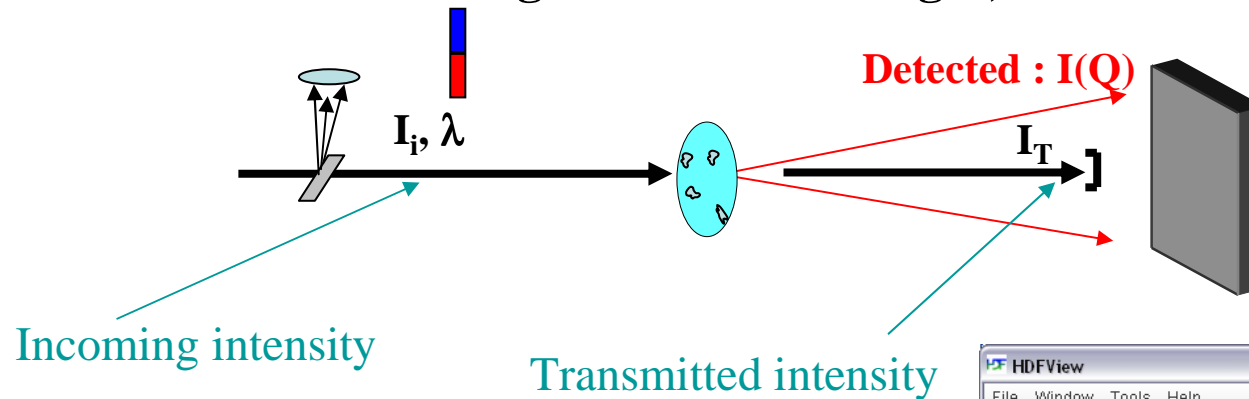


SAXS data format and data handling needs at Soleil

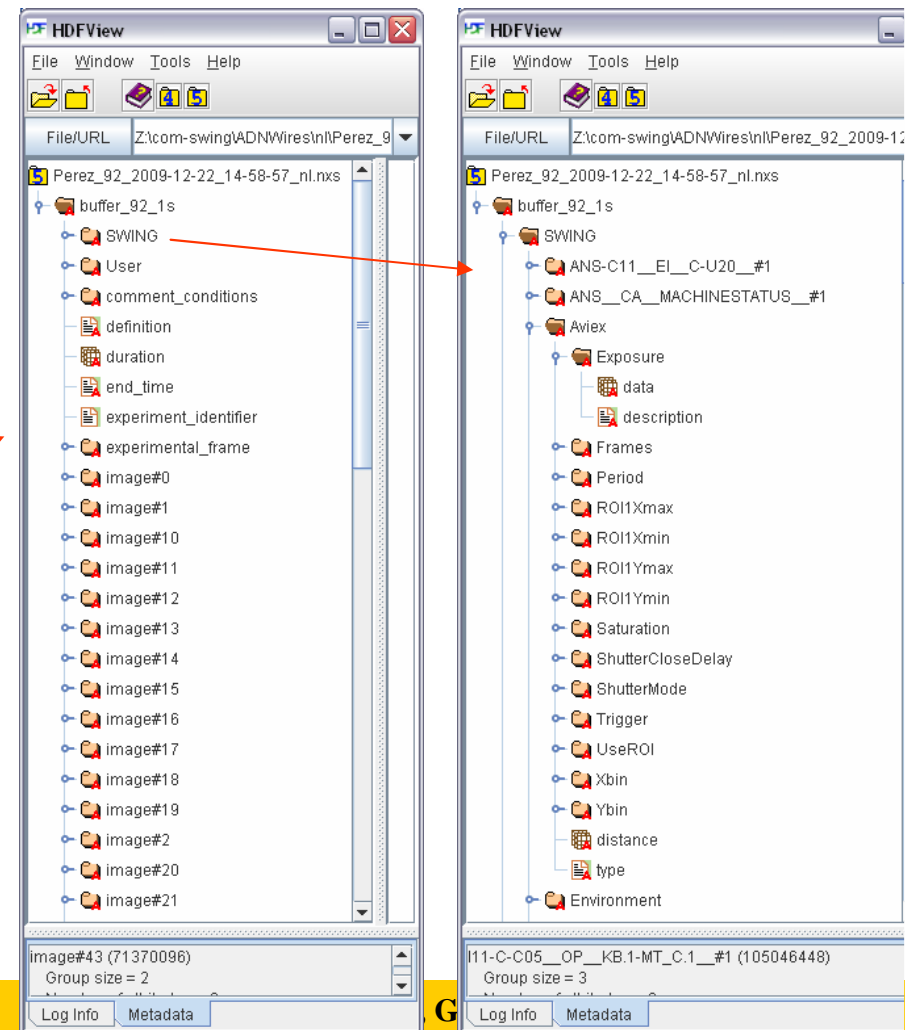
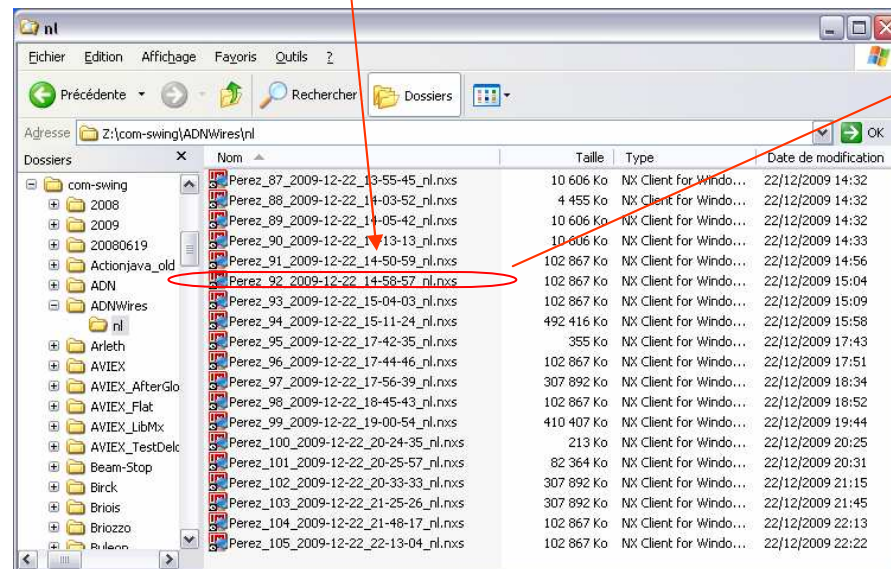
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NeXus : data storage format for images, intensities and contextual data

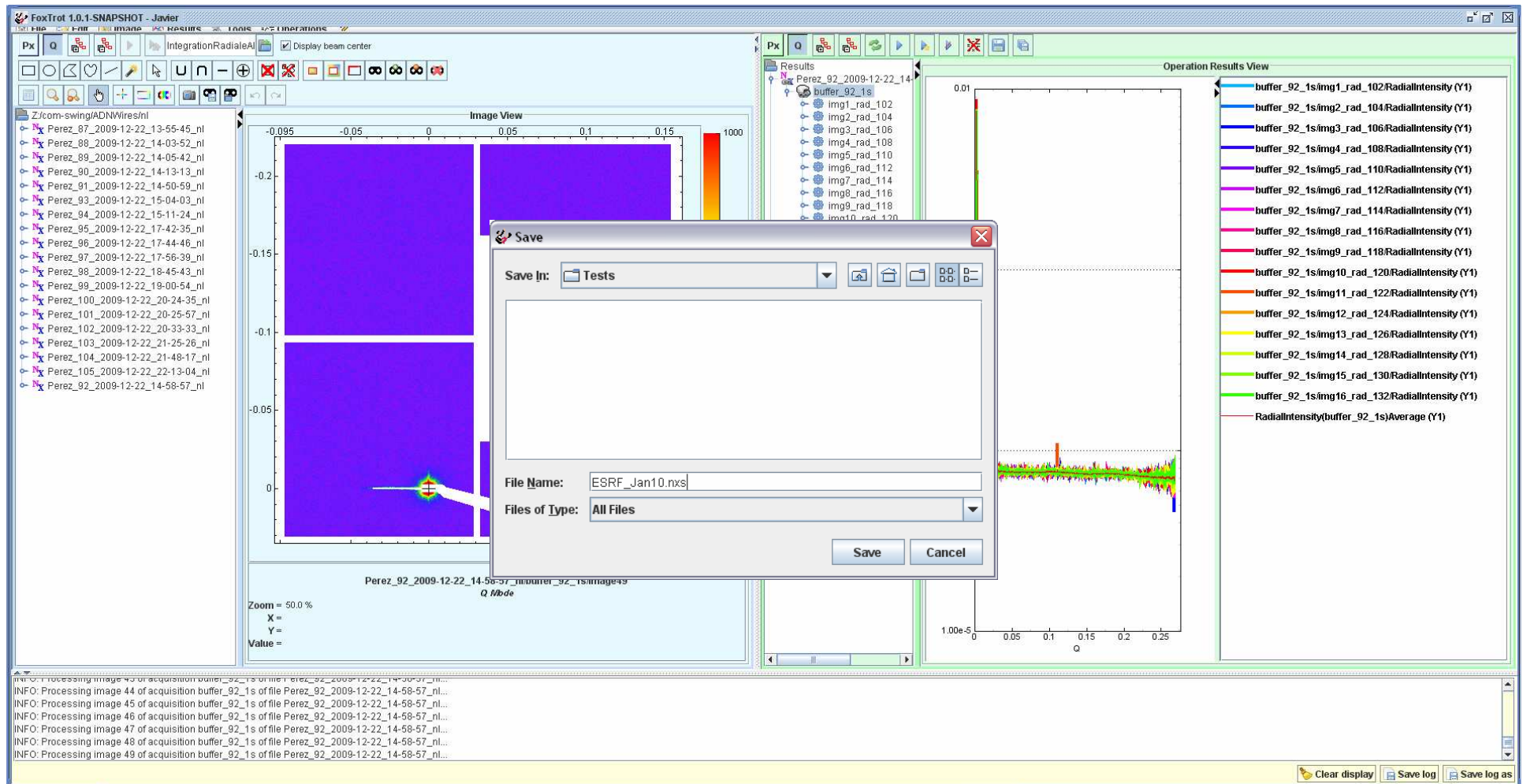


- Several images are collected for each given sample
- Monitoring intensities are also collected for each image
- A single NeXus file is generated for the whole sequence



Foxtrot : Graphical Application (Java) for Data reduction and first analysis

- Mask, 2D \rightarrow 1D Radial averaging, Frame averaging, Frame subtraction
- Determination of Guinier parameters (I_0 , R_g)
- Macro language



Output from Foxtrot : NeXus file + ASCII files to comply with users needs

The image displays two windows from a Windows operating system. The left window is a Windows Explorer window titled 'Tests', showing the directory structure of a NeXus file. The right window is a WordPad document titled 'buffer_92_1s_rad12.dat - WordPad', showing the contents of the NeXus file.

Windows Explorer (Left Window):

- Address: D:\FoxTrot_Profiles\Javier\data\Tests
- Files: Stebe_fluorés, Tests, ESRF_Jan10, ESRF_Jan10.nxs
- Selected file: ESRF_Jan10

WordPad (Right Window):

buffer_92_1s_rad12.dat - WordPad

NeXus source file: ESRF_Jan10
NXdata: name = img12_rad_124

Exposure_msec= 1500.0 + 10.0
_diffrn_source.source Storage Ring Soleil, beamline SWING
_diffrn_software FOXTROT
_diffrn_detector.detector aviex
_sas_detct.pixnum_ax 1024
_sas_detct.pixnum_eq 1024
_sas_detct.pixsize 40.7
_sas_detct.binning 4
_sas_detct.center_ax 386.7
_sas_detct.center_eq 886.8
_sas_detct.dist_spec/detct 3906.9316369
_sas_detct.bias.sub true
_sas_detct.bias 200
_sas_detct.sector_width 360.0
_sas_detct.mask D:\FoxTrot_Profiles\Javier\masks\mask_ADN.txt
Facteur de Normalisation= 1.0
Normalisation true
Mi de Normalisation= I11-C-C09_DT_MI_DIODE.8a

q(A-1)	I(q)buffer_92_1s_rad12	Sig(q)buffer_92_1s_rad
0.0	nan	nan
0.000253415939705	nan	nan
0.00050683187842	nan	nan
0.000760247815155	nan	nan
0.00101366374892	nan	nan
0.00126707967872	nan	nan
0.00152049560358	nan	nan
0.00177391152249	nan	nan
0.00202732743448	nan	nan
0.00228074333854	0.00761028701748	7.9411380025e-05
0.00253415923369	0.0063337661492	1.543824164e-05
0.00278757511895	0.00468693582002	9.52672098988e-06
0.00304099099331	0.00361703492004	7.2650056048e-06
0.00329440685579	0.00279441871374	5.805615225e-06
0.0035478227054	0.00212658773858	4.72304823177e-06
0.00380123854115	0.00169359287364	4.00428254903e-06
0.00405465436205	0.00137639987658	3.46000668382e-06
0.00430807016711	0.00112831100787	3.03421216492e-06
0.00456148595534	0.00093027779155	2.60743343477e-06
0.00481490172575	0.000783395833165	2.26943958356e-06
0.00506831747734	0.000674501624215	2.04469977319e-06
0.00532173320914	0.000588982194941	1.89204607841e-06
0.00557514892015	0.000503428928613	1.74858869597e-06
0.00582856460937	0.000433650523616	1.62888201936e-06
0.00608198027582	0.000381965849264	1.52942679822e-06
0.00633539591852	0.000332268533963	1.44066020513e-06

Appuyez sur F1 pour obtenir de l'aide

Am I happy ? Not completely

- I also want to use Foxtrot with data coming from other facilities
- But : I don't want to change Foxtrot code for each new different format
- I also want to use other applications (e.g. fit2D) on my own data
- But : I don't want to change my data format for each new interesting application

A possible solution : Common data format

- Long process : Convince each facility to change its own data format !
- Limited to future : You cannot access old data which don't have the common format

Meanwhile, alternative solution : Explain your own present data format

- Each facility should provide a plug-in that describes its own data format
- Each plug-in would define common simple functions (e.g. Getdata(« typeOfData »))
- Each application would have to implement these simple functions → ONLY ONCE

Light and progressive solution