DMP Implementation Status of IPP

2024-04-10

Sundry

- Changed the subheadings from beneficiary to device
  - https://wiki.euro-fusion.org/wiki/DMP#Test_UDA_implementations
- Tried accessing the MAST data using my uda.py on the Gateway
  - ./uda.py -u 'imas://data.mastu.ukaea.uk:56560/uda?mapping=MAST&path=/&verbose=0&shot=30417&batch_size=20' --case summary
  - 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]
  -
  - Timing information
  - DBentry = 0.302
  - open = 0.113
  - get = 13.539
  - close = 0.038
  - There seem to be problems with the lengths of data and some of the data values …

mast

```
/uda.py -u
'imas://data.mastu.ukaea.uk:56560/uda?mapping=MAST&path=/&verbose=0&shot=30417&batch_size=20' --case summary
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 0.2984745800495147 7
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 =  0.275
       open =  0.341
        get = 12.915
      close =  0.034
```

TCV

```
./uda.py -u 'imas://spcimasdata.epfl.ch:443/uda?path=/data/imas/public/imasdb/tcv/3/61010/1/&backend=mdsplus' --case summary
Accessing data from imas://spcimasdata.epfl.ch:443/uda?path=/data/imas/public/imasdb/tcv/3/61010/1/&backend=mdsplus
Time data for IDS summary
[0.         0.00350001 0.00700002 0.01050003 0.01400003 0.01750004
 0.02100005 0.02450006 0.02800007 0.03150008 0.03500009 0.05171273
 0.06842537 0.08513802 0.10185066 0.1185633  0.13527595 0.15198859
 0.16870123 0.18541388 0.20212652 0.21883917 0.23555181 0.25226445
 0.2689771  0.28568974 0.30240238 0.31911503 0.33582767 0.35254031
 0.36925296 0.3859656  0.40267825 0.41939089 0.43610353 0.45281618
 0.46952882 0.48624146 0.50295411 0.51966675 0.53637939 0.55309204
 0.56980468 0.58651733 0.60322997 0.61994261 0.63665526 0.6533679
 0.67008054 0.68679319 0.70350583 0.72021847 0.73693112 0.75364376
 0.77035641 0.78706905 0.80378169 0.82049434 0.83720698 0.85391962
 0.87063227 0.88734491 0.90405755 0.9207702  0.93748284 0.95419549
 0.97090813 0.98762077 1.00433342 1.02104606 1.0377587  1.05447135
 1.07118399 1.08789663 1.10460928 1.12132192 1.13803457 1.15474721
 1.17145985 1.1881725  1.20488514 1.22159778 1.23831043 1.25502307
 1.27173571 1.28844836 1.305161   1.32187365 1.33858629 1.35529893
 1.37201158 1.38872422 1.40543686 1.42214951 1.43886215 1.45557479
 1.47228744 1.48900008 1.48979998]
summary.ids_properties.comment:   from TCV cocos_in=17 transformed to cocos_out=11
summary.ids_properties.homogeneous_time:   1
summary.ids_properties.source:   TCV shot #61010
summary.ids_properties.provider:   gdat_git: gdat git hash not found; tcv_get_ids_summary; error_bar option: delta
summary.ids_properties.creation_date:   17-Aug-2021
summary.ids_properties.version_put.data_dictionary:   3.27.0
summary.ids_properties.version_put.access_layer:   4.8.4
summary.ids_properties.version_put.access_layer_language:   matlab
summary.global_quantities.ip.value:   shape (99,)  min -215110.64334371695  max -53644.58203125  num_nans 11
summary.global_quantities.ip.source:   gdat request: ip ; tcv_eq("i_pl","LIUQE.M")
summary.global_quantities.current_non_inductive.value:   shape (99,)  min -125494.42166315735  max 69305.202847707  num_nans 13
summary.global_quantities.current_non_inductive.source:   gdat request: \tcv_shot::top.results.ibs:icd ; \tcv_shot::top.results.ibs:icd
summary.global_quantities.current_bootstrap.value:   shape (99,)  min -41609.570812244856  max -5592.136456647319  num_nans 13
summary.global_quantities.current_bootstrap.source:   gdat request: \tcv_shot::top.results.ibs:ibs ; \tcv_shot::top.results.ibs:ibs
summary.global_quantities.v_loop.value:   shape (99,)  min -14.442719121977712  max 0.048464233854655266
summary.global_quantities.v_loop.source:   gdat request: vloop ; -1* interpos of \magnetics::vloop[*,$1] 001 with tens=-1000
summary.global_quantities.li.value:   shape (99,)  min 0.6791367530822754  max 1.4016493681710296  num_nans 11
summary.global_quantities.li.source:   gdat request: li ; tcv_eq("l_i_3","LIUQE.M")
summary.global_quantities.beta_tor.value:   shape (99,)  min 0.0  max 0.0131179300320107 65  num_nans 11
summary.global_quantities.beta_tor.source:   gdat request: beta_tor ; tcv_eq("beta_tor","LIUQE.M")
summary.global_quantities.beta_tor_mhd.value:   shape (99,)  min 0.0  max 0.0131179300320107 65  num_nans 11
summary.global_quantities.beta_tor_mhd.source:   gdat request: beta_tor ; tcv_eq("beta_tor","LIUQE.M")
summary.global_quantities.beta_tor_norm.value:   shape (99,)  min 0.0  max 1.9526302104929736  num_nans 11
summary.global_quantities.beta_tor_norm.source:   gdat request: betan ; 100*beta/ip*1e6*b0*a_minor, each from gdat_tcv
summary.global_quantities.beta_tor_norm_mhd.value:   shape (99,)  min 0.0  max 1.9526302104929736  num_nans 11
summary.global_quantities.beta_tor_norm_mhd.source:   gdat request: betan ; 100*beta/ip*1e6*b0*a_minor, each from gdat_tcv
summary.global_quantities.beta_tor_thermal_norm.value:   shape (99,)  min 0.0  max 1.9526302104929736  num_nans 11
summary.global_quantities.beta_tor_thermal_norm.source:   gdat request: betan ; 100*beta/ip*1e6*b0*a_minor, each from gdat_tcv
summary.global_quantities.beta_pol.value:   shape (99,)  min 0.0  max 1.3266593224895185  num_nans 11
summary.global_quantities.beta_pol.source:   gdat request: beta_pol ; tcv_eq("beta_pol","LIUQE.M")
summary.global_quantities.beta_pol_mhd.value:   shape (99,)  min 0.0  max 1.3266593224895185  num_nans 11
summary.global_quantities.beta_pol_mhd.source:   gdat request: beta_pol ; tcv_eq("beta_pol","LIUQE.M")
summary.global_quantities.energy_diamagnetic.value:   shape (99,)  min 0.0  max 18704.018921901417  num_nans 11
summary.global_quantities.energy_diamagnetic.source:   gdat request: w_mhd ; tcv_eq("w_mhd","LIUQE.M")
summary.global_quantities.energy_mhd.value:   shape (99,)  min 0.0  max 18704.018921901417  num_nans 11
summary.global_quantities.energy_mhd.source:   gdat request: w_mhd ; tcv_eq("w_mhd","LIUQE.M")
summary.global_quantities.energy_thermal.value:   shape (99,)  min 857.8686713419042  max 21260.068712900866  num_nans 13
summary.global_quantities.energy_thermal.source:   gdat request: .conf:we + .conf:wi ; \tcv_shot::top.results.conf:we + wi
summary.global_quantities.energy_ion_total_thermal.value:   shape (99,)  min 398.18947151487964  max 10807.56319483493  num_nans 13
summary.global_quantities.energy_ion_total_thermal.source:   gdat request: \tcv_shot::top.results.conf:wi ; \tcv_shot::top.results.conf:wi
summary.global_quantities.energy_electrons_thermal.value:   shape (99,)  min 459.6791998270246  max 11066.47919134024  num_nans 13
summary.global_quantities.energy_electrons_thermal.source:   gdat request: \tcv_shot::top.results.conf:we ; \tcv_shot::top.results.conf:we
summary.global_quantities.volume.value:   shape (99,)  min 0.08060136437416077  max 1.5717136334686569  num_nans 11
summary.global_quantities.volume.source:   gdat request: volume ; Volume of LCFS from tcv_eq('vol','LIUQE.M')
summary.global_quantities.r0.value:   0.88
summary.global_quantities.r0.source:   gdat request: r0 ; gdat(b0).r0
summary.global_quantities.b0.value:   shape (99,)  min -1.4149138226208562  max -1.4089903942736481
summary.global_quantities.b0.source:   gdat request: b0 ; 96*mu0/2piR0 * 0.996 * \magnetics::iphi
summary.global_quantities.h_98.value:   shape (99,)  min 0.48678196324525547  max 1.4246887082473858  num_nans 13
summary.global_quantities.h_98.source:   gdat request: h98y2 ; params_eff =
gdat_data.gdat_params;params_eff.data_request='\tcv_shot::top.results.conf:tau';gdat_tmp=gdat_tcv(shot,params_eff);params_eff.data_request='\tcv_shot::top.r
esults.conf:taue';gdat_tmp2=gdat_tcv(shot,params_eff);params_eff.data_request='\tcv_shot::top.results.conf:h_scal';gdat_tmp3=gdat_tcv(shot,params_eff);ih98y
2=5;ih98y2=5;if size(gdat_tmp3.data,1)>=ih98y2;gdat_tmp.data = gdat_tmp.data./gdat_tmp2.data .* gdat_tmp3.data(ih98y2,:)';end;
summary.global_quantities.q_95.value:   shape (99,)  min 0.8691381812095642  max 7.420474262680147  num_nans 11
summary.global_quantities.q_95.source:   gdat request: q95 ; tcv_eq("q_95","LIUQE.M")
summary.global_quantities.power_ohm.value:   shape (99,)  min 75368.55051840977  max 361109.5182916889  num_nans 13
summary.global_quantities.power_ohm.source:   gdat request: \tcv_shot::top.results.conf:ptot_ohm ; \tcv_shot::top.results.conf:ptot_ohm
summary.global_quantities.power_radiated.value:   shape (99,)  min 41575.470663062195  max 396883.02549260366  num_nans 15
summary.global_quantities.power_radiated.source:   gdat request: \results::bolo:prad:total ; \results::bolo:prad:total
summary.global_quantities.greenwald_fraction.value:   shape (99,)  min 0.24182076074488812  max 0.7386497308717752  num_nans 15
summary.global_quantities.greenwald_fraction.source:   gdat request: ngf ; params_eff =
gdat_data.gdat_params;params_eff.data_request='nel';gdat_tmp=gdat_tcv(shot,params_eff);params_eff.data_request='n_greenwald';gdat_tmp2=gdat_tcv(shot,p
arams_eff);ij=find(gdat_tmp2.data==0);gdat_tmp2.data(ij)=NaN;tmp_data2=interp1(gdat_tmp2.t,gdat_tmp2.data,gdat_tmp.t,[],NaN);gdat_tmp.data =
gdat_tmp.data./(tmp_data2+1e-5);
summary.boundary.geometric_axis_r.value:   shape (99,)  min 0.7648907899856567  max 0.8942020871018226  num_nans 11
summary.boundary.geometric_axis_r.source:   gdat request: r_geom
summary.boundary.geometric_axis_z.value:   shape (99,)  min -0.35285864770412445  max 0.06550545565697113  num_nans 11
summary.boundary.geometric_axis_z.source:   gdat request: z_geom
summary.boundary.magnetic_axis_r.value:   shape (99,)  min 0.7644960880279541  max 0.9234213755530336  num_nans 11
summary.boundary.magnetic_axis_r.source:   gdat request: r_mag
summary.boundary.magnetic_axis_z.value:   shape (99,)  min -0.32095155119895935  max 0.06579134879781039  num_nans 11
summary.boundary.magnetic_axis_z.source:   gdat request: z_mag
summary.boundary.minor_radius.value:   shape (99,)  min 0.06178851053118706  max 0.25184876183979477  num_nans 11
summary.boundary.minor_radius.source:   gdat request: a_minor
summary.boundary.elongation.value:   shape (99,)  min 1.0289912223815918  max 1.578235956285356  num_nans 11
summary.boundary.elongation.source:   gdat request: kappa
summary.boundary.triangularity_upper.value:   shape (99,)  min -0.09924408048391342  max 0.41988711105567983  num_nans 11
summary.boundary.triangularity_upper.source:   gdat request: delta_top
summary.boundary.triangularity_lower.value:   shape (99,)  min -0.02749396568904669  max 0.7914191995864095  num_nans 11
summary.boundary.triangularity_lower.source:   gdat request: delta_bottom
summary.volume_average.zeff.value:   shape (99,)  min 1.2678761203109206  max 3.41910111119126586  num_nans 13
summary.volume_average.zeff.source:   gdat request: \tcv_shot::top.results.ibs:z_eff ; \tcv_shot::top.results.ibs:z_eff (not vol avrg but to match lohm)
summary.gas_injection_rates.deuterium.value:   shape (99,)  min 14.290098141708684  max 51.107541390806254
summary.gas_injection_rates.deuterium.source:   gdat request: gas_flux
summary.code.name:   gdat
summary.code.version:   gdat git hash not found
summary.code.repository:   gdat git url not found
summary.time:   shape (99,)  min 0.0  max 1.489799976348877


Timing information
   DBentry =  0.197
      open =  0.073
       get = 12.757
     close =  0.020
```

AUG

./uda.py -u 'imas://uda.ipp.mpg.de:56565/uda?path=/root/public/imasdb/aug-dmp/3/41570/0&backend=hdf5' --case summary
Accessing data from imas://uda.ipp.mpg.de:56565/uda?path=/root/public/imasdb/aug-dmp/3/41570/0&backend=hdf5
Time data for IDS summary
[0.158 0.258 0.358 0.458 0.558 0.658 0.758 0.858 0.958 1.058 1.158 1.258
 1.358 1.458 1.558 1.658 1.758 1.858 1.958 2.058 2.158 2.258 2.358 2.458
 2.558 2.658 2.758 2.858 2.958 3.058 3.158 3.258 3.358 3.458 3.558 3.658
 3.758 3.858 3.958 4.058 4.158 4.258 4.358 4.458 4.558 4.658 4.758 4.858
 4.958 5.058 5.158 5.258 5.358 5.458 5.558 5.658 5.758 5.858 5.958 6.058
 6.158 6.258 6.358 6.458 6.558 6.658 6.758 6.858 6.958 7.058 7.158 7.258
 7.358 7.458 7.558 7.658 7.758 7.858 7.958 8.058 8.158 8.258 8.358 8.458
 8.558 8.658 8.758 8.858 8.958 9.058 9.158]
summary.ids_properties.comment: Using fill_summary.py
summary.ids_properties.homogeneous_time: 1
summary.ids_properties.source: /toks/scratch/dpc/FAIR4fusion/aug-summary-ingestion/fill_summary.py
summary.ids_properties.provider: dpc
summary.ids_properties.creation_date: 2023/12/06
summary.ids_properties.version_put.data_dictionary: 3.39.0
summary.ids_properties.version_put.access_layer: 5.0.0
summary.ids_properties.version_put.access_layer_language: python
summary.tag.name: {"description": "** First harmonic ICRF after this shot, long break for DivIIo installation started"}
summary.tag.comment: Additional data for which there is no home in the summary IDS.
summary.global_quantities.ip.value: shape (91,) min 338301.625 max 599634.1875
summary.global_quantities.ip.value_error_upper: shape (91,) min 351.726806640625 max 52749.35546875
summary.global_quantities.ip.source: AUGD/FPC/IpiFP/1
summary.global_quantities.v_loop.value: shape (91,) min 0.10686195641756058 max 4.67210578918457
summary.global_quantities.v_loop.value_error_upper: shape (91,) min 0.04553554952144623 max 3.2428390979766846
summary.global_quantities.v_loop.source: AUGD/TOT/u_loop/3
summary.global_quantities.energy_mhd.value: shape (91,) min 11042.5185546875 max 231911.953125
summary.global_quantities.energy_mhd.value_error_upper: shape (91,) min 663.809814453125 max 32162.3671875
summary.global_quantities.energy_mhd.source: AUGD/GQH/Wmhd/1
summary.global_quantities.energy_thermal.value: shape (91,) min 4512.73291015625 max 222827.78125
summary.global_quantities.energy_thermal.value_error_upper: shape (91,) min 813.8518676757812 max 23656.546875
summary.global_quantities.energy_thermal.source: AUGD/TOT/Wth/3
summary.global_quantities.volume.value: shape (91,) min 10.278403282165527 max 14.6323881149292
summary.global_quantities.volume.value_error_upper: shape (91,) min 0.03932863846421242 max 1.2950630187988281
summary.global_quantities.volume.source: AUGD/GQH/Vol/1
summary.global_quantities.r0.value: 1.65
summary.global_quantities.r0.value_error_upper: 0.0
summary.global_quantities.r0.source: Official AUG value
summary.global_quantities.b0.value: shape (91,) min -2.484121561050415 max -2.4799582958221436
summary.global_quantities.b0.value_error_upper: shape (91,) min 0.0002923092106357217 max 0.0007885782979428768
summary.global_quantities.b0.source: AUGD/MAI/BTF/-1
summary.global_quantities.tau_energy.value: shape (91,) min 0.005694422405213118 max 0.12494518607854843
summary.global_quantities.tau_energy.value_error_upper: shape (91,) min 0.0009540120954625309 max 0.06080828234553337
summary.global_quantities.tau_energy.source: AUGD/TOT/tau_tot/3
summary.global_quantities.q_95.value: shape (91,) min -9.153563499450684 max -6.304338455200195
summary.global_quantities.q_95.value_error_upper: shape (91,) min 0.01839715987443924 max 0.7778658866882324
summary.global_quantities.q_95.source: AUGD/GQH/q95/1
summary.global_quantities.power_ohm.value: shape (91,) min 255721.421875 max 1412302.25
summary.global_quantities.power_ohm.value_error_upper: shape (91,) min 26989.83203125 max 728935.25
summary.global_quantities.power_ohm.source: AUGD/TOT/P_OH/3
summary.global_quantities.power_steady.value: shape (91,) min 395396.0 max 6974752.5
summary.global_quantities.power_steady.value_error_upper: shape (91,) min 36407.25 max 2914687.25
summary.global_quantities.power_steady.source: AUGD/TOT/P_TOT/3
summary.boundary.elongation.value: shape (91,) min 1.1858265399932861 max 1.6919595003128052
summary.boundary.elongation.value_error_upper: shape (91,) min 0.0014877649955451488 max 0.05459081754088402
summary.boundary.elongation.source: AUGD/GQH/k/1
summary.boundary.triangularity_upper.value: shape (91,) min -0.02271001599729061 max 0.04597816243767738
summary.boundary.triangularity_upper.value_error_upper: shape (91,) min 0.0018475801916792989 max 0.20100650191307068
summary.boundary.triangularity_upper.source: AUGD/GQH/delRoben/1
summary.boundary.triangularity_lower.value: shape (91,) min 0.04599956423044205 max 0.4175274968147278
summary.boundary.triangularity_lower.value_error_upper: shape (91,) min 0.001116959028877318 max 0.25312021374702454
summary.boundary.triangularity_lower.source: AUGD/GQH/delRuntn/1
summary.line_average.n_e.value: shape (91,) min 1.1716272977723195e+19 max 1.1114984743275799e+20
summary.line_average.n_e.value_error_upper: shape (91,) min 1.8134190785794614e+17 max 5.671098260168926e+18
summary.line_average.n_e.source: AUGD/DCN/H-0/-1
summary.heating_current_drive.power_ec.value: shape (91,) min 359.3370666503906 max 2343476.75
summary.heating_current_drive.power_ec.value_error_upper: shape (91,) min 209.07534790039062 max 1145388.0
summary.heating_current_drive.power_ec.source: AUGD/ECS/PECRH/9
summary.heating_current_drive.power_nbi.value: shape (91,) min 0.0 max 3254347.75
summary.heating_current_drive.power_nbi.value_error_upper: shape (91,) min 0.0 max 823491.0
summary.heating_current_drive.power_nbi.source: AUGD/NIS/PNI/1
summary.heating_current_drive.power_ic.value: shape (91,) min -4.114134311676025 max 2590757.25
summary.heating_current_drive.power_ic.value_error_upper: shape (91,) min 0.07165080308914185 max 1243012.25
summary.heating_current_drive.power_ic.source: AUGD/ICP/PICRFc/1
summary.time_width: shape (91,) min 0.1 max 0.1
summary.code.name: fill_summary.py
summary.code.commit: 0.0.0-1-gbbd6c8d-dirty
summary.code.version: 0.0.0-1-gbbd6c8d-dirty
summary.code.repository: git@gitlab.com:fair-for-fusion/aug-summary-ingestion.git
summary.time: shape (91,) min 0.15799999833106995 max 9.15799999833107

Timing information
DBentry = 1.014
open = 0.126
get = 55.746
close = 0.042

IMAS-5237: Is there more documentation on the line_average structure of the summary IDS?

Question

- Within the summary ids, there is a structure "line_average". Is there documentation somewhere about which line the average should be based on?
- Most devices, I think, have a number of such lines for producing integrals or averages. What should be chosen for filling this set of fields for an experiment?
- There is also the possibility that (experimentally) different lines might be used for different signals ...

Answer

- Hi David. Precisely due to the reasons you mention, multiplicity of possible methods, also depending on the context (measurement, simulation, ...) I don't think it's possible to impose a unique definition for this in the Summary IDS. The best we can do is to document the provenance and/or calculation method of the information in the source node sibling to each value node of the IDS.