

DMP Implementation Status of IPP

2024-05-22

Versions of data

The versioning policy is very different for different sorts of data

1. Data from the diagnostics (JPF, AUG level-0)
 - Only one version, immutable
2. Processed experimental data (PPF, level-1 and higher at AUG)
 - Tend to be limited versions
 - Based on fixing bugs
 - Better calibrations
3. Higher level of processed data (e.g. equilibrium)
 - Multiple versions
 - But also multiple approaches
 - EFIT/EFTP/... at JET, EQI/EQH/EQB/IDE/... at AUG
 - Tend to be automated
4. Even higher level of processed data (e.g. core_profiles, core_sources) [e.g. trview, but also TRANSP]
 - Multiple approaches/programs to prepare the data
 - Often significant choices to be made
 - Some automated
 - But often human in the loop
- **Need to find a way of exposing this information to the user of the data!**
 - Particularly important for 3 and 4
 - **Should these case be in simdb? [particularly 4]**

MAST-U data

Accessing data from

imas://data.mastu.ukaea.uk:56560/uda?mapping=MAST&path=/&verbose=0&shot=30417&batch_size=20

ERROR:root:b'al_close_pulse: [ALException = [close]: pulse is not currently open\n[close]: pulse is not currently open\n']

Time data for IDS summary

[-2.00000024 -1.99980021 -1.99960029 ... 3.99939942 3.9995997
3.99979949]

summary.ids_properties.homogeneous_time: 1

summary.ids_properties.creation_date: /meta_date

summary.global_quantities.ip.value: shape (30000,) min -32.0626220703125 max 653.072265625

summary.global_quantities.ip.source: AMC_PLASMA CURRENT

summary.global_quantities.beta_tor.value: shape (107,) min -5.742833137512207 max
9.331830024719238

summary.global_quantities.beta_tor.source: EFM_BETAT

summary.global_quantities.r0.value: 1.0

summary.global_quantities.b0.value: shape (120,) min -0.40763556957244873 max
-0.39459049701690674

summary.global_quantities.b0.source: EFM_BVAC_VAL

summary.global_quantities.h_98.value: shape (107,) min -329.368408203125 max
1.2952461242675781

summary.global_quantities.h_98.source: ESM_H_ITER98PBY2

summary.global_quantities.q_95.value: shape (107,) min 2.788773536682129 max
7.587564945220947

summary.global_quantities.q_95.source: EFM_Q_95

summary.global_quantities.power_ohm.value: shape (107,) min -360359.53125 max 5527063.5

summary.global_quantities.power_ohm.source: ESM_PPHIX

summary.global_quantities.power_radiated.value: shape (7500,) min -24405820.0 max 1181963.5

summary.global_quantities.power_radiated.source: ABM_PRAD_POL

summary.local.magnetic_axis.t_e.value: shape (142,) min 13.173036575317383 max
1292.4188232421875

summary.local.magnetic_axis.t_e.source: AYC_TE_CORE

summary.local.magnetic_axis.n_e.value: shape (142,) min 1.1300766079191613e+18 max
4.4612543559522845e+19

summary.local.magnetic_axis.n_e.source: AYC_NE_CORE

summary.boundary.elongation.value: shape (107,) min 1.1766680479049683 max
1.6209739446640015

summary.boundary.elongation.source: EFM_ELONGATION

summary.boundary.triangularity_upper.value: shape (107,) min 0.14116111397743225 max
0.29847458004951477

summary.boundary.triangularity_upper.source: EFM_TRIANG_UPPER

summary.boundary.triangularity_lower.value: shape (107,) min 0.17068542540073395 max
0.5124835968017578

summary.boundary.triangularity_lower.source: EFM_TRIANG_LOWER

summary.line_average.n_e.value: shape (32768,) min -1.6485142761989734e+19 max
1.6900239627605403e+20

summary.line_average.n_e.source: ANE_DENSITY

summary.heating_current_drive.nbi[0].power.value: shape (50001,) min -25.043039321899414
max 2103.472412109375

summary.heating_current_drive.nbi[0].power.source: ANB_SS_SUM_POWER

summary.heating_current_drive.nbi[1].power.value: shape (50001,) min -0.07980138808488846
max 1740.9127197265625

summary.heating_current_drive.nbi[1].power.source: ANB_SW_SUM_POWER

summary.heating_current_drive.power_nbi.value: shape (50001,) min -25.061094284057617 max
3647.89306640625

summary.heating_current_drive.power_nbi.source: ANB_TOT_SUM_POWER

summary.time: shape (30000,) min -2.000000238418579 max 3.9997994899749756

Timing information

DBEntry = 0.308

open = 0.123

get = 18.112

close = 0.042

dataset_description

- dataset_description.ids_properties.comment: Using fill_summary.py
- dataset_description.ids_properties.homogeneous_time: 2
- dataset_description.ids_properties.source:
/toks/scratch/dpc/FAIR4fusion/aug-summary-ingestion/fill_summary.py
- dataset_description.ids_properties.provider: dpc
- dataset_description.ids_properties.creation_date: 2023-12-06T18:35:00Z
- dataset_description.ids_properties.version_put.data_dictionary: 3.39.0
- dataset_description.ids_properties.version_put.access_layer: 5.0.0
- dataset_description.ids_properties.version_put.access_layer_language: python
- dataset_description.data_entry.user: dpc
- dataset_description.data_entry.machine: ASDEX Upgrade
- dataset_description.data_entry.pulse_type: pulse
- dataset_description.data_entry.pulse: 41570
- dataset_description.data_entry.run: 0
- dataset_description.pulse_time_begin: 2022-07-27T16:10:00Z
- dataset_description.imas_version: imas
- dataset_description.dd_version: imas