

LHD Recommended analyzed data ("Kaiseki-data") list

parameter	parameter abbreviation	Kaiseki-data name	Variable name	Comments
electron temperature profile	Te(R)	tsmap, tsmap_calib	Te	new(>#100000): tsmap_calib
electron density profile	ne(R)	tsmap, tsmap_calib	n_e	new(>#100000): tsmap_calib
electron temperature profile	Te(r/a)	tsmap_smooth	Te_fit	
electron density profile	ne(r/a)	tsmap_smooth	ne_fit	
central electron temperature	Te(0)	thomson	Te	
central electron density	ne(0)	thomson	ne	
line-averaged electron density	ne_bar	firnel	ne_bar(****)	
electron temperature by ECE	Te_ECE(t)	ece_fast	Te	
ion temperature profile	Ti(R)	cxsm7	Ti	
central ion temperature	Ti(0)	cxsm7	Ti	
toroidal flow velocity	V_tor(r/a)	cx7_Er	Vt	
poloidal flow velocity	V_pol(r/a)	cx7_Er	Vp	
radial electric field	Er (r/a)	cx7_Er	Er	
stored energy	Wp	wp	Wp	
kinetic energy	Wpe	tswpe	Wpe	
plasma current	Ip	ip	Ip	
diamag beta	β_{dia}	wp	<beta-dia>	
H alpha intensity	H α	ha1	Halp(30)	
D alpha intensity	D α	ha3	Dalpa	
He (I) intensity	He	ha1	Hel(30)	
ratio of (H+D) and (H+D+He)	(H+D)/(H+D+He)	ha2	(H+D)/(H+D+He)	
radiation power	P_rad	bolo	Rad_PW	
Iron (XVI) impurity intensity	Fe XVI	imp02	FeXVI	
Carbon (III) impurity intensity	CIII	imp01	CIII	
Oxygen (V) impurity intensity	OV	imp01	OV	
NBI power	NBI	nb1, nb2, nb3, nb4, nb5	Power	
ECH power	ECH	echpw	Total ECH	
deposition profile of ECH power	ECH	LHDGAUSS_DEPROF		
ICH power	ICH	ichpw	P(total)	
injection timing of fuelling pellet	Pellet (t)	*fpellet	Fpellet	see file header
injection timing of fuelling gas-puff	GP (t)	*gaspuff	GASPUFF1	
injection timing of TESPEL	TESPEL (t)			N/A
injection timing of impurity pellet	Impurity Pellet (t)			N/A
electron thermal diffusivity	χ_e	dytrans_ts_7_tifitdytrans_ts	chi_e	"9" : using BL5 for CXS (Ti) measurements
ion thermal diffusivity	χ_i	dytrans_ts_7_tifitdytrans_ts	chi_i	"9" : using BL5 for CXS (Ti) measurements
equilibrium profile	tsmesh	tsmesh	R, Z, phi	
Fusion output	Sn	nfm	FC	
D-D neutron rate (t)	Sn	nfm	FC	
D-D neutron profiles (R)	vnc_25I	vnc_25I	COUNTS	
magnetic spectrogram	mp_psd	mp_psd	PSD	
Data from FILD	FILD	FILD	CH1-CH16	
Density profile of carbon evaluated with CXS	Carbon (r/a)	lhdcxs7_density	n_c_C	
Data from heavy ion beam probe				see below
signals of profile or a fixed location mapped without calibration before discharge.	$\phi(r/a)$	hibp_mapping	reff, potential	
signals of profile or a fixed location mapped with calibration before discharge.	$\phi(r/a)$	hibp_mapping_calib	reff, potential_calibrated	
time trace of measured signals at a location (r, z).	$\phi(r, z)$	hibp_t_rz	t, potential, R, Z	
time trace of measured signals at reff.	$\phi(t)$	hibp_t_reff	t, reff, potential	
plasma image data observed by CCD cameras				before 21 cycle: http://cdpvods2.lhd.nifs.ac.jp/ after 22cycle: https://kaiseki-dev.lhd.nifs.ac.jp/rails/plasma_disp/ https://exp.lhd.nifs.ac.jp/opendata/LHD/PDF/
SHOT Summary (PDF)				
lists of discharges with hydrogen/impurity pellet injections				This applies to shots for which "**fpellet" has NOT been registered
plasma duration time /s - No. of data acquisition nodes - total amount acquired data per shot				N/A
description of the Shot "Good", "Bad", "plasma collapse", "accident", "Test", "Calibration", etc.				N/A
Experiment Theme				http://logindex.lhd.nifs.ac.jp/index.html