poster Twin] Achievement At The ITER Neutral Beam Test Facility And Prospects For The R&D Activities Within The ITER Research Plan

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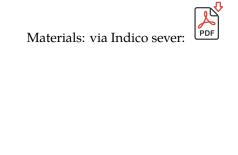


Hierarchy Of Turbulent Transport Models With The Soledge3X Code

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[Regular Poster Twin] The 2024 New Baseline ITER Research Plan

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Direct Comparison Of Gyrokinetic And Fluid Scrape-Off Layer **Simulations**

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[Regular Poster Twin] ITER Core Machine Assembly Progress

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IAEA-CN-316-3409



[Regular Twin Poster] Fusion Research And Development Strategy For JA DEMO Investigated In QST

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IAEA-CN-316-3502



[Regular Twin Poster] STEP: Driving A Pathway To Accelerated Fusion Delivery

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The Physics Of Elm-Free Regimes In Eurofusion Tokamaks

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[Regular Twin Poster] Towards A Stellarator Fusion Reactor: Achievements Of The European Stellarator Program

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IAEA-CN-316-3504



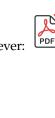
High Performance Elm-Free Semi-Detached Scenario Sustained At High-Current In JET DTE3

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[Regular Twin Poster] Tokamak Energy'S High Temperature Superconducting Magnet Spherical Tokamak Fusion Pilot Plant Concept

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Advances In Core-Edge Integration Of Low Collisionality Quiescent H-Mode Regimes Relevant To Burning Plasmas

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[Regular Twin Poster] Establishment And Progress Of K-DEMO Design Activities: A Coordinated National Approach For Future Fusion DEMOnstration Reactor

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IAEA-CN-316-3506



Pathways To Improved Core-Edge Integration For Negative Triangularity Scenarios In The DIII-D Tokamak

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IAEA-CN-316-3353





Experimental Observation Of Streamer-Like Structure Enhancing Turbulent Transport In Scrape-Off Layer Of Hl-2A Tokamak

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Study On The Effect Of Sidebands Of KSTAR-Like Traveling Wave Antenna Power Spectrum On Helicon Wave Current Drive In Exl-50U Spherical Torus Plasma

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R&D Achievements For The Full-Size 1/8 Vacuum Vessel Towards CFETR Construction

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IAEA-CN-316-3129



Transport In The Divertor Region Of Tokamaks And Role For Power Exhaust In Conventional And Alternative Divertors

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Advances In European In-Kind Contributions To Plasma Diagnostics And Port Integration For ITER

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IAEA-CN-316-2854



Divertor Flux Control By Rmp Elm Suppression And Radiative Divertor Operation In EAST H-Mode With Tungsten Plasma Facing Components In Support Of ITER New Research Plan

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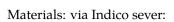


Numerical Modeling Of Neutralization Mechanisms And Nonlinear Beam-Plasma Interactions In High-Energy Negative Hydrogen Ion Beam Transport Through Plasma And Gas Targets

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A Global Licensing And Regulation Framework For Fusion Energy

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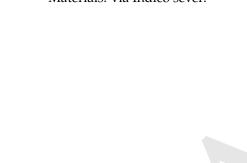
Development Of A Family Of Rays Tracing Code Based On A Non-Commutative Kinetic Ray System

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IAEA-CN-316-2738



Numerical Study On Power Coupling And Impurity Sputtering Near An Icrf Antenna

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Integrated Modelling Activities In Support Of The ITER Re-Baseline

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Detachment Control In W Divertor KSTAR With Real-Time 2D Boundary Surrogate Model

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IAEA-CN-316-2948



Implementation Of A Tightly Baffled Long-Legged Divertor In TCV

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Material Selection For Mirror Substrate Compatible With High-Power Laser Beam Utilized By Tritium-Monitor Diagnostic In ITER

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IAEA-CN-316-2736



Conceptual Design Study For Downsizing Of Fusion DEMO Reactor

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IAEA-CN-316-3169



Exploration Of Magnetic Perturbation Effects On Plasma Edge Transport For Advanced Divertor Configurations In Hl-3

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Key Dependencies For The Radial Density Decay In The Far-SOL Of JET H-Mode Plasmas

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IAEA-CN-316-2760



Core-Edge Integration Studies In Negative Triangularity In TCV

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IAEA-CN-316-2944



European ITER Vacuum Vessel Procurement: The Delivery Of The First Two Sectors And Overview Of The Overall Production

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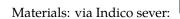


Design And Modeling Of A Closed Divertor With Mid-Leg Pumping For Core-Edge Integration In DIII-D

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Effect Of Edge-Localized Mode Simulation On Detached Plasma In The Divertor Simulation Experimental Module Of Gamma 10/Pdx

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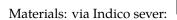


Development Plan And Current Status Toward The Realization Of Steady-State Fusion Reactor By Helical Fusion

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

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Stellarator Plasma Start-Up Model Based On Energy Confinement Time Scaling Laws, Experimental Verification And Numerical Simulation Results

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Simutaneous Elm Suppression And Divertor Detachment Combined Boron Powder And Ne Gas Injection In EAST

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Simulation Of Heat Exchanger Tube Rupture Accident For Cn Hccb Tbs

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Fast: A Fusion Energy Systems Integration Test Facility

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On The Selfconsistency Between Ray-Tracing/Fokker-Planck And The Toroidal MHD Equilibrium For The Lower Hybrid Current Drive

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Evaluation Of Finite Orbit Width Effect On Alpha And NBI Ions Heating In CFETR Scenarios

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Recent Progress In The Pilot Gamma Pdx-Sc Superconducting Mirror

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IAEA-CN-316-2802



Snowflake Divertor Studies In MAST-U Tokamak

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IAEA-CN-316-2683



Study On Tritium-Free Start-Up Scenarios Of Fusion Power Plant Consistent With Core Plasma Design And Plant Power Balance

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IAEA-CN-316-2704



Study On The Thermal Performance Of ITER Tungsten Divertor Monoblock Using Nanofluid For Cooling Enhancement

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IAEA-CN-316-2737



Impact Of Stark Broadening On Ion Temperature Measurements In The ITER Divertor Plasma

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IAEA-CN-316-2765



Edge Magnetic Islands And Its Application To The Development Of Advanced Divertor Configuration On The J-Text Tokamak

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IAEA-CN-316-2781



The Scaling Of The Ion Heating And Electrostatic Potential In Spherical Tokamak

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IAEA-CN-316-2782



High-Field-Side High-Density Region In Globus-M2 Divertor

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Development Of Welding, Cutting And Bolting Tools For ITER Blanket Remote Maintenance

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IAEA-CN-316-2833



Boron Carbide Ceramics As Neutron Shielding For ITER Port-Plugs

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IAEA-CN-316-2843



Impact Of Ion Temperature On Detached Plasma In Gamma 10/Pdx Divertor Simulation Plasma

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IAEA-CN-316-2846



Scaling Of The H-Mode Electron Separatrix Density Based On Engineering Parameters From C-Mod, AUG And JET Data

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IAEA-CN-316-2848



Active Spectroscopy For Atomic H And D Measurements In Fusion

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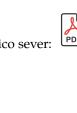
STEP: Novel Power Infrastructure For Fusion Powerplants

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IAEA-CN-316-2872

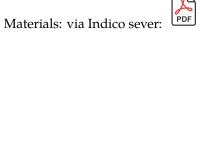


Anomalous X2-Mode Ecrh Power Absorption At The Tj-Ii **Stellarator: Comparison Of Theory And Experiments**

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Conceptual Design Of The Fusion Energy Experiment (Fenyx)

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IAEA-CN-316-2907



The Globus-3 Project As The Next Step In The Research Program On Spherical Tokamaks At The Ioffe Institute

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IAEA-CN-316-2914



Predictive Study Of Non-Axisymmetric Neutral Beam Ion Loss On The Upgraded KSTAR Plasma-Facing Components

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IAEA-CN-316-2916



Compatibility Of Pronounced Detachment With Improved Confinement On Hl-2A Tokamak

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Design And Development Of ITER VUV Spectrometers With Prototype Testing

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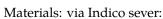


Density Dependence Of Convection In Parallel Heat Transport In The Scrape-Off Layer Of Jt-60U

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Progress In Fusion Workforce Development And Education In Europe, Usa, Japan And ITER

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IAEA-CN-316-2991



Characteristics Of Tungsten Impurity Sources And Transport In KSTAR

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Materials: via Indico sever:



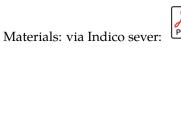
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Nonlinear Spectrum Evolution Of Lower Hybrid Waves And **Density Limit Of Lower Hybrid Current Drive**

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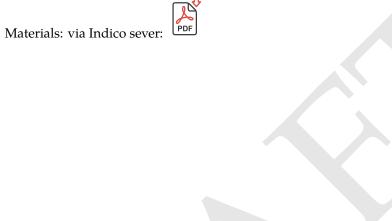


Progress Of The Ehl-2 Spherical Torus Engineering Design

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Experimental Investigation Of Deuterium And Nitrogen-Seeded H-Mode Plasmas In KSTAR With New W Divertor

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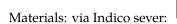


Towards Practical Fusion Energy: Engineering Challenges And Development Strategies By The Perspective Of Cnpe

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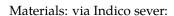


Impact Of Transient Heat Loads On The Detached MAST Upgrade Super-X Divertor

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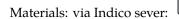


The X-Point Radiator Regime In The WEST Tokamak For Divertor Operation In Next Step Fusion Devices

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Feasibility Of Main Thermal Ion Heating By Icrf Waves Using A Top Launcher In A Tokamak With Deuterium-Tritium Plasmas

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Regulatory Framework Towards Fusion Energy In Germany

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A Comprehensive Design Of The Upper Port #18 Interspace Support Structure For The ITER Diagnostic Port

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Study Of Divertor Heat Load Control In The Hl-3 Tokamak

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Impact Of The Plasma Boundary On Machine Operation, And The Risk Mitigation Strategy On JET

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Endoscope Laser-Induced Breakdown Spectroscopy (Libs) For In Situ Elemental Distribution Diagnosis On The Surface Of Divertor In EAST

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Establishing African Fusion Energy Research Consortium: Capacity Building And Innovation Pathway

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IAEA-CN-316-3149



Preliminary Design And Development Of Neutron Activation System On Cn Hccb Tbs

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Low-Threshold Absolute Parametric Decay Instability In X2-Mode Ecrh Experiments And The Missing Power Effect

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Helium Cooled Ceramic Breeder Testing Blanket System Heat Release And Tritium Release For The ITER New Baseline Dt-1 Scenario In The Port Cell

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Design And Testing Of Quench Protection System For ITER Magnet Cold Test Bench

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IAEA-CN-316-3224



Design And Challenge For ITER Divertor Langmuir Probe

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IAEA-CN-316-3239



Commissioning Of The Chinese Largest Superconducting High-Flux Linear Plasma Device Sword

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IAEA-CN-316-3248

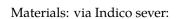


A Novel Multi-Timescale Strategy For Fusion Systems Codes And Its Impact To Parametric Analyses Of Fusion Power Plants

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Favourable Modifications Of Scrape-Off Layer (Sol) Heat Flux Width Through Pulsed Fuelling In ADITYA-U Tokamak

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IAEA-CN-316-3262



Alpha Particle Generation And Confinement In D-3He Scenarios In JT-60SA

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Evaluating Economic, Environmental, And Social Impacts Of Adopting Fusion Energy In Saudi Arabia

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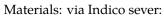


Development Of ITER Divertor Outer Vertical Target

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Demonstration Of Modelling And Optimization In Neutral Beam Heating And Current Drive With Hl-3 Parameters

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IAEA-CN-316-3291



Experimental And Simulation Study Of Plasma Detachment In The Linear Plasma Device Mps-Ld

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IAEA-CN-316-3314



Fusion Technology An Antidote To Nuclear Energy Deployment In Africa: A Case Study Of Nigeria

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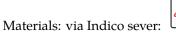


Pranos Fusion : Indiaâ S Pathway To Commercial Fusion

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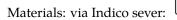


Beyond Finite-Differences : A Lattice Boltzmann Approach For Solving Fokker-Planck Equations In Magnetic Fusion

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Enabling Real-Time Icrf Heating Predictions Via An Automated Surrogate Model Generator Suite

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IAEA-CN-316-3355



Plasma Power Framework: How To Prepare Your Country For Fusion Energy

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Overview Of Wendelstein 7-X High-Performance Operation

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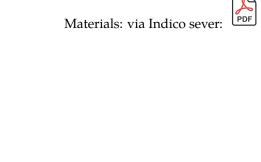


Recent Advances In Plasma Control And Physics Research In The Large Helical Device

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Overview Of Stellarator Physics And Engineering Simulation And Modeling For Fusion Pilot Plant Design And Optimization

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Towards Digital Twins Of Fusion Systems

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IAEA-CN-316-2930



[Regular Poster Twin] High Performance Elm-Free Semi-Detached Scenario Sustained At High-Current In JET DTE3

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[Regular Poster Twin] Advances In Core-Edge Integration Of Low Collisionality Quiescent H-Mode Regimes Relevant To Burning Plasmas

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High Gain Fusion Burning In Inertial Confinement Fusion Plasma

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[Regular Poster Twin] Pathways To Improved Core-Edge Integration For Negative Triangularity Scenarios In The DIII-D Tokamak

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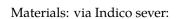


Foams As A Pathway To Energy From Inertial Fusion (Fopife): Overview Of Recent Results

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[Regular Poster Twin] The Physics Of Elm-Free Regimes In Eurofusion Tokamaks

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IAEA-CN-316-3419





Targets Developed In The 21St Century At The P.N. Lebedev Physical Institute Of Ras To Study The Extreme Matter Physics Using High-Power Laser Facilities

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A Novel Metal Foil Ir Sensor Bolometer For ADITYA-U Tokamak

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IAEA-CN-316-3121



Experimental And Numerical Study Of Broad Wavenumber Turbulence And Transport In Ion Internal Transport Barrier Plasmas On EAST

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Breaking Of The Ion Temperature Clamping In Electron Heated Plasmas With Turbulence Stabilization

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IAEA-CN-316-2929



Beamlet Divergence Of Research And Development Negative Ion Source With Rf Mode At Nifs

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IAEA-CN-316-2714



Mutliscale Gyrokinetic Simulations Of The Interaction Between Turbulence And Fishbone

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IAEA-CN-316-2780



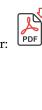
How âThe Tail Wags The Dogâ: Physics Of Edge-Core Coupling By Inward Turbulence Propagation

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IAEA-CN-316-2660



Turbulence And Transport Dependence On Temperature Ratio With Te/Ti \sim 1-1.5 In EAST H-Mode Plasma

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IAEA-CN-316-3226



Electron Cyclotron Heated Low To High Mode Transition In KSTAR

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IAEA-CN-316-2962



Global Gyrokinetic Simulations Of Isotope Effects For Future Tokamak Plasma Core And Pedestal

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IAEA-CN-316-2836



Progress On Nonlinear MHD Modeling Of ï¬ux Pumping And Hybrid Scenario For Asdex Upgrade Plasmas

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IAEA-CN-316-2705



Prediction Of The Implosion Dynamics Via Ai Enhanced Simulations For The Double-Cone Ignition Scheme

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IAEA-CN-316-2709



Characterization Of Turbulent Transport Of Particles, Optimization Of Plasma Heating And Operation Current Control In The Coils Of The Scr-1 Stellarator

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Physics Of Itg Transport Reduction In Negative Triangularity Plasmas

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Dynamic Evolution Of Pellet Fueling From Ablation Cloud To Reheat Mode In Heliotron J

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IAEA-CN-316-3107



The Final Design Accomplishment Of The Ec Upper Launcher And Ex-Vessel Waveguide Systems For ITER

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Discrete Stellarator Coil Optimization

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IAEA-CN-316-2651



The Establishment Of The Synthetic Diagnostic Modeling Specifically For The Imaging Neutral Particle Analyzer On The EAST

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IAEA-CN-316-3342



Energetic Particles Transport In The Presence Of Gyrokinetic Turbulence And Alfvén Activity

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IAEA-CN-316-2950



Effective Edge Transport Barriers Supported By Intrinsic Rotation Shear In DIII-D Negative Triangularity Plasmas

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IAEA-CN-316-3122



Confinement Modelling Of Enhanced Plasma Performance After Multiple Pellet Injections In The Tj-Ii Stellarator

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IAEA-CN-316-2804



The Impurity Behaviors And Transport Analysis Of Hl-2A And Hl-3 Plasmas

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IAEA-CN-316-3125



Exploitation Of Stable High-Ip Regime Under New Tungsten Divertor Environment In KSTAR

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IAEA-CN-316-2892



Freegsnke: An Open Source, Pure-Python, Predictive Evolutive Equilibrium Code For Control Design And Validation – Applications At UKAEA

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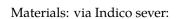


Fuel Supply And Helium Ash Exhaust In Global Gyrokinetic Itg/Tem Turbulence

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Effect Of Pfirsch-Schlüter Flow On Toroidal Flow In The Edge Region Of ADITYA-U Tokamak

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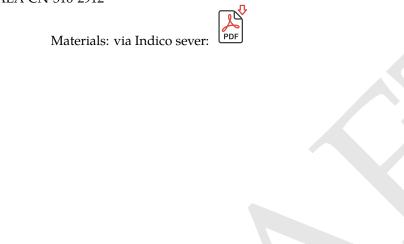


Flux Pumping In Asdex Upgrade, JET And JOREK

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How Mev-Range Ions And High Î' Will Shape The Core Plasma Dynamics Of Fusion Power Plants

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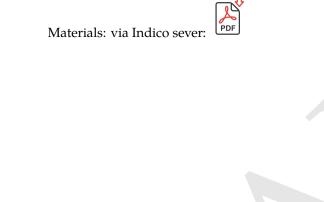


Towards Dual Plasma Equilibrium And Transport Scenario Planning For Tokamaks Using Cotsim

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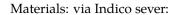


Progress Of Craft Negative Ion Source Neutral Beam Injection Test Facility

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Helium Ash Removal: Comprehensive Effects Of Alpha Particles On The Source And Transport Of Helium Ash

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IAEA-CN-316-3130



Gam Frequency Structure And Properties In Ohmic And Powerful Ecr-Heated Plasmas In A Tokamak

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IAEA-CN-316-2865



Development Of Innovative Repeatable Power Laser For Laser Fusion

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MHD-Driven Global Gam In ADITYA-U Tokamak

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IAEA-CN-316-3272



Development, Testing, And Commissioning Of 300 Kva T-Npc Inverter For 300 Kv, 2A High Voltage Dc Power Supply For Neutral Beam Accelerator System

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Thermal Management Study On Indigineously Developed High Power Rf Combiner For Rf Source Of ITER Ion Cyclotron Resonance Heating System

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IAEA-CN-316-3253



Qualification Of The European Gyrotrons And Power Supplies Of The Electron Cyclotron Heating And Current Drive System Of ITER

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IAEA-CN-316-2763



Neutral Penetration And Fueling Of ADITYA-U Tokamak Plasmas By Gas-Puffs

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Core-Edge Integrated Scenario With A High-Performance Hybrid Core, Naturally Small Elms, And A Dissipative Divertor On DIII-D

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Fdtd Simulation Of The Propagation Characteristics Of Millimeter-Wave Vortex In Magnetized Plasma

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IAEA-CN-316-3143



The Construction And Commissioning Of The Electron Bernstein Wave Heating And Current-Drive System For MAST-U

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IAEA-CN-316-2867



Lagrangian Statistics Of Heavy Impurity Transport In Drift-Wave Turbulence

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Energetic-Electron-Driven Geodesic Acoustic Mode Interaction With Microtearing Mode For Improved Confinement On Hl-3 Tokamak

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IAEA-CN-316-3110



Gyrokinetic Reduced Models For Pedestal Transport: Validation And Application To Core Edge Integration

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IAEA-CN-316-2648



Reconstructing The Plasma Boundary With A Reduced Set Of Diagnostics

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Exploring The Role Of Subdominant Kinetic Ballooning Mode In Driving Turbulent Transport In Nstx

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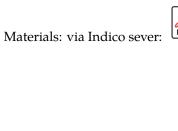


Inhouse Development Of Wideband 10 Kw Solid State Power Amplifier For Ich & Cd Rf Source

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Progress Into The Theoretical & Experimental Fusion Platform In Mexico

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IAEA-CN-316-3173



Neural Network Reduced Models For Plasma Turbulence

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Status Of DIII-D High Field Side Lower Hybrid Current Drive Experiment

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IAEA-CN-316-3181



Enhanced Surge Protections For Dc Ultra-High Voltage Power Supply For ITER NBI

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IAEA-CN-316-3177



On Advanced Operation Scenario Development In KSTAR Toward Compact Pilot Device

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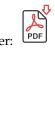
Global Eigenmode Structure Of Linear Drift-Wave Instabilities On Flux Surfaces In Stellarators

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Advancing Tokamak Transport Simulations With Mmm 9.1: Bridging Theory And Application

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IAEA-CN-316-2658



Design Of The Electron Cyclotron Heating Expansion System On EAST

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Repetitive Generation Of Hydrogen Negative Ion Beams With Initial Target Parameters For The ITER Hnb

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IAEA-CN-316-2715



Reconstruction Of Quasi-Symmetric Stellarator Geometry From A Low-Dimensional Parameter Space

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IAEA-CN-316-2789



Overview Of The Design And Procurement Of Ecrh System For Dtt

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IAEA-CN-316-2792



The Wendelstein 7-X Ecrh Plant - Experience With Reliable Long Pulse Operation Of A Multi Mw Gyrotron Installation

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IAEA-CN-316-2805





The Status And Design Challenges Of The Heating And Current Drive Systems For Dtt

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IAEA-CN-316-2816



Fast Ion Transport Simulations For The Spherical Tokamak For Energy Production

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Extrapolative Predictability Of Plasma Turbulent Transport Via A Multi-Fidelity Data Fusion Approach

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IAEA-CN-316-2838



Evaluation Of Plasma Performance In JA DEMO Steady-State Operation

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Can Turbulent Transport In Optimized Stellarators Be Lower Than Tokamaks

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IAEA-CN-316-2885



Particle Transport Of Ohmic Discharges With Different Plasma Current In EAST Tokamak

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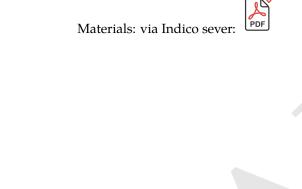


Improvement Of Plasma Performance By Edge Ecrh Power Deposition In EAST

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Stray Rf Evaluation And Design Improvement On The ITER Equatorial Ec H&Cd Launcher

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Study On The Key Technologies Involved In The Laser Neutralisation Of Negative Ion Source

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IAEA-CN-316-2906



Data-Efficient Digital Twinning Strategies And Surrogate Models Of Quasilinear Turbulence In JET And STEP

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Observations Of Core Heating And Current Drive By Helicon Waves At DIII-D

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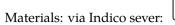


Exploration Of Emission Spectra From Highly Charged Tungsten Impurity Ions In X-Ray Wavelength Range Of 3.7â"4.0 Ã In The Large Helical Device For Fusion Plasma Diagnostics

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Effect Of Decreasing Aspect Ratio On Ion-Scale Electrostatic Drift-Type Modes And Pedestal Stability In H-Mode Plasmas

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IAEA-CN-316-2952



Prediction Of Heat Flux Splitting By Non-Axisymmetric Magnetic Field In The Realistic Tokamak Wall And Divertor Based On 3D Cad Model

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Numerical Studies Of Impurity Neoclassical Transport In Plasma Edge Region By Global Full-F Gyrokinetic Simulations

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IAEA-CN-316-2959



Impact Of The Temperature Ratio On Turbulence And Impurity Transport In The EAST Plasma Core

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IAEA-CN-316-2968



Performance Mt-I Spherical Tokamak With Upgraded Power Supplies System

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IAEA-CN-316-2990



Integrated Numerical Analysis Of Impurity Transport And Sources For High Currentâ"High Power Baseline Pulses With T In JET-ILW

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Technologies Of High Voltage Neutral Beam Injectors For Magnetic Fusion Devices

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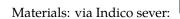


Effects Of Inter-ELM Quasi-Coherent Modes On The Dynamics Of Pedestal Turbulence On Hl-2A Tokamak

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Machine Learning Aided Neutron Yield For DUD Detection Based On JET And TFTR Deuterium-Tritium Plasmas

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IAEA-CN-316-3035

Materials: via Indico sever:



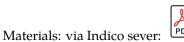
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Impact Of Li-Granule Injection On The Improvement Of Bulk Energy And Particle Transport And Expulsion Of Mid/High-Z Impurities In The LHD Heliotron

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First Fast Ion Measurements By The Collective Thomson Scattering And Ion Cyclotron Emission Diagnostics At Wendelstein 7-X.

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IAEA-CN-316-3050



First Experimental Observation Of "Staircase" High Confinement Mode In Tokamak Plasma

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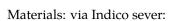


Rfx-Mod2 And The Nefertari Project: A Diffuse Infrastructure For The Study Of Magnetically Confined Plasmas For Fusion

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Safe Termination Of Runaway Electron Beams During Major Disruptions By Shattered Pellet Injection In The Hl-3 Tokamak

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IAEA-CN-316-3097





Influence Of Resonant Magnetic Perturbation On Flow And Turbulence Dynamics Towards L-H Transition In Hl-3

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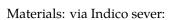


Imapet Of Runaway Electron On Plasma Initiation Of ADITYA-U Tokamak As Investigated Via Observed Hard X-Ray Spectrum

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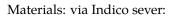


Development And Future Plan Of The Negative Hydrogen Ion Sources For NBI At SWIP

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Completion Of Manufacturing And Testing Of 8 ITER Gyrotrons With Its Auxiliary Systems

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IAEA-CN-316-3197



Ion Doppler Spectroscopy System On The Sunist-2 Spherical Tokamak

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The Development Of Millimeter-Wave Heating System Towards Cfedr

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IAEA-CN-316-3273

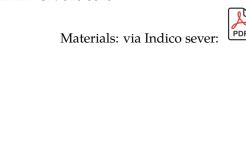


The Critical Role Of Shear Flow Collapse In Near Greenwald Density Limit Operation On The Hl-2A Tokamak

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Non-Inductive High-Performance Discharges On TCV On The Path To Steady State

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IAEA-CN-316-3345



New Understanding Of Resonant Layer Response Via Extended Drift MHD

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IAEA-CN-316-3103



First Demonstration Of Disruption Avoidance By Real-Time Physics-Based Disruption Event Characterization And Forecasting On KSTAR

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IAEA-CN-316-3247



[Regular Poster Twin] The Physics Basis For Implementing Alternative Divertor Configurations On Reactors

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IAEA-CN-316-3413



Thermal Quench Dynamics And Heat Flux Distribution During Massive-Impurity-Injection Triggered Disruption In EAST

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First Edge-Localized Mode Suppression With Lower Hybrid Waves On The EAST Tokamak

Fangchuan Zhong, Fuqiong Wang, Genfan Ding, Gongshun Li, Guoqiang Li, Guosheng Xu, Hailin Zhao, Huiqian Wang, Jinping Qian, LI LI, Liang Liao, Liang Wang, Lingyi Meng, Manni Jia, Mengze Xu, Miaohui Li, Ning Yan, Qing Zang, Ran Chen, Rong Yan, Rui Ding, Shuai Xu, Tao Zhang, Tengfei Tang, Tonghui Shi, Wenyin Wei, Xiang Gao, Xianzu Gong, Xiaohe Wu, YIFEI JIN, Yifeng Wang, Youwen Sun, Yunfeng Liang, Zeng Long

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IAEA-CN-316-3095



[Regular Poster Twin] WEST Long-Pulse Achievements In Support Of Next-Step Fusion Devices

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Characterization Of Runaway Impact On Instrumented Sacrificial Limiters On DIII-D

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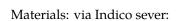


Non-Inductive Current Drive At Zero Loop Voltage Using Lhcd Pam Launcher On ADITYA-U

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[Regular Poster Twin] Development Of High-Performance Long-Pulse Discharge In KSTAR

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IAEA-CN-316-3421



Transition From Bursting Elms To Continuous Turbulence Fluctuations In High Sol Density Regimes

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IAEA-CN-316-2774



Analysis And Simulation Of Effective Runaway Electron Mitigation Using A Passive Coil In J-Text Tokamak

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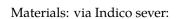


[Regular Poster Twin] Attaining Tokamak Level Performance Through Plasma Density Profile Shaping At Wendelstein 7-X

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Observation Of Pedestal Ion Temperature Screening Of High-Z Impurities In The Hybrid Scenario On DIII-D

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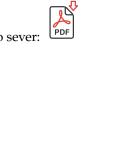
Changes In Disruption Dynamics During The First Operation Of A Runaway Electron Mitigation Coil (Remc) On A Tokamak

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IAEA-CN-316-3080



[Regular Poster Twin] Long-Pulse Elm-Free H-Mode Regime With Feedback-Controlled Detachment Under Boronized Metal Wall In EAST

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IAEA-CN-316-3423



[Regular Poster Twin] Development Of Steady-Sate Operation Scenarios With Full Tungsten LimITER/Divertor In ITER-Relevant Configuration On EAST

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[Regular Poster Twin] Prediction Of The Implosion Dynamics Via Ai Enhanced Simulations For The Double-Cone Ignition Scheme

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Materials: via Indico sever:



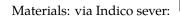
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WEST Operation â" Reliability And Availability Of A Long Pulse Fusion Tokamak

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Drift Flows Impact Island Divertor Operation In Wendelstein 7-X

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IAEA-CN-316-3182



[Regular Poster Twin] Development Of Innovative Repeatable Power Laser For Laser Fusion

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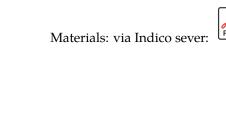


Actively Cooled Plasma Facing Components Design For W7-X And JT-60SA In Support Of The ITER Divertor

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Real-Time Feedback Control Of Radiation Front Position For Detachment In Multi-Device Studies: Application Of Machine Learning On DIII-D And KSTAR

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[Regular Poster Twin] High Gain Fusion Burning In Inertial Confinement Fusion Plasma

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IAEA-CN-316-3427



First SOLPS-ITER Wide Grid Simulations Of The ITER Burning Plasma Scrape-Off Layer

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ITER Organization, Russia

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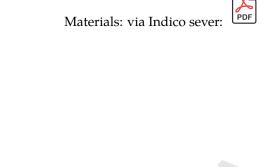


Advancing Plasma-Facing Materials For Fusion Pilot Plants At DIII-D

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[Regular Poster Twin] Foams As A Pathway To Energy From Inertial Fusion (Fopife): Overview Of Recent Results

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IAEA-CN-316-3428



The Divertor Tokamak Test Facility: Machine Design, Construction And Commissioning

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Modelling Divertor Solutions For Power Exhaust: In-Depth Experimental Validation In TCV

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IAEA-CN-316-2842



Design And Qualification Activity Of The First Divertor Of The Divertor Tokamak Test Facility

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IAEA-CN-316-2939



[Regular Poster Twin] Targets Developed In The 21St Century At The P.N. Lebedev Physical Institute Of Ras To Study The Extreme Matter Physics Using High-Power Laser Facilities

Nataliya Borisenko, Alexander Akunets, Alexander Gromov, Evgeniy Demikhov, Valeriy Dorogotovtsev, Alexander Eriskin, Vasiliy Litvin, Kirill Pervakov, Alexander Pastukhov, Vladimir Pimenov, Sergey Tolokonnikov

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SOLPS-ITER Simulations Of An X-Point Radiator In The DIII-D High-Beta Hybrid Plasmas

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IAEA-CN-316-2954



Performance Evaluation Of Tungsten Fiber-Reinforced Tungsten Composites Developed At SWIP For Application In Nuclear Fusion Reactors

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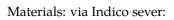


[Regular Poster Twin] Observation Of Pedestal Ion Temperature Screening Of High-Z Impurities In The Hybrid Scenario On DIII-D

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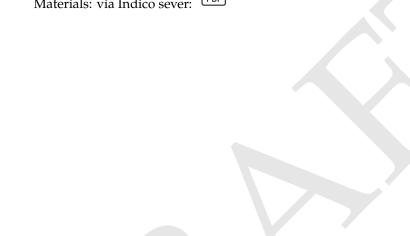
Breakthrough In Field-Reversed Configuration Formation And Sustainment Via Neutral-Beam Injection In C-2W

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IAEA-CN-316-2666



Analysis Of Fuel Retention And Recovery In JET With Be-W Wall

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IAEA-CN-316-2718



[Regular Poster Twin] First Edge-Localized Mode Suppression With Lower Hybrid Waves On The EAST Tokamak

Fangchuan Zhong, Fuqiong Wang, Genfan Ding, Gongshun Li, Guoqiang Li, Guosheng Xu, Hailin Zhao, Huiqian Wang, Jinping Qian, LI LI, Liang Liao, Liang Wang, Lingyi Meng, Manni Jia, Mengze Xu, Miaohui Li, Ning Yan, Qing Zang, Ran Chen, Rong Yan, Rui Ding, Shuai Xu, Tao Zhang, Tengfei Tang, Tonghui Shi, Wenyin Wei, Xiang Gao, Xianzu Gong, Xiaohe Wu, YIFEI JIN, Yifeng Wang, Youwen Sun, Yunfeng Liang, Zeng Long

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[Regular Poster Twin] Non-Inductive Current Drive At Zero Loop Voltage Using Lhcd Pam Launcher On ADITYA-U

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IAEA-CN-316-3439



[Regular Twin Poster] Modelling Divertor Solutions For Power Exhaust: In-Depth Experimental Validation In TCV

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IAEA-CN-316-3442



[Regular Twin Poster] Drift Flows Impact Island Divertor Operation In Wendelstein 7-X

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IAEA-CN-316-3444



[Regular Twin Poster] Real-Time Feedback Control Of Radiation Front Position For Detachment In Multi-Device Studies: Application Of Machine Learning On DIII-D And KSTAR

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Addressing Critical Tritium Challenges In Fusion Power Plants Using Spin-Polarized Fuel

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IAEA-CN-316-2622



Use Of Shielding Benchmark Experiment Database (Sinbad) To Identify Nuclear Data Status And Guide Future Experimental Activities

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IAEA-CN-316-2633



Status Of $\Phi \not \in D^{1/2}D\mu$ Development Of A Tritium Fuel Cycle For Long-Term Tokamak Operation

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IAEA-CN-316-2639



Single Mode Evolution In Wave-Particle Interactions In Tokamaks

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IAEA-CN-316-2649

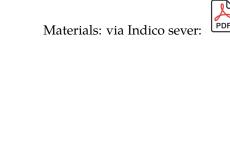


Explainable Ai Reveals Growth Of Instability For Forecasting Elm Onsets: Toward Multi-Machine Predictions

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Neoclassical Theory On Low Frequency Drift Alfvén Waves

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The Benchmark Database Of Experiments, Nuclear, And Technological Data For Hybrid Fusion Systems With Various Types Of Blankets

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IAEA-CN-316-2664



Physics Basis Of Discrepancies Between Temperature Measurements By Ece And Thomson Scattering In High Performance Plasmas On JET, EAST And DIII-D

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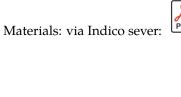


10-Hz-Injection At A Laser Focus Of Targets Accelerated Into Spring-Htsc-Maglev System

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The Study Of Alfvén Eigenmodes On The Spherical Tokamak Globus-M2 Using Doppler Backscattering

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IAEA-CN-316-2681



First Results Of Eho-Like Fluctuations Studies At The Spherical Tokamak Globus-M2

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IAEA-CN-316-2682



Quantitative Evaluation Of Beam Loss Based On Radiation Detection In High-Duty Beam Commissioning Of Lipac Rfq

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IAEA-CN-316-2688



Effect Of Ech On Energetic-Particle-Driven MHD Modes In Heliotron J

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IAEA-CN-316-2702



Measurement Of Nuclear Reaction Cross-Section For Thermonuclear Applications

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Observation Of Non-Collisional Ion Heating In Helical Plasmas Under Dominant Electron Heating Condition By Neutral Beam Injection On LHD

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IAEA-CN-316-2707



Laser-Driven Non-Thermal Aneutronic Proton-Boron Fusion Reactions In Solid-Density Plasma

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IAEA-CN-316-2728



Experimental Update On The Counter-Illuminating Fast Ignition Scheme Using The Kj-Class Ultra-Intense Laser Lfex

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IAEA-CN-316-2730



10-Hz Laser Beam Steering And Illumination For Free-Fall Targets

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IAEA-CN-316-2731



Validation Of Tungsten Nuclear Data Using The Tud-W Benchmark

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IAEA-CN-316-2751



Investigation Of Filament Dynamics Using High-Speed Video Shooting In The Globus-M2 Tokamak

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IAEA-CN-316-2752



Rmp Elm Control Unveils High Ion Temperature With Itb In The DIII-D Tokamak

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IAEA-CN-316-2768



Accelerating Development Of Sustainable Fusion Reactor With Tuneable Neutron Field Of Compact Accelerator-Based Neutrons Sources

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Investigating Long-Duration Plasma Operation With The International Multi-Machine Database

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IAEA-CN-316-2770



Hybrid Simulation Of Alfvén Eigenmodes Caused By Multiple Fast Ion Species In The Large Helical Device

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Non-Inductive Plasma Start-Up Using Electron Bernstein Wave Mode-Converted From Electron Cyclotron Wave Launched From High-Field Side On Spherical Tokamak, Quest

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IAEA-CN-316-2783



Observation Of Nonlinear Coupling Of Waves Excited At Distinct Regions Of Overlapping Dual Lower Hybrid And Ion Cyclotron Resonances

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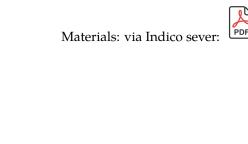


Study Of Fast Ion Transport And Losses During Alfvén Type MHD Instabilities At Globus-M2

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Openmc Based Simulations For Shutdown Dose Rate Assessment In The DEMO Fusion Reactor

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IAEA-CN-316-2815



Heating D Ions To Optimal D-T Fusion Energies With Icrf Waves

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IAEA-CN-316-2819



Verification And Validation Of Global Gyrokinetic Simulations Of Alfvén Eigenmodes In Spherical Tokamaks

Clive Michael, Guillaume Brochard, Handi Huang, Henry Hingyin Wong, Ken McClements, Luca Garzotti, Mario Podesta, Neal Crocker, Nicolas Fil, Nikolai Gorelenkov, Phillip Bonofiglo, Troy Carter, Xishuo Wei, Yangyang Yu, Zhihong Lin, pengfei Liu

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Noninductive Startup Of Spherical Tokamak With Reduced Trapped Electrons By Electron Bernstein Wave Heating And Current Drive On Late

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IAEA-CN-316-2832



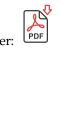
Progress With Commissioning The Icrh System For The Large Optimized Stellarator Wendelstein 7-X

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IAEA-CN-316-2834

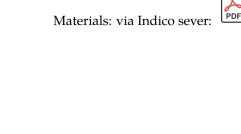


Stimulated Brillouin Scattering And Filamentation Instabilities In High Temperature Plasmas

Karima Bendib-Kalache

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Suppression Of Low-K Turbulence By Alfv \tilde{A} ©n Eigenmodes In The DIII-D Tokamak

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IAEA-CN-316-2873



Dual Utilization Of X-I And O-I Eccd For Fully Solenoid-Free Operations For A Fusion Reactor

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IAEA-CN-316-2874

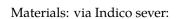


Evaluation Of Solid Spherical Fuel Compression By Comparison With Simulation

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Experimental Study Of Epm Instability In The EAST Off-Axis Region With Elevated Safety Factor (Q) Value

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IAEA-CN-316-2894



Global Electromagnetic Symmetry-Breaking Effects On Momentum Transport And Current Generation In Tokamaks

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IAEA-CN-316-2900



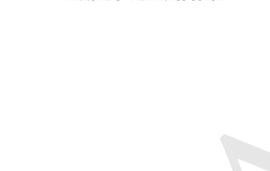
The Effect Of Gas Puffing At The LH Grill On The Efficiency Of The Central Dense Plasma Ion Heating At The FT-2 Tokamak

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IAEA-CN-316-2910



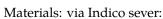


Neutral Beam Injection For Electron Heating Of Globus-M2 Spherical TokamakâS Plasma

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Control Of Energetic Particle Modes On The TCV Tokamak

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IAEA-CN-316-2917



Neutronics Analysis Of EU DEMO Conducted At The Lithuanian Energy Institute

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IAEA-CN-316-2921



Feasibility Study Of Non-Maxwellian Distribution Measurement Using An Oblique View In ITER Electron Cyclotron Emission Diagnostics

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IAEA-CN-316-2941



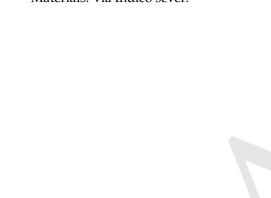
Burn Control In ITER By Maximization Of Ion Cyclotron Power Absorption Through Regulation Of Helium-3 Concentration

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IAEA-CN-316-2945



Fusion-Alpha-Enhanced Displacement And Stability Of ITER Helical Core Plasmas

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IAEA-CN-316-2951



Nonlinear Saturation Of Toroidal Alfvén Eigenmode Via Ion Induced Scattering In Nonuniform Plasmas

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IAEA-CN-316-2957



Application And Analysis Of The Revised Accurate Weight Method For Fusion Facilities

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IAEA-CN-316-2964



Design-Based Multidinensional Tritium Transport Analysis Platform For Blanket System

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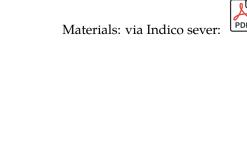


Analysis Of Background Plasma Behavior Under External Fields In The Low Energy Beam Transport Section Of Lipac

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Lower Density Limit For Accessing To Elm Suppression Using N=4 Rmp In EAST

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IAEA-CN-316-2981



Effect Of Electron Cyclotron Waves On Plasma With Runaway Electrons

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IAEA-CN-316-2996



Investigation Of Double Frequency Fishbone In EAST With Neutral Beam Injection

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IAEA-CN-316-3006



Radiological Safety Assessments For Fusion Neutron Source In Engineering Design Activities Under Ifmif/Eveda Project

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IAEA-CN-316-3021

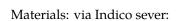


Investigation Of Impurity Behaviour In Three-Ion Icrf Scenarios In H-D And D-T Plasmas At JET

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Non-Inductive Current Start-Up And Optimized Ramp-Up In Exl-50U For Next-Generation Spherical Torus Devices

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IAEA-CN-316-3047



Drift-Kinetic And Fully Kinetic Simulations Of Plasma Waves Based On A Geometric Particle-In-Cell Discretization Of The Vlasov-Maxwell System

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Feasibility Study Of Tungsten-Water/Air Reaction In DEMO Conditions

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IAEA-CN-316-3054

Materials: via Indico sever:



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Experimental Observations Of Magnetohydrodynamic Instabilities In Hl-3 Low-Current High-Î'n Plasmas

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IAEA-CN-316-3060



Observation Of High-Frequency Oscillations In The Tuman-3M Ohmic Plasmas

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IAEA-CN-316-3061



Alpha Particle Velocity Space And Orbit Sensitivity Of Gamma-Ray Spectroscopy Diagnostics Based On The 10B(\Alpha,P\Gamma)13C Reaction

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Simulations Of Taes In Nstx-U

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IAEA-CN-316-3081

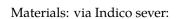


Experimental Profiles Of Helicon Wave Power In The Core Of DIII-D Plasmas

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Evolution And Mitigation Of Runaway Electrons Emerging During Tokamak Plasma Start-Up

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IAEA-CN-316-3089

Materials: via Indico sever:



544

Icrf Antenna Design For The Hl-3 Tokamak

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IAEA-CN-316-3098



Effects Of Zonal Fields On Energetic-Particle Excitations Of Reversed-Shear Alfv \tilde{A} ©n Eigenmodes

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IAEA-CN-316-3109



Operation Space Of Off-Axis Electron Cyclotron Current Drive At High Density On The DIII-D Tokamak

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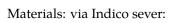


Pressure Gradient Driven Core-Localized Electromagnetic Instability In The Plasma With A Weak Magnetic Shear On Hl-2A Tokamak

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Observations Of Fast Ions Transport Induced By Fishbone Using A Fast Ion Loss Detector On Hl-3 Tokamak

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IAEA-CN-316-3133





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Ion And Electron Heating Via Magnetic Reconnection During Merging/Compression Plasma Startup In St40

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IAEA-CN-316-3137



Fast Ion Transport Induced By Edge Localized Modes

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Progress Of Lower Hybrid Current Drive Experiment Towards Long-Pulse Operation On EAST

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IAEA-CN-316-3147



Recent Experiments And Development Of Lhcd System On Hl-3

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IAEA-CN-316-3152



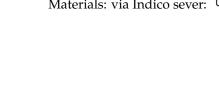
A New Eigenvalue Solver For Electrostatic Drift-Wave **Instabilities In Tokamaks**

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IAEA-CN-316-3158



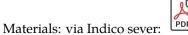


Impact Of Long-Term Simulations On Fast Ion Relaxation In Steady-State ITER Scenarios

Marina Gorelenkova, Nikolai Gorelenkov, Simon Pinches, Vinicius Duarte

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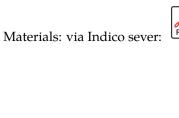


Progress On Neutronics Densign And Analysis On Fusion **Reactors In SWIP**

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Observation Of Edge Magnetic Islands And 3D Turbulence Structure During Rmp Elm Suppression

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Radiation Shielding Analysis Of Ifmif-Dones Test Cell And Adjacent Rooms

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IAEA-CN-316-3190



Realization Of Direct Internal Recycling For DEMO Fuel Cycle Based On A Novel Cryopump Configuration

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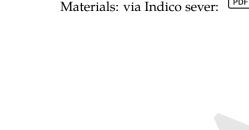
Natural Small Elms Achieved At Low Pedestal Collisionality (<1) In A Metal Wall Environment On EAST

Y.F. Wang, H.Q. Wang, X.Q. Xu, G.S. Xu, N.M. Li, Q.Q. Yang, X. Lin, Q. Zang, T. Zhang, Y.F. Jin, M.R. Wang, G.Z. Jia, N. Yan, R. Chen, L. Wang

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IAEA-CN-316-3207





In-Situ Calibration Of Neutron Flux Monitor For Hl-3 Tokamak

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Kinetic Modeling Of Interactions Among Drift-Alfven Instability, Continuous Spectrum And Energetic Particle In Fusion Experiments

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Materials: via Indico sever:



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Theoretical Model For The Experimentally Observed GamâS Satellites

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IAEA-CN-316-3263



Average Magnetic Drift Model For Ion Temperature Gradient Driven Instability In Tokamaks

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IAEA-CN-316-3264



$Gyrokinetic\ Simulations\ Of\ Pressure\ Driven$ $Magnetohydrodynamic(MHD)\ Instabilities\ In\ Stellarator$

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IAEA-CN-316-3266



Comparative Neutronics Analysis Of Three Structures Of Helium - Cooled Blankets For Compact Fusion Reactors

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IAEA-CN-316-3287



The Research Of The Stability Of Reversed Shear Alfvén Eigenmodes Excited By Energetic Particles In Hl-2A

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Impact Of Neutral Particles On Beam-Ion Losses In EAST Tokamak

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IAEA-CN-316-3307



Insights From Fast-Ion Physics Studies On JET In Support Of JT-60SA And ITER Rebaseline

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IAEA-CN-316-3333





Energetic Particle Distributions For Quantitative Calculations Of Burning Plasma Stability

Guillaume Brochard, Simon Pinches, William W. Heidbrink, Zhihong Lin

ITER organization, ITER Organization

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Challenges And Achievements In Ifmif-Dones Neutronics Activities

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IAEA-CN-316-3350



Analysis Of Fast Ion Distributions Using Neutron Emission Spectroscopy In NBI-Icrf Synergistic Heating Plasma On EAST

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IAEA-CN-316-3358

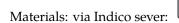


Attaining Tokamak Level Performance Through Plasma Density Profile Shaping At Wendelstein 7-X

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[Regular Poster Twin] Divcontrolnn: A Game-Changer For Real-Time Divertor Plasma Detachment Control In Magnetic Fusion Devices

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IAEA-CN-316-3410



Development Of Steady-Sate Operation Scenarios With Full Tungsten LimITER/Divertor In ITER-Relevant Configuration On EAST

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[Regular Poster Twin] Hierarchy Of Turbulent Transport Models With The Soledge3X Code

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IAEA-CN-316-3411



Long-Pulse Elm-Free H-Mode Regime With Feedback-Controlled Detachment Under Boronized Metal Wall In EAST

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IAEA-CN-316-3116



[Regular Poster Twin] Direct Comparison Of Gyrokinetic And Fluid Scrape-Off Layer Simulations

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IAEA-CN-316-3412



WEST Long-Pulse Achievements In Support Of Next-Step Fusion Devices

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[Regular Poster Twin] Validated, Global Edge-Sol Turbulence Simulations In Various Elm-Free Regimes

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IAEA-CN-316-3414



Development Of High-Performance Long-Pulse Discharge In KSTAR

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IAEA-CN-316-2961



[Regular Poster Twin] Integrated Modelling Activities In Support Of The ITER Re-Baseline

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IAEA-CN-316-3415



[Regular Poster Twin] Transition From Bursting Elms To Continuous Turbulence Fluctuations In High Sol Density Regimes

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IAEA-CN-316-3436



[Regular Poster Twin] New Understanding Of Resonant Layer Response Via Extended Drift MHD

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IAEA-CN-316-3438

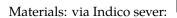


Development Of Low Inductive Electric Field Plasma Start-Up In JT-60SA

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Comprehensive Simulations Of Bursting And Non-Bursting Alfvén Waves In Icrf Heated Tokamak Plasmas

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[Regular Twin Poster] First SOLPS-ITER Wide Grid Simulations Of The ITER Burning Plasma Scrape-Off Layer

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Multi-Machine Validation Of Plasma Initiation Modelling And Prospects For Future Devices

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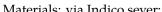


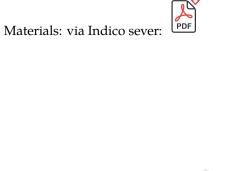
Theory And Simulation Of Phase Space Transport In Burning **Plasmas**

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[Regular Twin Poster] SOLPS-ITER Simulations Of An X-Point Radiator In The DIII-D High-Beta Hybrid Plasmas

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IAEA-CN-316-3443



Development Of Equilibrium Control Simulator And Experimental Validation Of Advanced Iso-Flux Equilibrium Control During The First Operational Phase Of JT-60SA

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Fusion Alpha-Particle-Driven Alfven Eigenmodes In JET DT Plasmas: Experiments And Theory

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IAEA-CN-316-3056



[Regular Twin Poster] The Divertor Tokamak Test Facility: Machine Design, Construction And Commissioning

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Direct Control Of Turbulence For Improved Plasma Confinement

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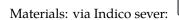


Turbulence, Zonal Flows, And Global Modes In Burning Plasmas: Code Development And Simulations

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[Regular Twin Poster] WEST Operation â" Reliability And Availability Of A Long Pulse Fusion Tokamak

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IAEA-CN-316-3448



Simulation Of Alpha Power Dynamics In DIII-D

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Plasma Control Experiments In JET Deuterium-Tritium Plasmas

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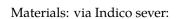


[Regular Twin Poster] Design And Qualification Activity Of The First Divertor Of The Divertor Tokamak Test Facility

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Advancing Tritium Fueling For Dt Fusion In Hl-3: Innovations In Smbi Techniques And Physics-Based Tritium Fueling Strategies

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[Regular Twin Poster] Actively Cooled Plasma Facing Components Design For W7-X And JT-60SA In Support Of The ITER Divertor

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[Regular Twin Poster] Advancing Plasma-Facing Materials For Fusion Pilot Plants At DIII-D

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IAEA-CN-316-3451



[Regular Twin Poster] Performance Evaluation Of Tungsten Fiber-Reinforced Tungsten Composites Developed At SWIP For Application In Nuclear Fusion Reactors

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Active Tearing Mode Avoidance With Machine Learning Controllers

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IAEA-CN-316-2628



Effect Of Boron Powder Injection On The Density Limit In The Large Helical Device

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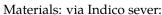


Generalizing Shadow Mask Predictions For Sparc Plasma-Facing Components Using Machine Learning

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Enabling Advanced Plasma Shapes On MAST-U Spherical Tokamak

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Modelling Of H-Mode EAST Edge Plasma With Impurity Seeding By SOLPS-ITER 3.2.0 On Wide Grid

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IAEA-CN-316-2672



Research On The Relationship Between Microstructure And Mechanical Properties Of Chsn01 Jacket Under Cold Deformation

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IAEA-CN-316-2686



Disruptions And MHD Instabilities Observed In The Initial Operation Phase Of JT-60SA

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IAEA-CN-316-2690



Characteristics Of Runaway Electron Loss In The Integrated Commissioning Of JT-60SA

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IAEA-CN-316-2692



Development Of Pure Boron Pellet For Fusion Reactor

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Frequency Hysteresis Of MHD Instabilities In Helical And Tokamak Plasmas

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IAEA-CN-316-2698



Verification Of Energetic And Angular Distributions Of Nuclear Fusion Products In Plasmas

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IAEA-CN-316-2708



Progress In Plasma-Wall Interactions Modelling For EU-DEMO

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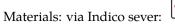


Machine Learning-Based Multimodal Super-Resolution: Experimental Evidence For Elm Suppression Mechanism Through Rmp-Induced Magnetic Island Formation

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Liquid Metal Droplets Systems For Application In Tokamaks And Plasma Devices

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IAEA-CN-316-2745



The Belgium Contribution To The Development Of Steels For Fusion Applications

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IAEA-CN-316-2759



Starting Dtt Infrastructures Construction At Enea Frascati Site

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Experimental Analyses And Numerical Modelling Of Trace Neon Shattered Pellet Injection Discharges On JET

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Effect Of Collision Processes In Divertor Plasma On The Tokamak Operational Window

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IAEA-CN-316-2801



Cryopump And Fuelling Location Impacts On Upstream Density And Detachment On MAST-U

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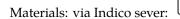


Learned Models For Integrated Tokamak Scrape-Off Layer Modelling And Design

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Multi-Scale Interation Near Locked Magnetic Islands And Resulting Disruption Delay In KSTAR

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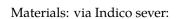


Development Of The Nuclear Radiation Shield Concept For The Volumetric Fusion Source

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Investigating Of Multi-Scale Instabilities In EAST Ion Temperature Central Peak Discharge

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IAEA-CN-316-2879



Research On New High-Strength Structural Materials For Low-Temperature Applications In The Next Generation Of Fusion Reactors

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Simulations Of Rmp Configurations For Tungsten Impurity Control In EAST Tokamak

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IAEA-CN-316-2893



Defining Operational Scenarios For Dtt In Metallic Environment: A Modeling Study Of Core-Edge Dynamics And Plasma-Wall Interaction

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IAEA-CN-316-2905



Impact Of Radiation Distribution On Detachment Onset And Implications For STEP Divertor Design

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IAEA-CN-316-2908



Overview Of Plasma Disruption Mitigation On J-Text Tokamak

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Deuterium Interaction With Lowâ"Activated Chromium-Manganese Austenitic Steel With Increased Contamination Of Carbide Particles

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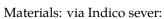


Generation And Acceleration Of Steady-State Plasma In Plm-M Device For Testing Of Fusion Materials

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The Use Of Electron Temperature Collapses And Evolution To Forecast And Avoid Disruptions And Its Application In The KSTAR Device Through Decaf

Christopher Ham, David Ryan, Freddie Sheehan, Grant Tillinghast, Guillermo Bustos Ramirez, Hankyu Lee, James Harrison, Joseph Jepson, Juan Riquezes, Jun-Gyo Bak, Keith Erickson, Matt Tobin, Minho Woo, Minjun J. Choi, Ricardo Shousha, Sam Blackmore, Steven Sabbagh, Veronika Zamkovska, Y.U. Nam, Young-Seok Park

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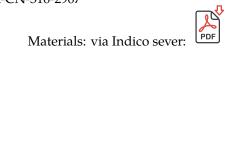


Overview Of Error Field Scaling Studies In EAST And Implications For ITER

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Elm Suppression By Eccd-Controlled Benign MHD Modes In The KSTAR Tokamak

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IAEA-CN-316-2975



Dynamics Of Internal Reconnection Events In Versatile Experiment Spherical Torus

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IAEA-CN-316-2977



Study Of Erosion Of Ceramic Materials Under Transient Thermal Load

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IAEA-CN-316-2983



Introduction To Single Crystal Dispersion Interferometer (Scdi) And Its Measurement In KSTAR For Plasma Disruption Mitigation Study

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Data Efficiency And Long-Term Prediction Capabilities For Neu-Ral Operator Surrogate Models Of Edge Plasma Codes

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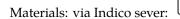


Assessment Of B4C As First Wall Coating For Thermonuclear Reactor

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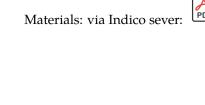


Challenges In Pwi Modelling For Metallic Devices At The Example Of The EU-DEMO Tokamak

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First Quantification Of Volume Recombination In W7-X With EMC3-EIRENE

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IAEA-CN-316-3024



Effective Corrosion And Tritium Barrier Coatings In Pbli WCLL-BB

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IAEA-CN-316-3040



Exhaust Operational Space Assessment For The European Volumetric Neutron Source (Eu-Vns)

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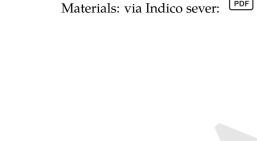
Verification And Optimization Of Vdes By Coupling The Free-Boundary Equilibrium And Transport Codes With Control In The Hl-3 Tokamak

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IAEA-CN-316-3058





Runaway Electrons In JET â" Summary On Re Data After The End Of JET Operations

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Optimization Of Shattered Pellet Injection (Spi) Composition For Maximal Assimilation

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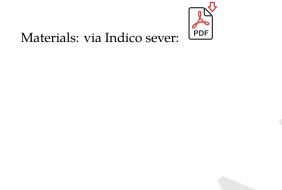


Experimental Research On Magnetohydrodynamic (MHD) Flows In Liquid Metal Cooling Systems For Fusion Reactors

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A Mechanism To Trigger Edge Localized Mode Crash Due To A Threshold Of Magnetic Perturbation Driven By Peeling-Ballooning Mode

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IAEA-CN-316-3105



Progress In The Concept Development Of The Vns - A Beam-Driven Tokamak For Component Testing

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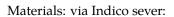


Disruption Prediction For Future Tokamak Reactors From Different Perspectives And With Different Methods

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First Experimental Validation Of The Prototype ITER Hard X-Ray Monitor For Runaway Electron Studies In ADITYA-U Tokamak

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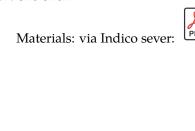


Validation Of Plasma -Wall Self-Organization Theory By High Density Limits Achieved On EAST

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Experimental Study Of The 2/1 Mode Rmp On The Runaway Current Suppression During Disruptions On J-Text

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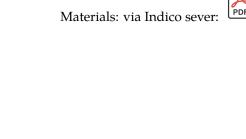


Decoding The Causes Of High-Density Disruption Through Interpretable Machine Learning

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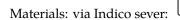


Prediction And Real-Time Control Of The Tokamak L-Mode Density Limit Via Edge Collisionality

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Design And Optimization Of Advanced Divertor Configurations For Heat Flux Management In The Ehl-2 Spherical Torus Project

Xiang gU, Fuqiong Wang, Jiankun Hua, liLI DONG, YU WANG, HONG ZANG, wang yumin, xiaokun bo, bo chen, Shuai Xu, Erhui Wang, xie huasheng, Jiaqi Dong, Y. K. M. PENG, QINGWEI YANG, Yunfeng Liang, Xianming SONG, Minsheng Liu

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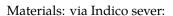


Recent Progress In Improvement Of Atomic And Molecular Process Treatment In Eirene-Ngm

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Accelerating Multiscale Simulations Of Irradiated Material Properties Using Machine Learning

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IAEA-CN-316-3186



Conceptual Design Of The Divertor Tokamak Test (Dtt) Cryogenic System

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IAEA-CN-316-3187



Advanced Materials To Enable Timely Deployment Of Fusion Energy

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IAEA-CN-316-3188



Development Of Reduced-Activation High-Strength High-Conductivity Copper Alloys For Additive Manufacture Of Fusion Reactor Components

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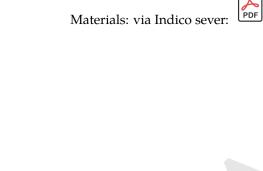


Simulation Of Deuterium-Tritium Isotope Effects On The Divertor Target Heat Flux Density In Cfedr

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Progress On The Engineering Qualification Of Cn-Rafm Steel

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High Intensity Neutron Source For Fusion Nuclear Technology Development

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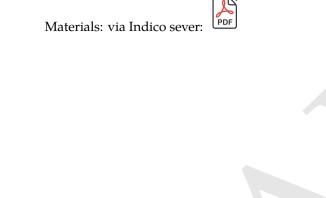


Active Control Of Internal Disruptions Via Cold Pulse Propagation In ADITYA-U Tokamak.

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Calculation Of Dust Grain Charging In Tokamak Plasma Conditions

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Analysis And Understanding Of Accelerated Mode Disruptions In The ADITYA-U Tokamak

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Impact Of MHD Activity On Energetic Electron Dynamics In LHCD-Assisted Plasma Scenarios In ADITYA-U Tokamak

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IAEA-CN-316-3255



The Role Of Ambient Turbulence In Facilitating Thermal Quench Of Disruptive Plasmas In Hl-2A Tokamak

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IAEA-CN-316-3259



Effect Of Impurity Distribution On The Stability Of Neoclassical Tearing Mode

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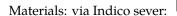


Plasma Instability Events Detection And Disruption Prediction In EAST Tokamak Via Heterogeneous-Feature Multi-Task Learning

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Simulation Study On Tungsten First Wall Erosion And Impurity Transport In EAST Tokamak

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IAEA-CN-316-3285



The Radiative Divertor And In/Out Asymmetry In Hl-2M By Impurity Seeding With Full Drifts

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IAEA-CN-316-3288



Cluster Dynamics Modeling Of Defect Evolution In Neutron-Irradiated Tungsten For Fusion Applications

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IAEA-CN-316-3295



Plasma Transport Study With 3D Shaped First Wall For Limiter Ramp-Up Phase Of ITER

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IAEA-CN-316-3298



Simulation Of Hydrogen Isotope Retention In Tungsten Under Fusion-Relevant Conditions

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IAEA-CN-316-3300



Modeling Of Wall Material Evolution And The Impact On Edge Particle Recycling For Long Pulse Discharges In EAST

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Development Of A Three-Dimensional Simulation Code For Scrape-Off Layer Plasmas

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IAEA-CN-316-3313



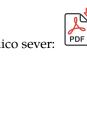
The Influence Of EÃB Drift Combined With Divertor Dome On Plasma Detachment In CFTER By Using SOLPS-ITER

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IAEA-CN-316-3316



Cermet Alloys For Hybrid Fission-Fusion Nuclear Reactor

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IAEA-CN-316-3318



Exploration Of Ohmic Plasma Current Control Strategies For The ADITYA-U Tokamak

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IAEA-CN-316-3328



Sans Investigation Of Precipitate Evolution And Optimum Tempering Temperature Of Rafm Nuclear Reactor Steel And Weld

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IAEA-CN-316-3331



Simulation Of Fuel Inventory In Damaged Tungsten Under Simultaneous Hydrogen And Deuterium: Synergistical Effect Of Defect Annealing And Isotope Exchange

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IAEA-CN-316-3338



3-Dimensional Vacuum Field Modeling And Edge Plasma Response To Applied Radial Magnetic Perturbation In ADITYA-U Tokamak

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IAEA-CN-316-3343

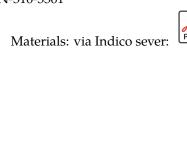


Multi-Device Rotating MHD Mode Lock And Disruption Forecaster With Real-Time Feedback For Disruption Avoidance

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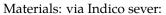


Error Field Identification Through Torque Balance On A Magnetic Island With Rotating Magnetic Perturbation

Colin Chrystal, Daisuke Shiraki, Dmitriy Orlov, Edward Strait, Jeremy Hanson, Nikoas Logan, Qiming Hu, SeongMoo Yang, Shengyu Shi, Wilkie Choi, Yanzheng Jiang

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High-Heat-Flux Performance Of Monoblock Target Prepared With Advanced W-K Plate

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The Interaction Between The Edge Dislocation And The Dislocation Loop-Bubble Complex Under Shear Stress In Bcc Iron

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IAEA-CN-316-3366



Integrated Disruption Mitigation Planning On Tokamak Power Reactors And Its Physics Bases

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Physical Model For Testing Structural Materials Of Fusion Reactors Under Plasma And Thermal Impact

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IAEA-CN-316-3370



JOREK Simulation Of Injection Assimilation And Radiation Asymmetry During ITER H-Mode Dual SPIs

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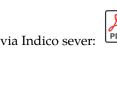
Neutronics For ITER Nuclear Phase: Insights And Lessons Learnt From JET DT Operation

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IAEA-CN-316-2937



[Regular Twin Poster] H-Mode Operation Scenarios In JT-60SA Initial Research Phase Predicted By Integrated Core-Pedestal-SOL/Divertor Simulation

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IAEA-CN-316-3453



Hybrid Kinetic-MHD Studies Of Runaway Electron Beam Termination Events

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IAEA-CN-316-2721



Anticipating Tritium Impact And Transfer In Fission And Fusion Powerplants

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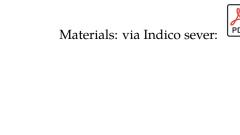


[Regular Twin Poster] Uk STEP Towards A Fusion Power Plant Plasma

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Overview Of The Dcll Breeding Blanket For Helias 5-B And Further Steps Towards A Novel Qi Device

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Modelling Of Mildly Relativistic Runaway Electrons â"Development Of Reduced-Kinetic Model And Validation In KSTAR Ohmic Startup

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[Regular Twin Poster] A Tale Of Two (Visco)Cities Electromagnetic Turbulence And Transport Bifurcations: Implications For Next- Generation Fusion Power Plants

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Piecewise Omnigenous Fields: A Radically New Family Of Optimized Magnetic Fields For Stellarator Reactors

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IAEA-CN-316-2922



Experimental Study On Tritium Release From Li2Tio3 Pebbles As Tritium Breeder Through International Collaboration Between Korea And China

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A Novel Method To Optimize Omnigenity Like Quasisymmetry For Stellarators

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[Regular Twin Poster] Integrated Modeling Of DIII-D Super H-Mode Using Improved Pedestal Physics And Integrated Core-Pedestal-Boundary Physics To Optimize Fusion Performance

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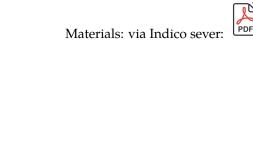


Accomplishment Of High Duty Cycle Beam Commissioning Of Linear Ifmif Prototype Accelerator (Lipac) At 5 Mev, 125 Ma D+

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[Regular Twin Poster] Global Dispersion And Nonlinear Dynamics In Plasmas Modeled For Jt-60U Strongly Reversed Magnetic Shear Configuration Exhibiting A Signature Of Itbs From L-Mode Characteristics

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[Regular Twin Poster] Automatic Between-Shot Kinetic Equilibria And Neutral Beam-Heat Load On DIII-D Using Supercomputers

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IAEA-CN-316-3458



[Regular Twin Poster] Development Of Data Assimilation System Asti Toward Digital Twin Control Of Fusion Plasma

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IAEA-CN-316-3459



Theory-Based Integrated Modelling Of Tungsten Transport: Validation In Present-Day Tokamaks And Predictions For ITER

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IAEA-CN-316-2857



Overview Of Recent Results In Research Tacking Remote Maintenance Challenges Of Future Fusion Energy Devices

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IAEA-CN-316-3154

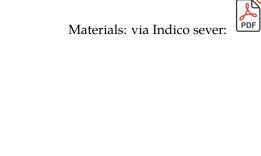


[Regular Twin Poster] ITER Disruption Mitigation System Design And Application Strategy

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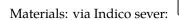


Testing Tungsten Plasma Facing Components In WEST And AUG Tokamaks: Lessons For ITER

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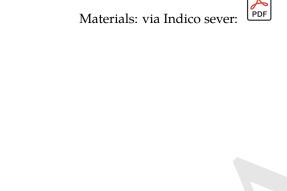


Qualification, Fabrication, And Commissioning Of High-Temperature Superconducting Magnets For Compact Fusion

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[Regular Twin Poster] Trt Plasma Control Complexes Conceptual Design On The Base Of The ITER Fusion Technology Development

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IAEA-CN-316-3461

Performance Of JT-60SA Superconducting Magnet Operation In Integrated Commissioning Test

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IAEA-CN-316-2727



Numerical Modeling And Experimental Assessment Of RF Sheath Generation Due To Far-Field RF Electric Field

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[Regular Twin Poster] Artificial Intelligence For Tokamak Fusion: Advancements In Diagnostics, Control, And Scenario Optimization

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IAEA-CN-316-3462



Results Of Electron Cyclotron Heating And Current Drive System Operation In The Integrated Commissioning Phase On JT-60SA

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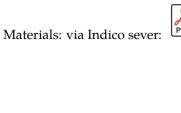
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First Performance Test Of Multi-Frequency Gyrotron For ITER **And Fusion Devices**

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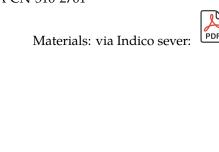


Simulation Of Tungsten Erosion And Edge-To-Core Transport In Neon-Seeded JET Plasmas

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[Regular Twin Poster] Development Of Low Inductive Electric Field Plasma Start-Up In JT-60SA

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IAEA-CN-316-3463



Progress Towards Development Of Prototype Radio Frequency Source For ITER Ion Cyclotron Resonance Heating System

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IAEA-CN-316-3290



Tungsten LimITER Start-Up Experiments In Different Boronization States In Support Of ITER

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IAEA-CN-316-3308



[Regular Twin Poster] Multi-Machine Validation Of Plasma Initiation Modelling And Prospects For Future Devices

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Developing Long Pulse Hybrid Scenario In DIII-D And KSTAR For W-Compatible Steady-State Operation Toward ITER

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IAEA-CN-316-2631



Construction Progress Of Chinese First Quasi-Axisymmetric Stellarator (Cfqs) And Preliminary Results In The Cfqs-Test Device

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[Regular Twin Poster] Direct Control Of Turbulence For Improved Plasma Confinement

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IAEA-CN-316-3465



[Regular Twin Poster] Development Of Equilibrium Control Simulator And Experimental Validation Of Advanced Iso-Flux Equilibrium Control During The First Operational Phase Of JT-60SA

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IAEA-CN-316-3466

[Regular Twin Poster] Plasma Control Experiments In JET Deuterium-Tritium Plasmas

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IAEA-CN-316-3467



[Regular Twin Poster] Simulation Of Alpha Power Dynamics In DIII-D

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[Regular Twin Poster] Comprehensive Simulations Of Bursting And Non-Bursting Alfvén Waves In Icrf Heated Tokamak Plasmas

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IAEA-CN-316-3469

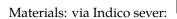


[Regular Twin Poster] Turbulence, Zonal Flows, And Global Modes In Burning Plasmas: Code Development And Simulations

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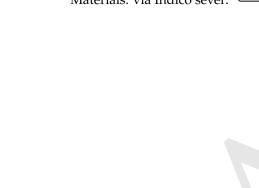
[Regular Twin Poster] Theory And Simulation Of Phase Space Transport In Burning Plasmas

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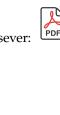
[Regular Twin Poster] Fusion Alpha-Particle-Driven Alfven Eigenmodes In JET DT Plasmas: Experiments And Theory

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IAEA-CN-316-3472



[Regular Twin Poster] Advancing Tritium Fueling For Dt Fusion In Hl-3: Innovations In Smbi Techniques And Physics-Based Tritium Fueling Strategies

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IAEA-CN-316-3473



System Architecture For Actuator Management In ITER PCS

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IAEA-CN-316-2619



Fusion Twin Platform: An Innovative Tool For Fusion Research And Education

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IAEA-CN-316-2620



Performance Optimisation Of Tokamak Operation In ASDEX Upgrade Through Novel Feedback Control Capabilities

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IAEA-CN-316-2623



Rapid, Robust, Real-Time AI-Based Plasma Equilibrium Profile Reconstruction And Control On DIII-D

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IAEA-CN-316-2627



Demonstration Of Vertical Stability Control Based On Non-Inductive Faraday-Effect Polarimetry Measurements On DIII-D

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Exploration Of High-Performance Pedestals And Eped Model Validation In Shape And Volume Rise (Svr) Studies On DIII-D

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IAEA-CN-316-2642



Observation And Control Of 3D Heat Flux On The Plasma Facing Component In Wendelstein 7-X

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Use Of Nuclear Spectrometry To Monitor Fusion Rate, Fast Particles And Runaway Electrons In Tokamak Plasmas

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IAEA-CN-316-2677



Development Of ITER High-Fidelity Plasma Simulator Based On Jintrac And Dina, And Strategy For Validation

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IAEA-CN-316-2753



Intra-Shot Tools For Plasma Scenario Optimization And Magnetic Control

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IAEA-CN-316-2757



Multi-Field Turbulence And Transport Barrier Measurements And Validating Predictive Codes For High-Performance, Negative Triangularity Elm-Free DIII-D Plasmas

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Pushing Boundaries Of Integrated Modeling âWith Improved Gpu-Enhanced Performance Andâ Validated Gyrokinetic Model In Transp Code

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Enhanced H-Mode By Boron Powder Injection And Implications For Reactors

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IAEA-CN-316-2825



Overview Of The European Contribution To The Diagnostic Equipment Of JT-60SA For The Next Operational Phases

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IAEA-CN-316-2827



Machine Enhancement Of Tokamak Device For The JT-60SA Next Operation

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IAEA-CN-316-2835



Estimation Of Plasma Parameters Based On Discharge Settings On WEST

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IAEA-CN-316-2841



Bayesian Data Fusion For Enhanced Edge Plasma Density Profile Estimation In KSTAR

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IAEA-CN-316-2849



Developing Open Machine Learning Benchmarks For Tokamak Event Prediction From MAST

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IAEA-CN-316-2852



Study Of Plasma-Edge Turbulence Reduction In Negative Triangularity Plasmas Using Thermal Helium Beam Diagnostic In The TCV Tokamak

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A Human-In-The-Loop Active Learning Tool For Event Detection In Tokamak Discharges

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IAEA-CN-316-2861



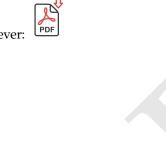
A Multiscale And Multiphysics Approach To The Development Of A High-Fidelity Physics Plasma Simulator For Burning Plasma

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IAEA-CN-316-2869



Density Limit In Peeling-Limited Pedestals At And Above The Greenwald Value In DIII-D High Poloidal Beta Plasmas

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IAEA-CN-316-2888



Zonal Flows In Stellarators: Experimental Measurements, Code Validation And Implications For Future Reactors

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IAEA-CN-316-2901



Sawtooth Crashes Prediction Using A Convolutional Neural Network On EAST

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IAEA-CN-316-2920



Ai-Augmented Scenario Design And Classical Control Of Tokamak Plasmas

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Self-Organized States Of Alfvén Eigenmodes And Zonal Modes Via Cross-Scale Interactions

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IAEA-CN-316-2969



Energy Exchange Between Electrons And Ions Induced By Itg-Tem Turbulence

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IAEA-CN-316-2972



Gyrokinetic Analysis For Electron-Scale Turbulence In KSTAR Fire Mode Discharge

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Leveraging Turbulence Data From Fusion Experiments

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Theory Of Fast Ion Population Effect On Turbulence Self-Regulation In Magnetized Fusion Plasmas

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IAEA-CN-316-2984



Growing Nonlinearity In KSTAR Fire Mode Pedestal Provides Clue To Undesirable H-Mode Transition In I-Mode Plasmas

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A Simulation Study Of Plasma Breakdown In The Tokamak Electron Cyclotron Pre-Ionization Phase

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IAEA-CN-316-2994

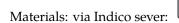


Flux-Driven Simulations Of Self-Generated Radial Electric Fields And Transition To Improved Confinement Regime

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Effects Of Finite Ion Temperature And Its Gradient On Hasegawa-Mima Equation And Zonal Flow Generation

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IAEA-CN-316-2998



Advancing The Concept Of The Quasi-Isodynamic Stellarator As The Basis For A Fusion Reactor

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IAEA-CN-316-3001



Features Of Fusion Power Measurements In The Next Generation Magnetic Plasma Confinement Experiments

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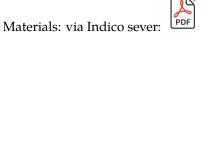


Coupling Of Geodesic Acoustic Modes And Resonant Magnetic **Perturbations In Fusion Plasmas**

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New Insights On The Quasicoherent Mode In Eda High Confinement Discharges

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Materials: via Indico sever:



774

Surrogate Model For Turbulent Transport Using Deep Learning And Plasma Profile Prediction In Tokamak Plasmas

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IAEA-CN-316-3046

Materials: via Indico sever:



775

Evolution Of Confinement Physics And Most Probable Compact Ignition Test Device In Magnetic Fusion

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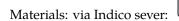


Application Of A Design Structure Matrix Methodology To STEP Plasma Control System Design And Sensor Optimisation

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Tangential Injection Of Compact Torus Fueling In The Hl-3 Tokamak Using The Hl-Cti Injector

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IAEA-CN-316-3071



Demonstration And Investigation Of A Reactor-Relevant, Low-Collisionality, High-Performance, Intrinsic Grassy ELM Regime In DIII-D

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Tokamak Formation Via Localized Helicity Injection Using Tangential Boundary Flows

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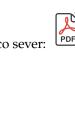
Nonlocal Behavior Of Turbulence In The Presence Of Poloidally Localized Heat Source

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IAEA-CN-316-3096



Operational Space Of Small Elm And Elm-Free Regimes On Hl-3 Tokamak

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IAEA-CN-316-3115



Progress Of Core-Edge Integrated Tungsten Transport Study In EAST With ITER-Like Tungsten Divertors Using Advanced Impurity Diagnostics

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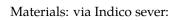


Engineering Design, Construction, And Flexible Control Of Magnetic Field Configuration Of Quasi-Axisymmetric Stellarator Cfqs-T

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Characteristics Of High Frequency Turbulence During Edge Localized Modes In The Hl-2A Tokamak

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IAEA-CN-316-3138



A Physics-Informed Neural Network For Real-Time, Data-Efficient Plasma Equilibrium Reconstruction In Sunist-2

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A Proposed New Experimental Stellarator: Variable Symmetry Torus

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Investigation Of Transient Transport Dynamics Induced By Compact Torus Injection In The EAST Tokamak

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IAEA-CN-316-3161



Plasma State Discovery Using Bayesian Methods

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Sawteeth Dynamics In JT-60SA Baseline Scenarios With Effects On Ntm Onset

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IAEA-CN-316-3171



Neural Network Assisted Electrostatic Global Gyrokinetic Toroidal Code Using Cylindrical Coordinates

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Simulating Energetic Particle Dynamics Using Operator Neural Networks With Spatial Translation Invariance

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IAEA-CN-316-3195



Experimental Studies On The Effect Of Turbulence-Driven Edge Poloidal Shear Flow On Tokamak Plasma Confinement

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Fast Ion Transport In Presence Of Magnetic Perturbations Using Full-Orbit And Guiding-Center Simulations

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IAEA-CN-316-3202



Magnetic Flux Surface Mapping System At Chinese First Quasi-Axisymmetric Stellarator

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Progress On Real-Time Density Control Capability Of The KSTAR Tokamak

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IAEA-CN-316-3209



Dynamics Of Turbulence And Zonal Flows Effected By Tungsten Impuitty In Hl-2A Edge Plasmas

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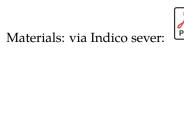
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Manipulating Ambipolar Electric Field To Improve Confinement In Stellarators

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Transport Properties Of Trapped-Electron-Mode Turbulence Interacting With Tearing Modes In Tokamak Plasmas

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IAEA-CN-316-3221



Novel Effects Of Edge-Localised Rmps And Plasma Density On The L-H Transitions And Turbulence

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IAEA-CN-316-3227



Advancing Pedestal Stability Prediction Through Integrated Equilibrium And Resistive MHD Modeling

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IAEA-CN-316-3230



Development Of Ai Framework For Plasma Equilibrium Parameters Generation For Virtual Tokamak Environment

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IAEA-CN-316-3238



Reinforcement Learning-Based Plasma Shape Control Via Isoflux Scheme On Superconductor Tokamak

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Characteristics Of Edge Quasi-Coherent Mode In The Eda H-Mode On Hl-3

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Strongly Rotating St P-11B Fusion Plasmas A Data-Based Model To Raise Confinement And Fusion Reaction Rate Is Proposed

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IAEA-CN-316-3282



Perturbated Magnetic Field Threshold Of Edge Coherent Oscillation During Elm Mitigation By N = 1 And N=2 Rmp

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IAEA-CN-316-3286



Experimental Research On The Penetration Behavior Of Compact Toroid Fueling On EAST

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IAEA-CN-316-3297



Development & Validation Of Control System For Operation Of 170Ghz, 1Mw, 1000S Gyrotron At ITER-India Gyrotron Test Facility

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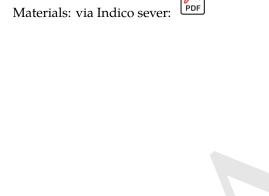


Study Of Reversed Magnetic Shear Configuration In ADITYA-U **Tokamak**

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Experimental Observation Of Zonal Flow-Like Oscillation In Chinese First Quasi-Axisymmetric Stellarator-Test Device

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Temo: A Comprehensive And Versatile Equilibrium Modelling Toolbox For Tokamak Operations

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Innovative And Efficient Plasma Magnetic Confinement Method Based On An Overlooked Historical Discovery

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Materials: via Indico sever:



812

Examining Boundaries For Operation On Alcator C-Mod From The Separatrix Perspective And Projection To Sparc

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Plasma Current And Position Control In Ktm Tokamak

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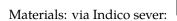


Plasma Prediction And Simulation In Support Of Reactor Design And Operation At Tokamak Energy

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Development Of Data Assimilation System Asti Toward Digital Twin Control Of Fusion Plasma

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IAEA-CN-316-2739



H-Mode Operation Scenarios In JT-60SA Initial Research Phase Predicted By Integrated Core-Pedestal-Sol/Divertor Simulation

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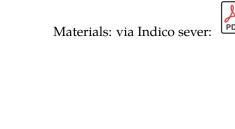


[Regular Poster Twin] Characterization Of Runaway Impact On Instrumented Sacrificial Limiters On DIII-D

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Automatic Between-Shot Kinetic Equilibria And Neutral Beam-Heat Load On DIII-D Using Supercomputers

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IAEA-CN-316-2670



Uk STEP Towards A Fusion Power Plant Plasma

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IAEA-CN-316-2940



[Regular Poster Twin] Thermal Quench Dynamics And Heat Flux Distribution During Massive-Impurity-Injection Triggered Disruption In EAST

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A Tale Of Two (Visco)Cities Electromagnetic Turbulence And Transport Bifurcations: Implications For Next- Generation Fusion Power Plants

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IAEA-CN-316-3074



Artificial Intelligence For Tokamak Fusion: Advancements In Diagnostics, Control, And Scenario Optimization

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[Regular Poster Twin] Changes In Disruption Dynamics During The First Operation Of A Runaway Electron Mitigation Coil (Remc) On A Tokamak

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IAEA-CN-316-3432



ITER Disruption Mitigation System Design And Application Strategy

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Global Dispersion And Nonlinear Dynamics In Plasmas Modeled For Jt-60U Strongly Reversed Magnetic Shear Configuration Exhibiting A Signature Of Itbs From L-Mode Characteristics

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IAEA-CN-316-3124



[Regular Poster Twin] First Demonstration Of Disruption Avoidance By Real-Time Physics-Based Disruption Event Characterization And Forecasting On KSTAR

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IAEA-CN-316-3433



Trt Plasma Control Complexes Conceptual Design On The Base Of The ITER Fusion Technology Development

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Integrated Modeling Of DIII-D Super H-Mode Using Improved Pedestal Physics And Integrated Core-Pedestal-Boundary Physics To Optimize Fusion Performance

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[Regular Poster Twin] Analysis And Simulation Of Effective Runaway Electron Mitigation Using A Passive Coil In J-Text Tokamak

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IAEA-CN-316-3434

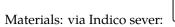


The Impact Of A Flying Collector On Runaway Electrons During Current Disruption In A Tokamak

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Catalogue-Based Reverse Engineering: For Ai-Based Modelling In Fusion Remote Maintenance Equipment Design

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IAEA-CN-316-2797



Recent Progress Of Dissimilar Material Bonding Technique With Spark Plasma Sintering Method For High Heat Load Plasma Facing Components In Reactor-Relevant Devices

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IAEA-CN-316-3127



A Novel Computation Of The Linear Plasma Response To A Resonant Error Field In Single-Fluid Visco-Resistive MHD And Application To The RFXmod2 Tokamak

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IAEA-CN-316-2791



Development Of In-Vessel Rail Deployment And Connection Method For ITER Blanket Remote Maintenance

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IAEA-CN-316-2694





Tests Of Ultrasonic Lithium Injector With External Lithium Supply System On Tokamak T-11M

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IAEA-CN-316-2767



Application Of Low-Z Materials For Enhancing H Mode Plasma Performance And Pulse Duration In EAST With Full Metal Wall

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IAEA-CN-316-2883



Next-Generation Coil Power Supply System For The Tokamak: Design, Implementation, And Operational Performance

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IAEA-CN-316-3240



Dynamic Evolution Of Multi-Physics-Dependent Non-Uniform Inter-Turn Contact Resistivity In No-Insulation Rebco Magnets: Modeling And Experimental Validation

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The Effect Of W Surface Fuzz Induced By He Plasma On Deuterium Permeation

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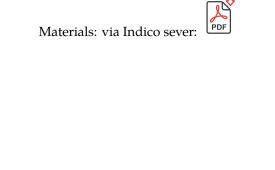


Bb Segment Grasping Pipeline With Variable Admittance Control For EU DEMO Remote Maintenance

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Accessing Stable Operational Windows In K-DEMO

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IAEA-CN-316-3315



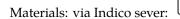
Design, Development & Testing Of Toroidal Field Power Supply (Tfps) For Small-Scale Spherical Tokamak (Ss-St)

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IAEA-CN-316-3265





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Deuterium Gas-Driven Permeation And Retention In La2O3, Y2O3, And Zro2 Dispersion-Strengthened Tungsten

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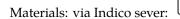


Design Studies On Advanced Self-Cooled Liquid Test Blanket Modules For JA-DEMO

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Development Status Of In-Vessel Components Inspection And Pipe Maintenance Robot For K-DEMO And Fusion Experimental Device

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IAEA-CN-316-2970



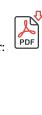
Numerical Analysis Of Peeling-Ballooning Stability At Various Triangularities In Globus-M2

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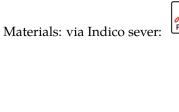


X Point Effects On The Tokamak Stability And Confinement In The Description Of Dual-Poloidal-Region Safety Factor

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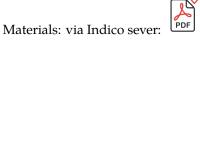


Experimental And Modeling Studies Of Boron Injection And Deposition In Support Of ITER

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Recent Progress Of Libra Project And New Tbr Measurements

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IAEA-CN-316-2826



Development Of Meter-Scale Large W/Cu Divertor Components For Fusion Reactor At Asipp

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R&D On W First Wall For ITER And Future Fusion Reactors

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IAEA-CN-316-3194



Experimental Verification Of AlâOâ-Insulated Non-Inductive Rebco Coil Array In Quench Detection For Central Solenoids Of Tokamaks

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Strong Toroidal Electric Field Generation During Sawtooth Crashes

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IAEA-CN-316-3005



Study Of Impurity Particulate Dynamics And Impurity Transport Using The DiMES Pellet Launcher In DIII-D

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IAEA-CN-316-2636



Analytical Approach To Calculation Of Disruption-Induced Vertical Force On The Tokamak Wall

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IAEA-CN-316-2748



Simulation Of Stochastic Transport And Deposition Of Seed Runaway Electrons During ITER SPI

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Impurity Radiation Seeding Of Neoclassical Tearing Mode Growth

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Simulation Of Runaway Electron Avalanche In Iter Disruption

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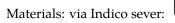


Investigating The Formation And Growth Of Fuzzy Nano-Structures Due To The Interaction Of Helium Plasma With Tungsten Utilizing A Dc Glow Discharge Plasma Device

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Infernal-Kink Instability In Negative-Triangularity Plasamas With Negative Central Shear

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The ITER Tungsten First Wall

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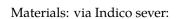


WEST Advanced Wall Protection Achievements Toward Long Pulse Operation

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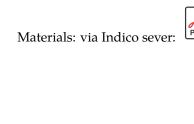


Augmenting The Extrapolation Capability Of Disruption Prediction To Extended Parameter Regimes By Predict-First Neural Network

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Improvements Of Magnet Power Supply System And Achievements In Coil Energization Tests For First Plasma Of JT-60SA

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A Material Database Of Ss316L(N)-Ig For ITER Blanket Shield Blocks

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Material Migration And Erosion Of Plasma-Facing Components In The Full-Tungsten WEST Tokamak During Its Phase 1 And Phase 2 Operations

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Optimal Design Of Fast Plasma Boundary Control Considering Vertical Instability Features Using In-Vessel Coils In JT-60SA

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A Novel High-Temperature Superconducting Cable Design For Compact Tokamaks

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Anisotropic Peeling-Ballooning Mode Scans Of JET-Like Equilibric

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IAEA-CN-316-3280



Nonlinear Magnetohydrodynamic Modelling Of Ideal Ballooning Modes In High-Beta Wendelstein 7-X Plasmas

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IAEA-CN-316-3108



Achieving Full-Coverage Liquid Gainsn Film Flow Under Magnetic Fields: Synergistic Effects Of Wettability Optimization And Dual-Layer Structural Design

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Fusion Magnet Power Equipment Installation Design Based On Multi-Physics Field Coupling And Modular Optimization

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Tungsten Dust Transport In The Stor-M Tokamak

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IAEA-CN-316-3218



Development And Validation Of Magneto-Hydrodynamic Turbulence Models For The Thermal-Hydraulic Design Of Arc-Class Fusion Reactor Liquid Blankets

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Nonlinear Self-Consistent Dynamics Of Geodesic Acoustic Modes And Zonal Flows In Toroidally Rotating Tokamak Plasmas

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3D Hybrid Fluid-Kinetic Simulations Of Large Scale Plasma Instabilities In Runaway Electron Beams

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Design And Test Of A Unified Modular Pulsed Power Supply For All Magnets Of The Negative Triangularity Spherical Tokamak (Ntst)

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Breakthrough In Performance Degradation Of ITER Central Solenoid Conductors Owing To Short-Twist-Pitch Cabling And Suppression Of Bending Strain

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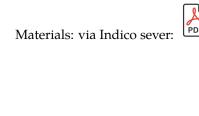


WEST Wall Conditioning With Boron: Lessons For ITER And Fusion Power Plants

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[Regular Twin Poster] A Novel Method To Optimize Omnigenity Like Quasisymmetry For Stellarators

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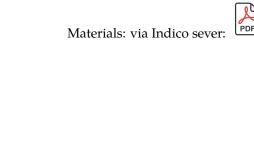


[Regular Twin Poster] Overview Of The Dcll Breeding Blanket For Helias 5-B And Further Steps Towards A Novel Qi Device

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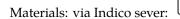


Overview Of UKAEAâS Integrated Fusion Technology Programmes, Emphasising A Digital First Strategy

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[Regular Twin Poster] Anticipating Tritium Impact And Transfer In Fission And Fusion Powerplants

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IAEA-CN-316-3480



Raising Fusion Readiness By Addressing Plasma-Material Interactions And Fusion Nuclear Science With Linear Plasma Devices, An Overview.

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[Regular Twin Poster] Neutronics For ITER Nuclear Phase: Insights And Lessons Learnt From JET DT Operation

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IAEA-CN-316-3481



Overview Of Achievements And Outlook Of The Ifmif/Eveda Project

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Overview Of The Dones Experimental Programme

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[Regular Twin Poster] Experimental Study On Tritium Release From Li2Tio3 Pebbles As Tritium Breeder Through International Collaboration Between Korea And China

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[Regular Twin Poster] Accomplishment Of High Duty Cycle Beam Commissioning Of Linear Ifmif Prototype Accelerator (Lipac) At 5 Mev, 125 Ma D+

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Overview Of St40 Results And Future: Expanding The Physics Basis Of High-Field Spherical Tokamaks

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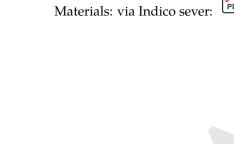


[Regular Twin Poster] Developing Long Pulse Hybrid Scenario In DIII-D And KSTAR For W-Compatible Steady-State Operation **Toward ITER**

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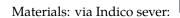


Recent Advances At The Globus-M2 Tokamak

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[Regular Twin Poster] Simulation Of Tungsten Erosion And Edge-To-Core Transport In Neon-Seeded JET Plasmas

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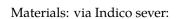


Strategic Plan To Demonstrate Heatwave-Driven Laser Fusion With Fast Ignition Scheme

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[Regular Twin Poster] Theory-Based Integrated Modelling Of Tungsten Transport: Validation In Present-Day Tokamaks And Predictions For ITER

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IAEA-CN-316-3486



[Regular Twin Poster] Testing Tungsten Plasma Facing Components In WEST And AUG Tokamaks : Lessons For ITER

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IAEA-CN-316-3487



[Regular Twin Poster] Numerical Modeling And Experimental Assessment Of Rf Sheath Generation Due To Far-Field Rf Electric Field

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IAEA-CN-316-3488



[Regular Twin Poster] Tungsten LimITER Start-Up Experiments In Different Boronization States In Support Of ITER

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[Regular Twin Poster] Results Of Electron Cyclotron Heating And Current Drive System Operation In The Integrated Commissioning Phase On JT-60SA

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[Regular Twin Poster] First Performance Test Of Multi-Frequency Gyrotron For ITER And Fusion Devices

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[Regular Twin Poster] Performance Of JT-60SA Superconducting Magnet Operation In Integrated Commissioning Test

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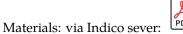


[Regular Twin Poster] Overview Of Recent Results In Research Tacking Remote Maintenance Challenges Of Future Fusion Energy Devices

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[Regular Twin Poster] Progress Towards Development Of Prototype Radio Frequency Source For ITER Ion Cyclotron Resonance Heating System

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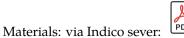


[Regular Twin Poster] Qualification, Fabrication, And Commissioning Of High-Temperature Superconducting Magnets For Compact Fusion

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Remote Handling Strategy Of Volumetric Neutron Source Blanket

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Recovery Behavior Of High-Purity Cubic Sic For First-Wall Applications In Fusion Reactors By Post-Irradiation Annealing After Low-Temperature Neutron Irradiation

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Reference Governor For Plasma Scalar Control To Prevent Stability Limit Breaches In Tokamaks

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Overview Of The Recent Experimental Studies Of Plasma-Facing Components Irradiated With Divertor Relevant Plasma

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Conjugate Heat Transfer Large Eddy Simulation Of A Hypervapotron: From Incipient Nucleate Boiling To Critical Heat Flux

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Virtual Tokamak For Integrated Physics And Engineering Analysis

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Fusion-Relevant Tritium Interactions With Ss316L Stainless Steel

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Formation Of Fractal Substance In Thermonuclear Facilities With High Heat Flux To Materials

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Electron Density Window On The Suppression Of Spontaneous Neoclassical Tearing Mode With High Fraction Of Bootstrap Current

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Wall Conditioning Plasma Production Using Fundamental And Second Harmonic Electron Cyclotron Waves In JT-60SA

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Experimental Study On The Migration Process Of Adatom In The Growth Dynamic Of Fuzz

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A Possible Method To Implement Passive 3D Coils For Runaway Electron Suppression In Future Reactor-Scale Tokamaks

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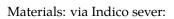


N=0 Vertical Displacements, Impact Of Magnetic X-Points, And Vertical Displacement Oscillatory Modes Driven By Fast Ions In Tokamak Plasmas

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Force-Electric Coupling Characteristics Of Corc Cables Under Bending Load

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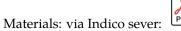


The 4C Code As A Candidate Tool For The Qualified Analysis Of Superconducting Magnets In The Licensing Of Nuclear Fusion Reactors

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Simulation Of Pulse Quench Propagation In Superconducting Magnets For The Next Generation Compact Fusion Energy Experimental Device

yu chen

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Synchrotron Radiation From Runaway Electrons And Positrons In Lorentzian Plasmas

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Studies On Low Energy Helium Plasma Exposure Behaviour Of Tungsten-Based High Entropy Alloy

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IAEA-CN-316-3216



Bounce-Averaged Fluid Equations For Interchange Dynamics In A Dipole-Confined Plasma

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IAEA-CN-316-3002



Nonlinear Simulations Of Core Density Collapses In Large Helical Device

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Runaway Electron Avalanche And Energy Deposition During Scraping-Off Of Vertically Unstable Disruption Generated Runaway Beams

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Eliminating Tokamak Major Disruptions With Feedback

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Csmc Power Supply System Completes Dc 48Ka Steady State Output Experiment

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High-Fidelity Warpx Simulations Of Long-Lived Advanced Frcs

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Automated Design Rationalization Of Robot Component Configuration For In-Vessel Task Of ITER Blanket Remote Handling System

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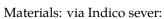


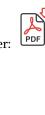
3D Modelling Of Thermal Loads During Unmitigated Vertical Displacement Events In ITER And JET

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Performance Of Li- And Sn-Filled Cps Targets Under The Transient Plasma Loads In Qspa

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EuropeâS Cutting-Edge Handling Systems For The ITER Assembly In The Pre-Start Of Research Operations Phase

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Modeling Of Heat Flux On The Main Limiter In EAST

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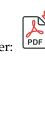
Structure Design Of Poloidal Horseshoe Limiter For Pulse Operation Heat Load In Ja DEMO

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IAEA-CN-316-2882



STEP Inboard System â" Architecture And Technology Development Overview

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The Development Of 3D MHD Code In Comsol Multiphysics And Its Application For MHD Flow In Rippled Magnetic Field

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Progress Of Hts Magnet Technology Development For The Next Generation Fusion Device At Asipp

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Experimental And Numerical Research On High-Temperature Superconducting Demountable Joints For Toroidal Field Coils Of Tokamaks

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Hydrogen Isotope Retention Behavior In Wtavcr High-Entropy Alloy For Fusion Applications

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Towards A Stellarator Fusion Reactor: Achievements Of The European Stellarator Program

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STEP: Driving A Pathway To Accelerated Fusion Delivery

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Tokamak Energy'S High Temperature Superconducting Magnet Spherical Tokamak Fusion Pilot Plant Concept

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Establishment And Progress Of K-DEMO Design Activities: A Coordinated National Approach For Future Fusion DEMOnstration Reactor

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Fusion Research And Development Strategy For JA DEMO Investigated In QST

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Core And Edge Transport Of Scenario With Internal Transport Barrier In Tritium And Deuterium-Tritium Plasmas In JET With Be/W Wall

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[Regular Twin Poster] Analysis Of Fuel Retention And Recovery In JET With Be-W Wall

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Achievement Of A High-Density, High-Confinement, And High Beta Tokamak Plasma Regime For ITER And FPP

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[Regular Twin Poster] JOREK Simulation Of Injection Assimilation And Radiation Asymmetry During ITER H-Mode Dual SPIs

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Development Of High Poloidal Beta Scenario For Long-Pulse Operation In Collaboration Between DIII-D And KSTAR

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[Regular Twin Poster] Hybrid Kinetic-MHD Studies Of Runaway Electron Beam Termination Events

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Peeling Limited Pedestals In JET, MAST-U And TCV: Effect Of Density And Isotope Mass In Deuterium And Tritium-Rich Plasma On Pedestal Structure And Stability And Validation Of Pedestal Predictions For ITER.

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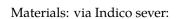


[Regular Twin Poster] Piecewise Omnigenous Fields: A Radically New Family Of Optimized Magnetic Fields For Stellarator Reactors

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High Pedestal Pressure Path To High Fusion Performance Leveraging The New "Shape And Volume Rise" Divertor On DIII-D

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[Regular Twin Poster] Modelling Of Mildly Relativistic Runaway Electrons â"Development Of Reduced-Kinetic Model And Validation In KSTAR Ohmic Startup

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