# DMP Implementation Status of IPP

2025-09-17

# IMAS versions updated on the TOK and Citrix systems

| DD | AL | TOK cluster | Citrix system |
|---|---|---|---|
| 3.38.1 | 4.11.4 | | 2023-06-08 |
| 3.39.0 | 4.11.5 | 2023-07-26 | 2023-07-31 |
| 3.39.0 | 5.0.0 | 2023-10-10 | |
| 3.41.0 | 4.11.10 | 2024-04-17 | |
| 3.41.0 | 2024.07-foss-2023b | | 2024-08-11 |
| 3.42.0 | 2024.08-foss-2023b | | 2024-08-13 |
| 3.42.0 | 2024.08.1-foss-2023b | 2024-08-23 | 2024-08-22 |
| 3.42.0 | 2024.08.1-intel-2023b | 2024-08-23 | 2024-08-22 |
| 3.42.0 | 4.11.10 | | 2024-10-09 |
| 3.42.0 | 2024.09-foss-2023b | 2024-10-21 | 2024-10-21 |
| 3.42.0 | 2024.09-intel-2023b | 2024-10-21 | 2024-10-21 |
| 4.0.0 | 2024.12-foss-2023b | 2025-01-22 | 2025-01-22 |
| 4.0.0 | 2024.12-intel-2023b | 2025-01-22 | 2025-01-22 |

- Entries in red have a problem after the cluster upgrade
  - Underlying python changed, together with numpy
    - Remove?

# From ITER (Li beam diagnostic)

- for Li beam diagnostic
- Searching IMAS data dictionary for lithium beam related IDS names to answer which IDS to use.
- *Auto approved for this profile (Edit)*
- Looking up explicit IDS names related to a lithium beam diagnostic.
- *Auto approved for this profile (Edit)*
- For a lithium beam edge density diagnostic there is (currently) no dedicated lithium_beam IDS; you map it onto existing IDS as follows:
- Recommended IDS usage
- Raw measured spectra / channel intensities (Li I line brightness vs time, channel, wavelength): use spectrometer_visible (or generic spectrometer_* variant your project already employs). Store:
    - signal channels (line-of-sight along the beam)
    - wavelength / spectral bins
    - calibrated brightness (photons·s^-1·sr^-1·m^-2 or similar)
    - geometry (view chords, beam path) in the diagnostic / geometry sub-structures.
- Derived edge electron density profile from Li beam inversion: use edge_profiles (preferred) because the product is an edge ne(R) (and possibly Te if inferred) profile with uncertainties.
    - Put the reconstructed ne (and errors, spatial grid) into edge_profiles.profiles_1d (or appropriate container) referencing time vector.
    - Note the method (collisional-radiative model, inversion algorithm) in the source / code / comment fields.
- If you only obtain a narrow radial slice that some analyses merge with the main profile, you can also feed the final merged profile into core_profiles (clearly tagging the source) after combining with Thomson/other data—edge_profiles still remains the primary place for the Li beam–only result.
- Geometry of the injected neutral Li beam itself (beam direction, energy, modulation) can be documented:
    - Minimal approach: metadata fields inside spectrometer_visible.diagnostic plus a custom note in source.
    - More detailed approach: neutral_beam IDS is intended for heating beams, so avoid overloading it for a diagnostic Li beam unless your project has an accepted convention; instead keep a concise beam description (energy, species=Li, divergence) in edge_profiles.source or an auxiliary structure.

Summary answer Use spectrometer_visible for raw lithium line emission signals and edge_profiles for the processed electron density profile; there is no separate lithium_beam IDS in the dictionary.

# From ITER (thermal He beam diagnostic)

and for the thermal He beam diagnostic

- Searching IMAS data dictionary for helium beam related identifiers to determine the correct IDS.
- *Auto approved for this profile (Edit)*
- Searching IMAS dictionary for a dedicated helium beam IDS and analogous lithium beam naming to infer pattern.
- *Auto approved for this profile (Edit)*
- Checking whether there is a dedicated IDS for helium beam by comparing with existing lithium beam IDS and looking for BES-related IDS.
- *Auto approved for this profile (Edit)*
- Searching for potential dedicated IDS names related to a thermal helium beam (atomic beam, beam emission spectroscopy).
- *Auto approved for this profile (Edit)*
- Use the charge_exchange IDS (the BES sub-structure) for a thermal helium beam (He-BES) diagnostic.
- Explanation:
    - IMAS does not (currently) define a dedicated helium_beam or lithium_beam diagnostic IDS (searches for helium_beam / he_beam / li_beam show none).
    - Beam Emission Spectroscopy–type diagnostics (including low-energy thermal He beams used for edge ne and Te profiles or fluctuation measurements) are mapped into charge_exchange, using channel/... plus the bes container (e.g. charge_exchange/channel/bes/… paths like z_n, z_ion, a).
    - You specify the neutral beam particle properties there (atomic mass a, nuclear charge z_n) and store derived BES signals (intensities, fluctuation data, derived profiles) in that same bes structure.
    - Raw spectra (if you keep them) can go in the spectral / line-of-sight channel data; processed edge density profile results can also be referenced or duplicated in summary/edge/appropriate higher-level IDS if desired, but the primary diagnostic home is charge_exchange.

So: charge_exchange IDS (bes container) is the correct place; there is no separate thermal He beam IDS. If you also perform CXRS with the same helium beam, you still stay in charge_exchange (non-BES parts of the same IDS).

# Some updates to “IDS_by_device_and_code”

https://docs.google.com/spreadsheets/d/18LBTtpIWsUVxRzY83PuQIfauyHTSv0UQULpyZuXfjkc/edit?gid=0#gid=0

- WEST have updated their column
- Current non-blank entries
  - AUG 25
  - JET 25
  - MAST 5
  - MAST-U 14
  - TCV 28
  - WEST 30
- Others (COMPASS, COMPASS-U) are currently at 3

# Just received: do we want to provide a community response

改进的邮件模板
Dear David Coster,

I am Xueyi Li, a Ph.D. Candidate at Wuhan University. I know you through your scientific dataset entitled "Experimental investigation and SOLPS-ITER modeling of Ne-seeded radiative divertor H-modes plasma on EAST" from ScienceDB. And I am writing to kindly solicit your participation in a survey on researchers' use of data search tools for discovering open data to find out your general views.

Data is a fundamental resource for research. The open data movement provides opportunities for sharing, obtaining, integrating, and reusing existing datasets. However, researchers face a new challenge: before data collection and reuse, how do we effectively find relevant datasets published on the Web? The open dataset is as useful as its discovery mechanisms and dataset search tools provide a promising solution to overcome this challenge. These tools allow researchers to search for the datasets relevant to their data needs and obtain up the description of datasets to evaluate datasets. It contributes to discovering the existence, characteristics, and accessibility of datasets. And I am carrying out a research project aiming to explore researchers' discovery of open data and the role of data search tools, especially generative AI tools in this process, which provides support for optimizing the practice of open data retrieval. This survey is a vital component of this project.

Your participation is greatly important to us and the questionnaire will take you around 5 minutes to complete. We guarantee that all responses will be treated as confidential and used only for this research project, in which the results of this study will be included in an article discussing researchers' dataset discovery. We will strictly follow the law including the International Covenant on Civil and Political Rights of the United Nations, General Data Protection Regulation and the Cybersecurity Law of the People's Republic of China and ethical research guidelines in ensuring the confidentiality of any private information that you have disclosed. All results will be analyzed in aggregate only and the answer will never be associated with individual participants. The e-mail contact details will be deleted from the survey results data file.

If you have used the Science Data Bank's Data Discovery Chat (beta) or any other data retrieval systems integrated generative AI technologies, please follow this link:

https://forms.office.com/r/fXkcLtGjt7

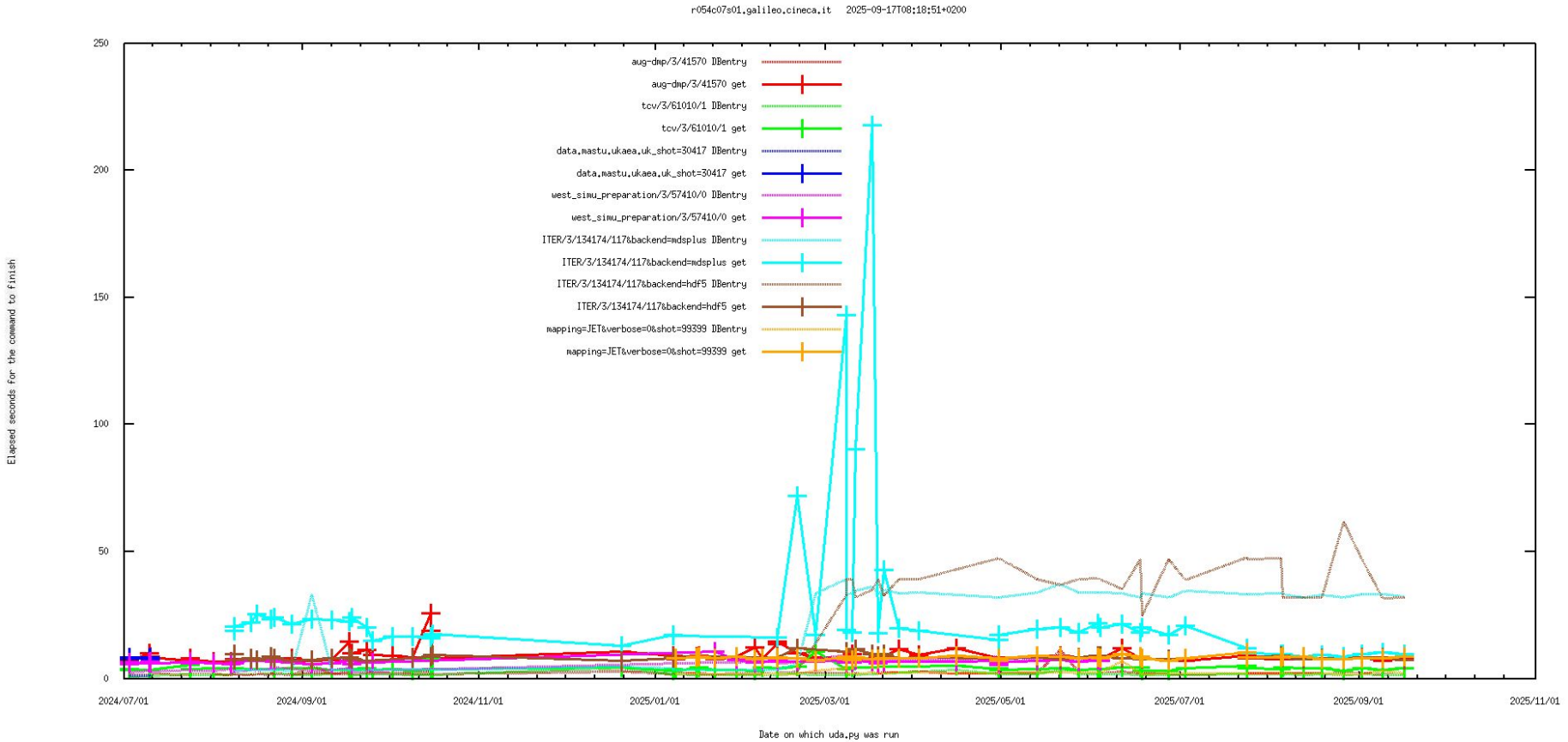
By submitting your responses are indicating your consent to participate in this survey. Your participation in this research is voluntary. You have the right to withdraw at any point during this survey, for any reason, and without any prejudice. If you have any questions about this survey, please feel free to contact me at lixueyi_sim@whu.edu.cn.

Thank you for your consideration and participation. It is very valuable to me.

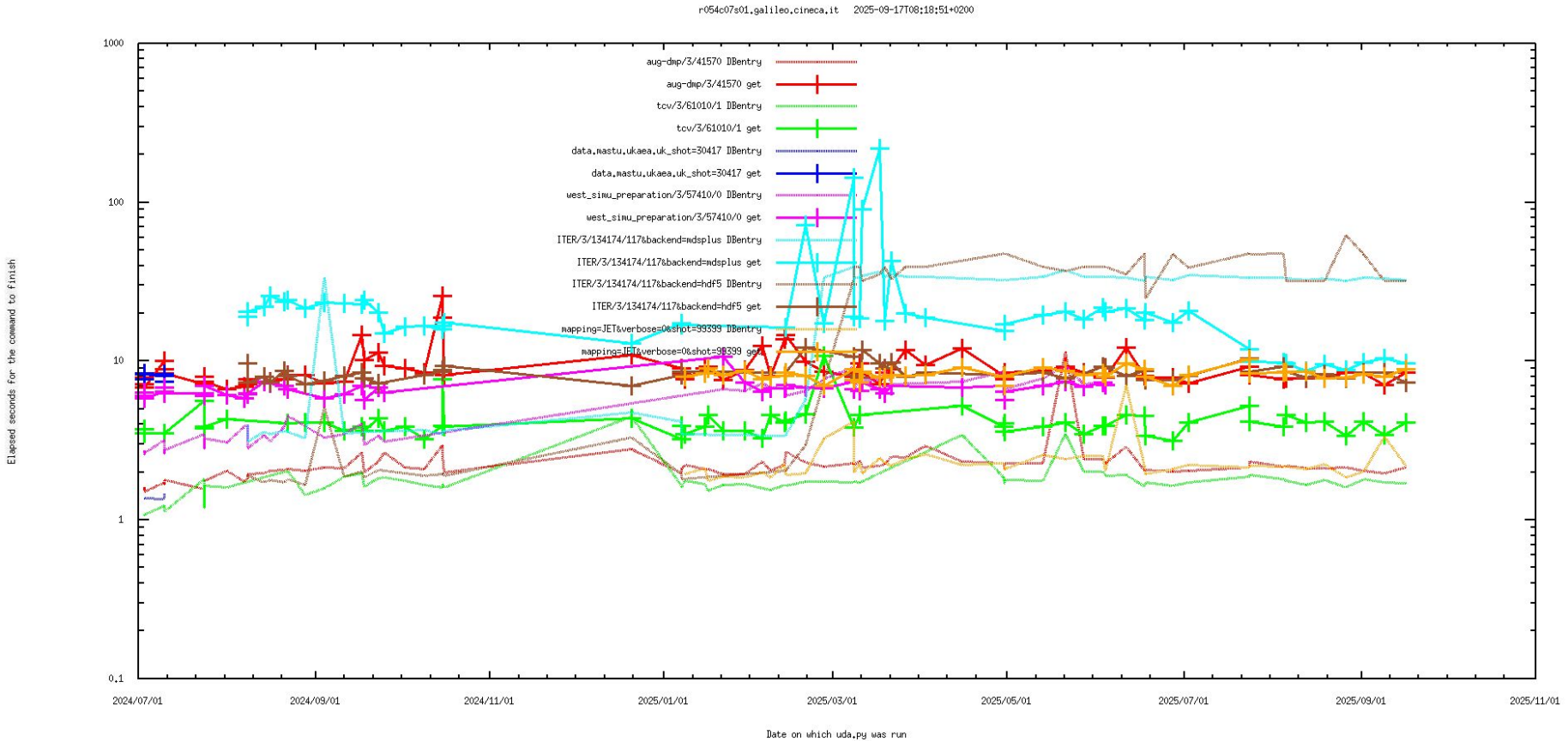
With regards,

Xueyi Li
Ph.D. Candidate
School of Information Management Wuhan University
Email: lixueyi_sim@whu.edu.cn

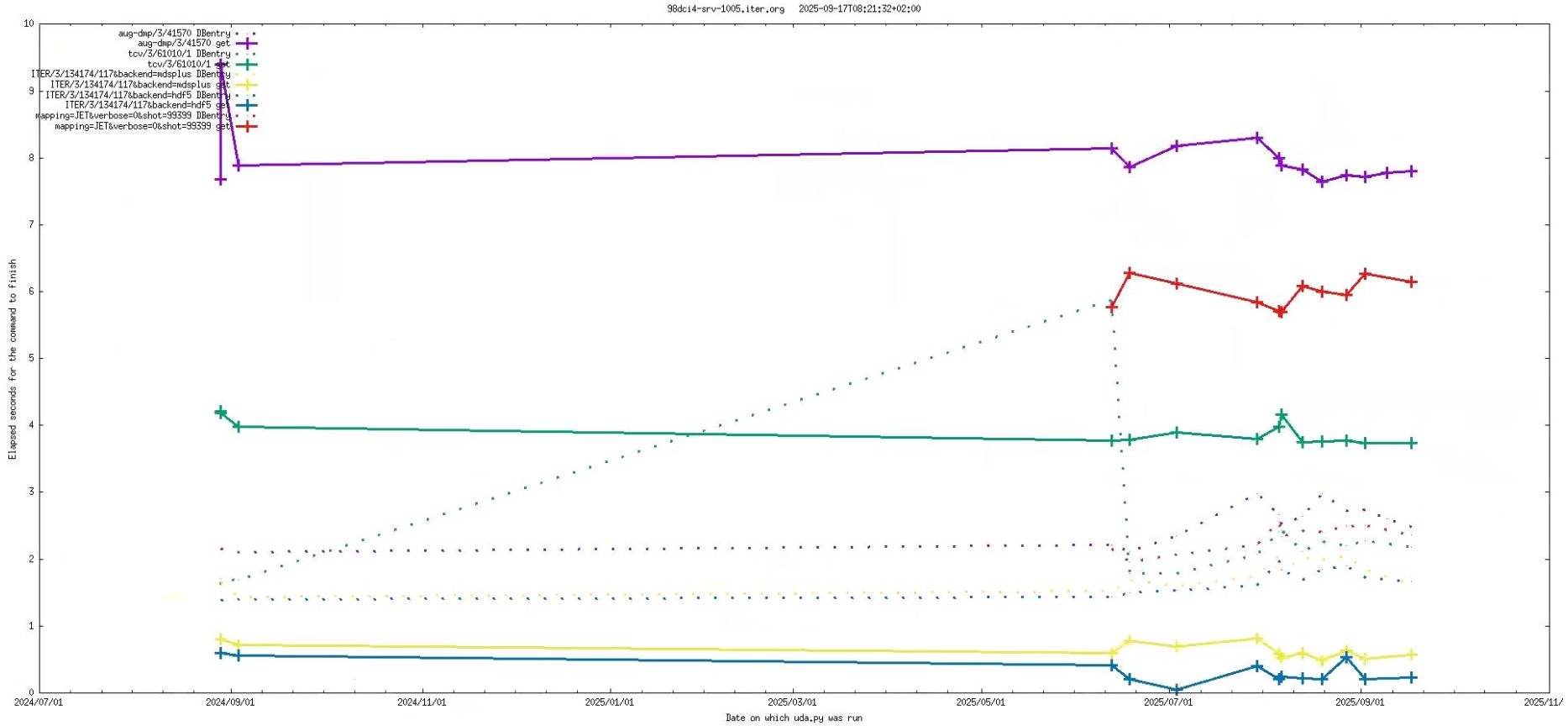
# Data access times: run on Gateway



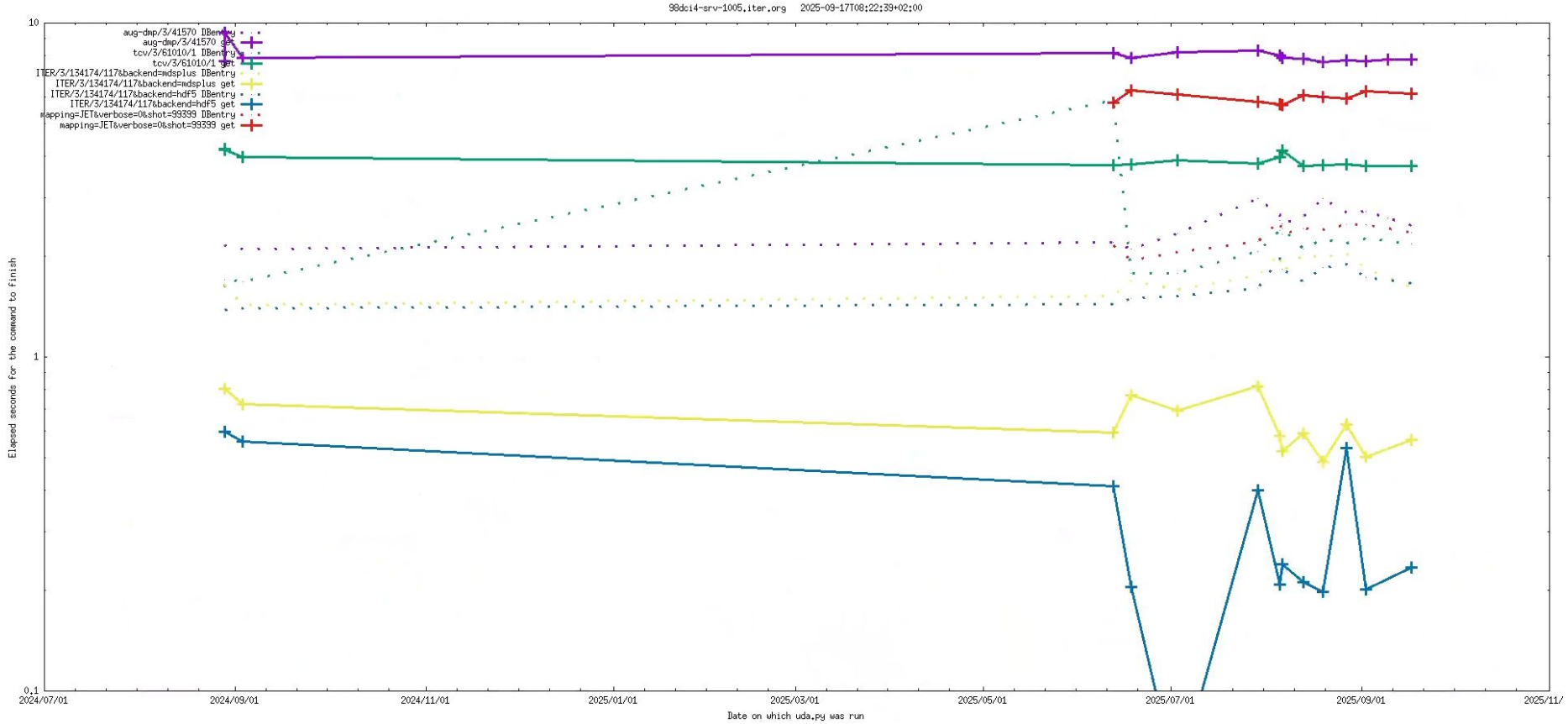
# Data access times: run on Gateway



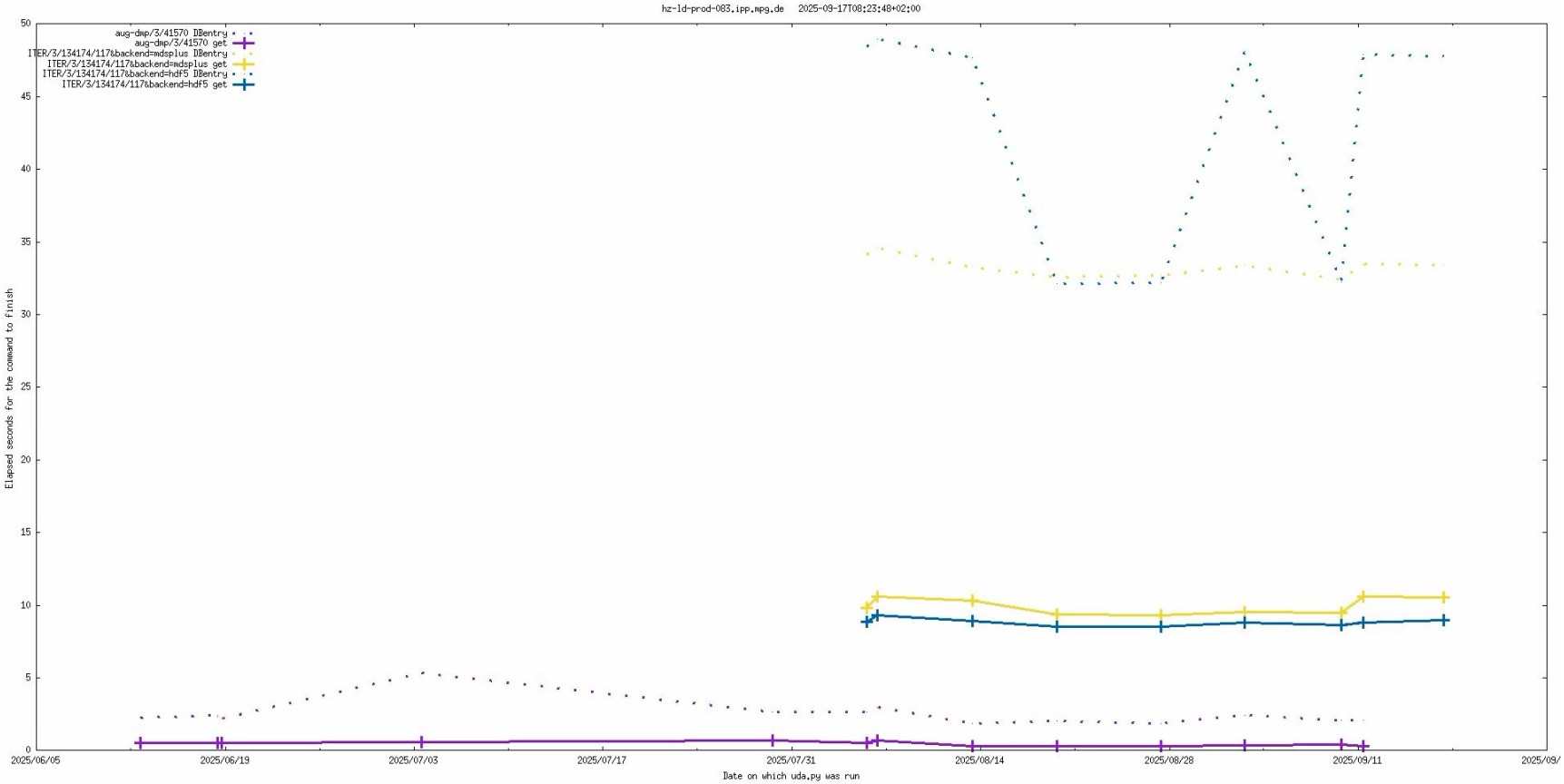
# Data access times: run at ITER



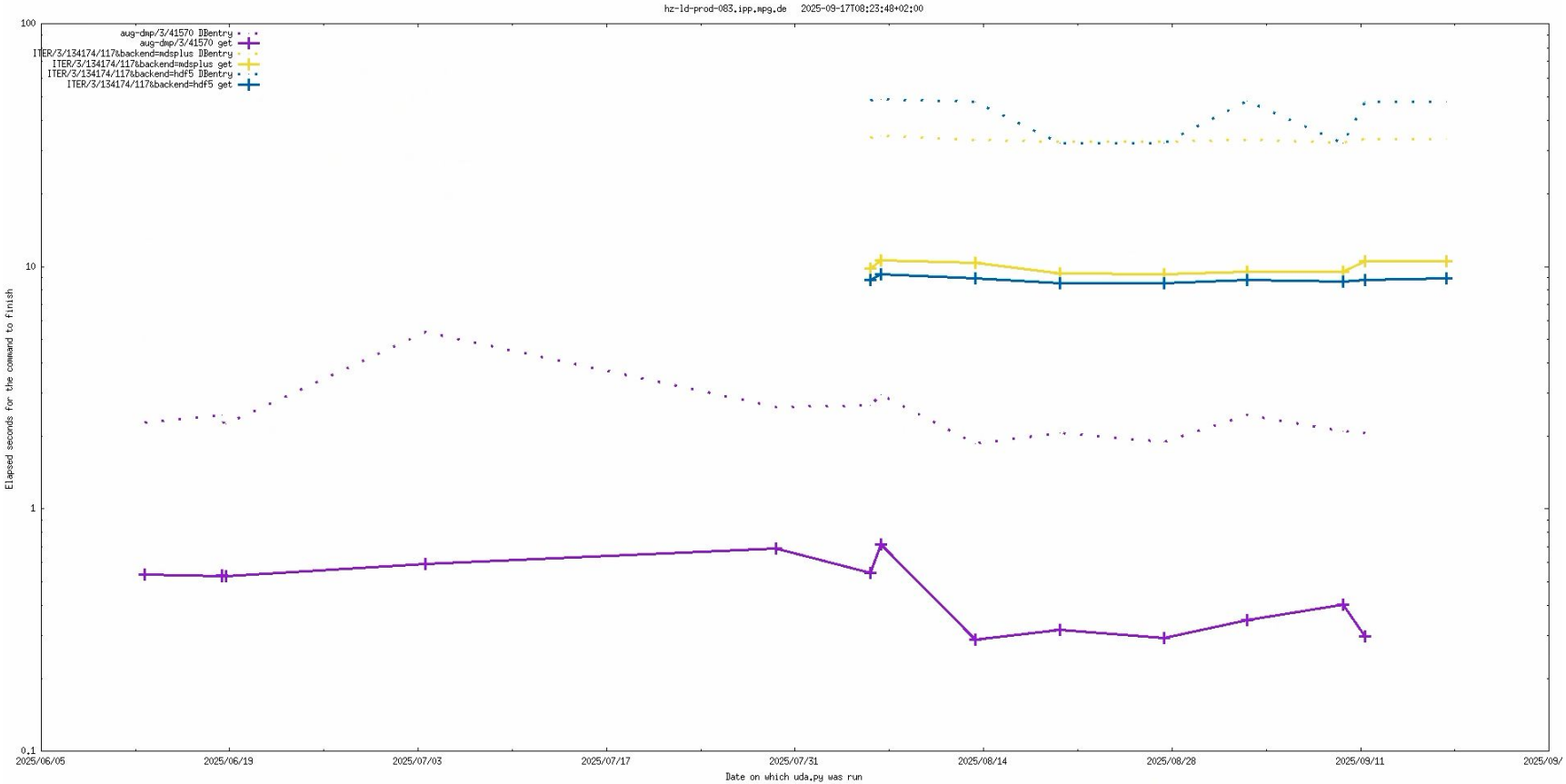
# Data access times: run at ITER



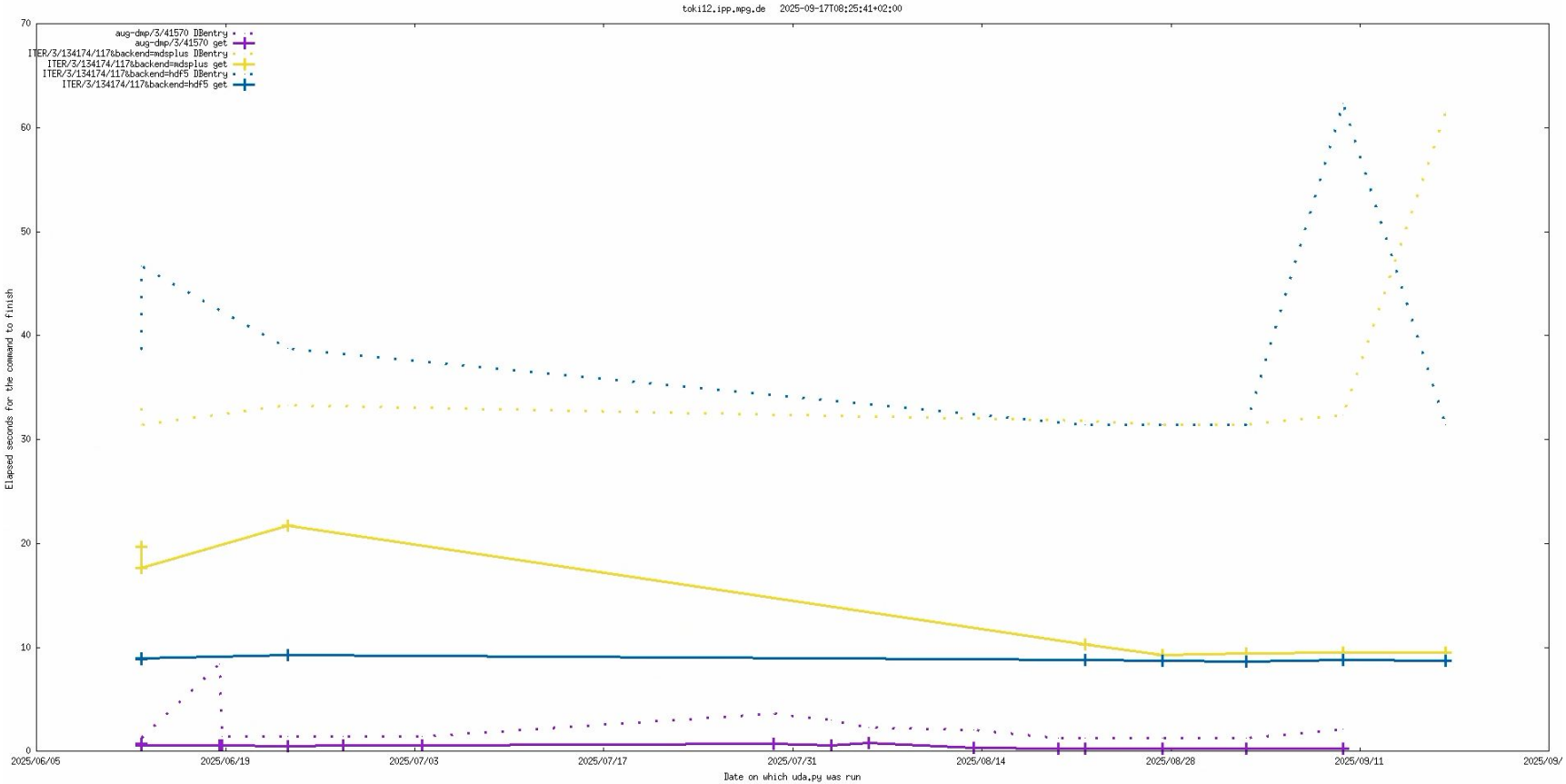
# Data access times: run at IPP (horizon)



# Data access times: run at IPP (horizon)



# Data access times: run at IPP (TOK cluster)



# Data access times: run at IPP (TOK cluster)