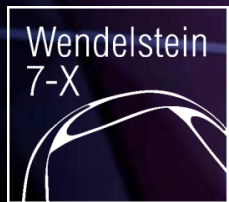




Data Base Action



EUROfusion

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Background and need for action



Requests for 0D extrapolation studies motivate an update of the confinement database:

- τ_E extrapolations rely on ISS04 (gyro-Bohm character)
- gB makes ISS04 surprisingly robust
- Understanding of f_{ren} is lacking (e.g. configuration effects) (but has impact e.g. on expected reactor volume)
- need for validated data sets for theory

Last update: 23.12.2020 (CERC profiles)

- Substantial progress is not reflected
 - LHD **deuterium** plasmas (incl. high-power)
 - LHD **mixed** plasmas
 - LHD high-performance plasmas
 - W7-X high-performance plasmas
 - W7-X configuration scanned data
 - W7-X long-pulse plasmas
 - Also, data from TJ-II, H-J, HSX, ...

International Stellarator-Heliotron Profile Database				
Public Data				
Disclaimer The International Stellarator-Heliotron Database is pursued under the auspices of EA Implementing Agreement for Cooperation in Development of the Stellarator-Heliotron Concept (2.10.1992). The content of this web-site is the intellectual property of the International Stellarator-Heliotron Profile Database collaboration. Any publication from material stored on this web-site requires agreement from the collaborators. As for the access to LHD data, LHD_DataUsageAgreement, ResearchProposal, should be sent to yokoyama@lhd.nifs.ac.jp.				
Information	23.12.2020	W7-X	CERC data added	(J.M. Garcia-Regana / N. A. Pablant)
Confinement Data	24.01.2020	W7-X	Section of modeling validation added	(J.M. Garcia-Regana)
CERC	13.07.2017	H-J	CERC data added	(J.L. Velasco)
High Beta	23.05.2016	TJ-II	Particle tr./ pellets data added	(J.L. Velasco)
Validation of Neoclassical Transport	23.05.2016	TJ-II	Flow data added	(J. Arevalo / J.L. Velasco)
High Performance	05.08.2014	LHD	Flow data added	(M. Yokoyama / F. Warmer)
High Ti	14.07.2014	LHD	Neocl. valid. data added	(M. Yokoyama / F. Warmer)
H-Mode	06.09.2013	TJ-K	Transport data of twin array added	(M. Ramisch)
Edge Turbulence	16.11.2012	LHD	Neocl. valid. data added	(M. Yokoyama / A.Kus)
Plasma Flows	09.11.2012	TJ-II	Ufiles for neocl. transp. valid.	(D. Lopez-Bruna / A.Kus)
Pellets	19.07.2012	HSX	Turbulent transport data added	(M. Ramisch)
Modeling and code verification	25.05.2012		Page Reference Plasmas created (NKA)	(A. Kus)
Update Information	19.10.2011	W7AS	Turbulent transport data added	(M. Ramisch)
How to access?	27.02.2011	HSX	CERC data added	(A. Kus)
Software	06.10.2010	TJ-II	Configuration data added	(A. Kus)
Stellarator Turbulence	30.08.2010	WEGA	Turbulent transport data updated	(M. Ramisch)
	25.08.2010	WEGA	Turbulent transport data updated	(M. Ramisch)
	05.07.2010	LHD	High-Beta data updated	(H. Funaba)
	07.06.2010	HSX	Turbulent transport data updated	(M. Ramisch)
	02.06.2010	TJ-K	Turbulent transport data updated	(M. Ramisch)
	31.05.2010	AUG	Turbulent Iisat data updated	(M. Ramisch)
	17.05.2010	AUG	Turbulent Iisat data added	(M. Ramisch)
	13.05.2010	TJ-II	Two H-Mode profiles added	(A. Kus)
	29.04.2010	MAST	Turbulent Machprobe data added	(M. Ramisch)
	28.04.2010	TJ-II	H-Mode data added	(A. Kus)
	28.04.2010	U-3M	Turbulent transport data updated	(M. Ramisch)
	26.04.2010	HSX	Turbulent transport data added	(M. Ramisch)
	22.04.2010	U-3M	Turbulent transport data updated	(M. Ramisch)
	19.03.2010	WEGA	Turbulent transport data added	(M. Ramisch)
	18.03.2010	U-3M	Turbulent transport data added	(M. Ramisch)
	15.03.2010	TJ-K	Turbulent transport data added	(M. Ramisch)
	11.11.2009		Edge turbulence data base created	(A. Dinklage)
	16.09.2009	LHD	H-Mode data added	(A. Kus)
	04.09.2009	CHS	H-Mode data added	(A. Kus)
	17.06.2009	W7-AS	High-Performance data added	(A. Kus)
	12.05.2009	W7-AS	High-Beta data updated	(A. Kus)

Proposal for a joint action ISS26

- Add new data sets to ISCDB, check the impact on regression
- Add data sets for operation limits
- Enrich data with profiles to incorporate presently unconsidered parameters (gradient lengths, wall conditions, radiation ...)
- Revise the structure and nomenclature to align with tokamak DB (IMAS) and long pulse DB (CICLOP)
- ❖ First goal: updated scaling ISS26

Datasets to be included (proposal):

- LHD: high-power, D, high-beta, high-performance (PI)
- W7-X: high-performance (PI), detached, long-pulses
- TJ-II: PI, ...
- H-J: PI, ...

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Special Topic

