

ABSORPTION TOMOGRAPHY

Sinogram generation:

Online (during scanning): `sinofly_tomcat_j.py`

This script needs to be started only once at the beginning of the beamtime, it will automatically recognize when a new scan has started and otherwise wait.

Offline (after scanning): `sinooff_tomcat_j.py <tifdir>`

Center determination:

with IDL (`idl_tomcat`): `ms_sinotune`

Center adjustment, filter selection and determination of scaling parameters for TIF conversion:

Web-interface: <http://pc4860.psi.ch/tomcat/reco/>

Cluster reconstruction of the dataset:

`tif2rec_batch_j.py <nnode> <logdir> <center> <filter> <rot> <roirec> <ring> <output>
<outputtag> <roisin> <binning>`

ARGUMENTS

<code>nnodes</code>	Number of available nodes on the cluster
<code>logdir</code>	Directory with logfile
<code>center</code>	Center of rotation of the sinograms
<code>filter</code>	Filter parameters of the form <code><id,p1,p2></code> Default: 5,10,0,0.5 (Butterworth). Options: id 0 : no filtering; p1 = SDD in mm id 1-5: filter with order p1 and cutoff frequency p2 with id's 1=Ramp, 2=Hamming, 3=Hanning, 4=Parzen, 5=Butterworth
<code>rot</code>	Rotation in clockwise orientation. Default: 0.0
<code>roirec</code>	Region of interest given in the form <code><x1,y1,x2,y2></code> , applied after rotation. Default: 0,0,0,0 (= full image)
<code>ring</code>	Removal of ring artifacts of the form <code><id,p1,p2></code> id 0: no ring removal id 1: ring removal starting for adjacent columns with a difference in standard deviation larger than p1 and maximum p2 adjacent columns
<code>output</code>	Output format in the form <code><id,min,max></code> id 0: DMP min=max=0.0 id 8: 8-bit TIFF id 16: 16-bit TIFF min,max: scaling parameters for TIFF if set to 0.0, they will be chosen automatically (not recommended)
<code>outputdir</code>	Additional tag to be added to the name of the output directory
<code>roisin</code>	Option to reconstruct only part of the dataset in the form <code><j,sinstart,sinend></code> j: only one reconstruction each j lines of the projections

sinstart/einend: reconstruction only in the specified interval
Default: All reconstructions (1,0,0)
binning Bin size
Default: 1

EXAMPLE

```
tif2rec_batch_j.py 16 /sls/X02DA/Data1/e11218/MBA/Taumatina_para_43mm/tif 1024.5 4,10.0,0.5 45.0  
200,150,1000,900 1,0.3,10 8,0.01,0.05 parzen 50,200,800 2
```