DMP Implementation Status of IPP

2024-05-15

Experimental signals …

- Have committed a new version of readaug (git@gitlab.eufus.psnc.pl:data-access-tools/readaug.git) as branch test_338
- git log on next page
- Have produced
  - bin/imasdbs -u $USER -d aug --backend hdf5 slices 17151
  - Tokamak: aug
  - Data version: 3
  - UAL Backend: hdf5
  - Shot 17151
  - Run: 3
  - equilibrium: 58 slices (0.20000000298023224 - 6.199999809265137)
  - magnetics: 10001 slices (0.0 - 10.0)
  - pf_active: 10001 slices (0.0 - 10.0)
  - tf: 10001 slices (0.0 - 10.0)
  - wall: 1 slices (0.0 - 0.0)

git log

commit e3a053238d9ebc44777e36c23622e6b5ee1c84bf (HEAD -> test_338, origin/test_338)
Author: David Coster <David.Coster@ipp.mpg.de>
Date: Wed May 8 19:54:17 2024 +0200

    change '(0.0000d0, i=1,12)' to the explicit 12 copies of 0.0000d0

commit a52ff57f1a84385116d70fdb82ebb52af119520c
Author: David Coster <David.Coster@ipp.mpg.de>
Date: Wed May 8 19:53:04 2024 +0200

    use history.txt to determine the right version; update the mappings to deal with OHo & OHu; try to find another BT

commit 4a6423a42d991f57670476ce9a83aa7774a7f82a
Author: David Coster <David.Coster@ipp.mpg.de>
Date: Wed May 8 19:51:00 2024 +0200

    deal with missing data

commit 03ed2871250381a2dd0d55a59845dec166fcdc4f
Author: David Coster <David.Coster@ipp.mpg.de>
Date: Wed May 8 19:50:17 2024 +0200

    use history.txt to determine the right version

commit cfdb2a0721d5e68018ef1110208a8c764df0e4d1
Author: David Coster <David.Coster@ipp.mpg.de>
Date: Wed May 8 19:48:35 2024 +0200

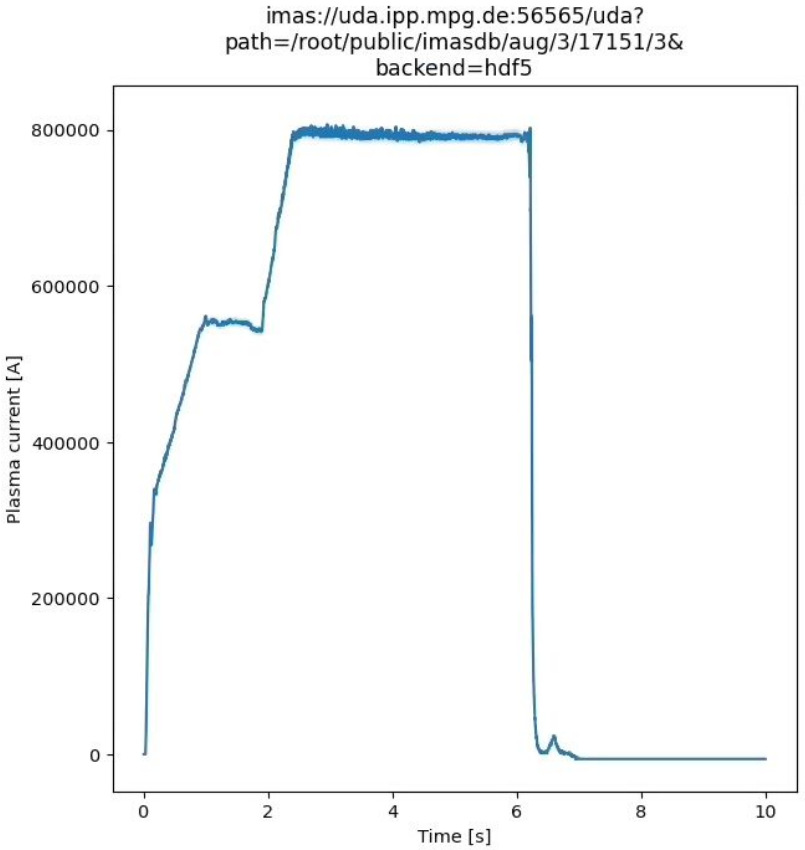
    use hdf5

commit 25adcba5e5de970d0c566c1ffb8f32183dc48026
Author: David Coster <dpc@CX-LD-DSK-091.ipp.mpg.de>
Date: Wed May 8 19:45:18 2024 +0200

    remove some Mac files

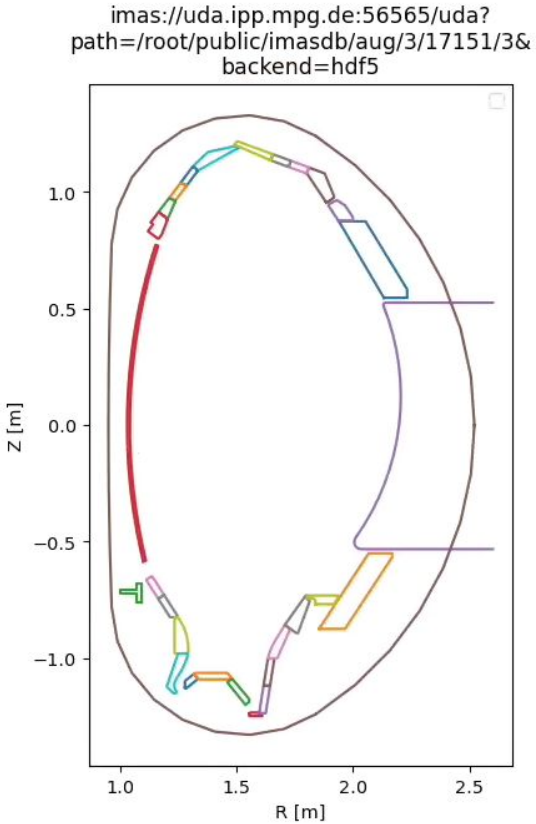
Reading experimental signals via uda (IMAS file, not mapped yet)

- Directory: ~/GIT/simdb/
- ./uda.py -u 'imas://uda.ipp.mpg.de:56565/uda?path=/root/public/imasdb/aug/3/17151/3&backend=hdf5' --case magnetics
  - ...
  - magnetics.method[0].ip.data: shape (10001,) min -6037.396484375 max 806982.625
  - magnetics.method[0].ip.data_error_upper: shape (10001,) min -60.37396484375 max 8069.82625
  - magnetics.code.name: read_augmagnetics_writeids.py
  - magnetics.code.version: 2020.01.28
  - magnetics.time: shape (10001,) min 0.0 max 10.0
  - ...
  - Timing information
  - DBentry = 0.400
  - open = 0.134
  - get = 64.679
  - close = 0.052



Reading experimental signals via uda (IMAS file, not mapped yet)

- Directory: ~/GIT/simdb/
- ./uda.py -u 'imas://uda.ipp.mpg.de:56565/uda?path=/root/public/imasdb/aug/3/17151/3&backend=hdf5' --case magnetics
  - ...
  - wall.description_2d[0].limiter.unit[28].closed: 1
  - wall.description_2d[0].limiter.unit[28].outline.r: shape (8,) min 1.4912999868392944 max 1.6562000513076782
  - wall.description_2d[0].limiter.unit[28].outline.z: shape (8,) min 1.1373000144958496 max 1.2173999547958374
  - wall.code.name: aug_eq_new_edition.py
  - wall.code.version: 2017-03-26
  - wall.time: [0.]
  - ...
  - Timing information
  - DBentry = 0.425
  - open = 0.139
  - get = 11.192
  - close = 0.051



Machine_description and mapping XML → UDA mapping plugin JSON

- We have machine_description and mapping XML's from the ITM/WPCD [Rui] for many devices and systems.
  - Developed for CPOs
  - Also have (indirectly) mappings from CPOs to IDSs
- It would be good if we could try a joint effort to generically transform this XML information into the JSON needed by the UDA mapping plugin