ICAT use at Diamond

Ghita Kouadri Mostefaoui

Scientific Computing Group
Diamond Light Source

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ICAT as a catalogue for archived data

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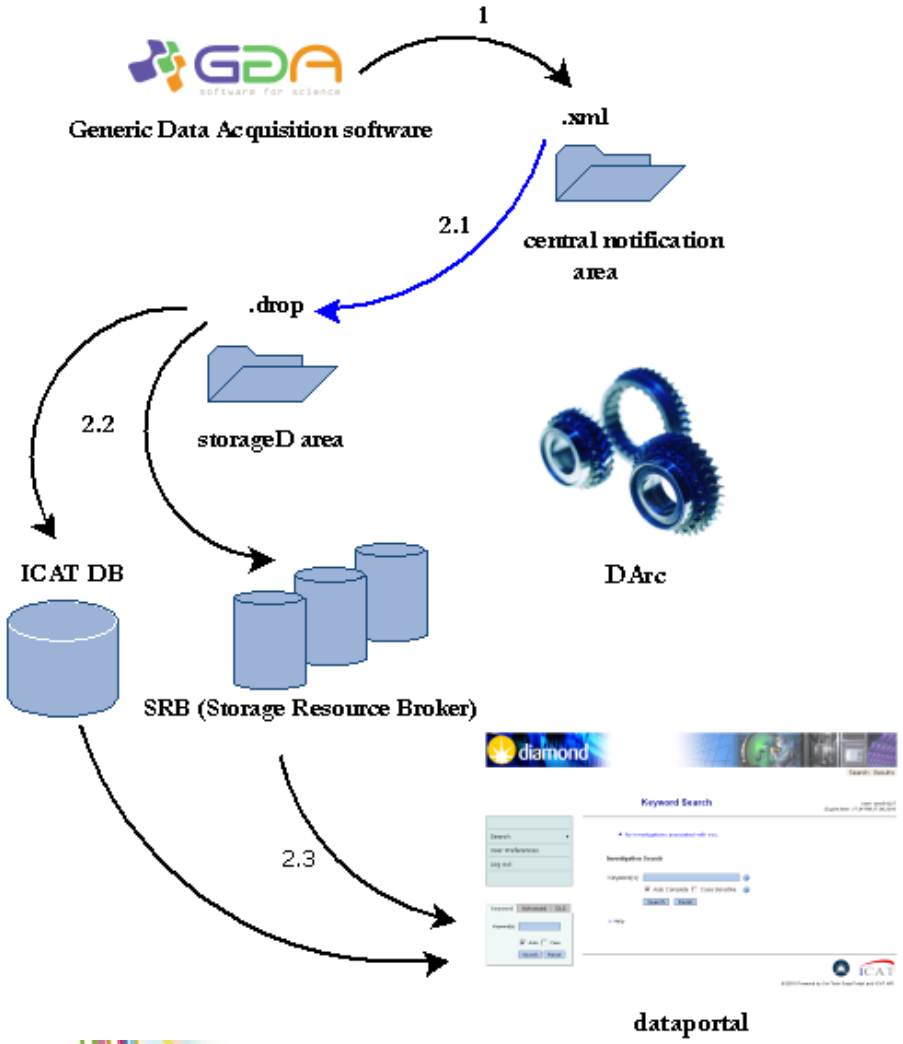
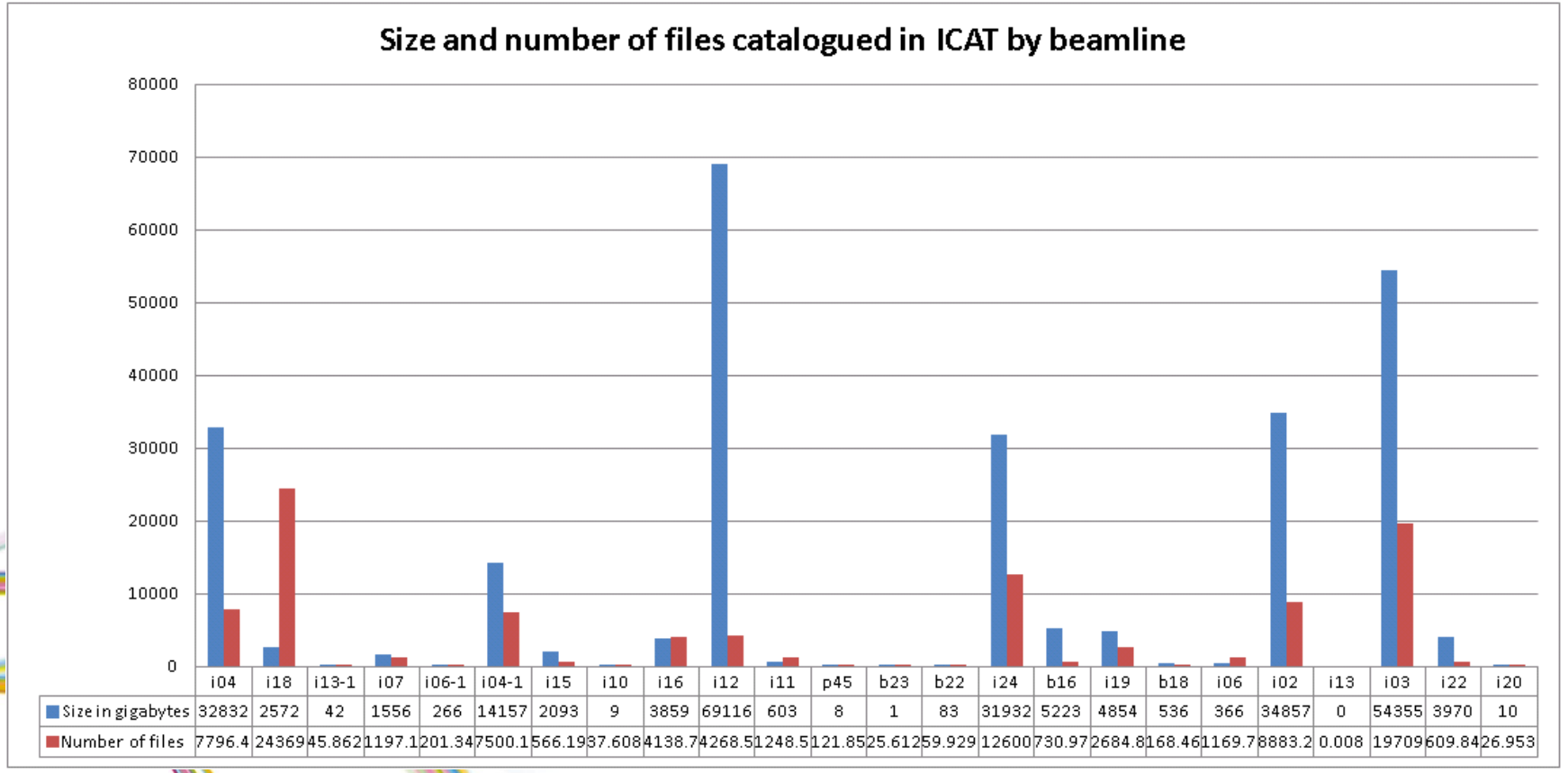
Data archiving – current version



Some statistics



	i04	i18	i13-1	i07	i06-1	i04-1	i15	i10	i16	i12	i11	p45	b23	b22	i24	b16	i19	b18	i06	i02	i13	i03	i22	i20
Size in gigabytes	32832	2572	42	1556	266	14157	2093	9	3859	69116	603	8	1	83	31932	5223	4854	536	366	34857	0	54355	3970	10
Number of files	7796.4	24369	45.862	1197.1	201.34	7500.1	566.19	37.608	4138.7	4268.5	1248.5	121.85	25.612	59.929	12600	730.97	2684.8	168.46	1169.7	8883.2	0.008	19709	609.84	26.953

Some statistics (cont.)

- Total size ~ 260 Terabytes
- Total number of files ~ 98,497,014 files
- Currently running at 0.5 to 1 Terabyte/day

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ICAT integration with SDA

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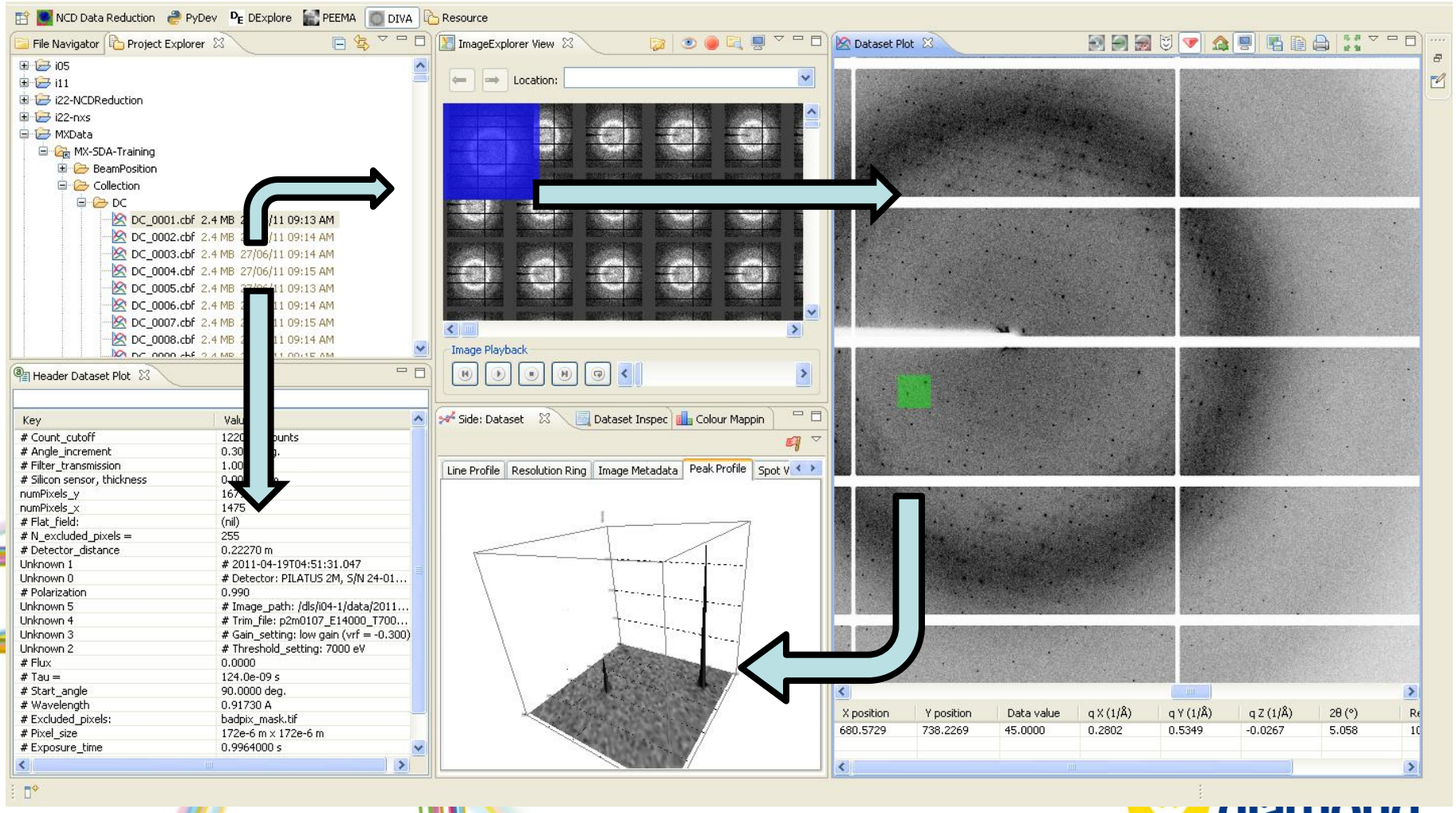
SDA (Scientific Data Analysis)

- A collection of supported, generic and bespoke, RCP views compiled into a number of application or perspectives.
- Views developed by Scientific Software and Data Acquisition teams
  - Plotting
  - ‘simple’ analysis tools
  - Python/Jython tools
  - Eclipse data project
  - File/s viewing
  - Workflow tool
  - ICAT archive explorer and data retrieve

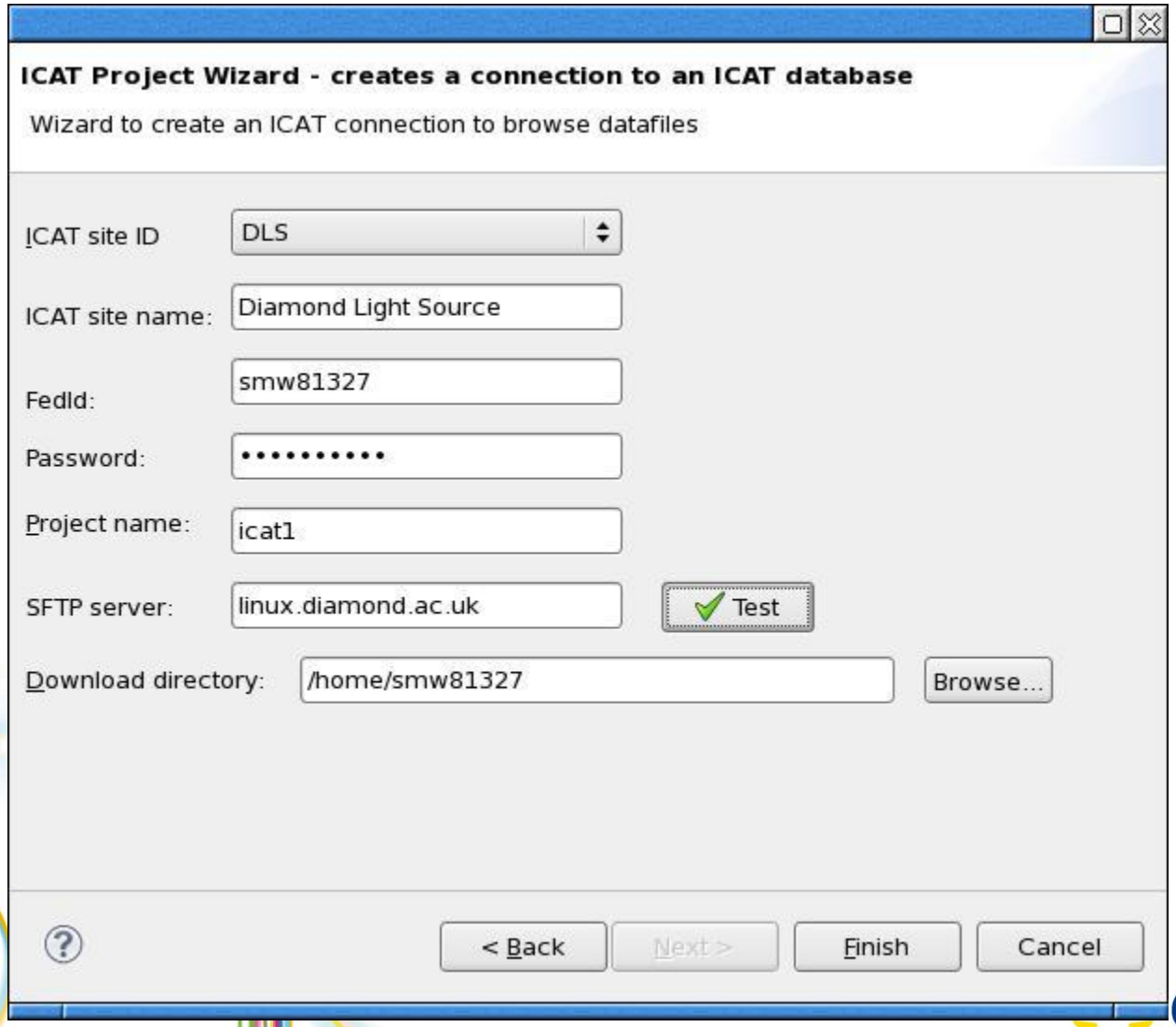
SDA perspectives and views

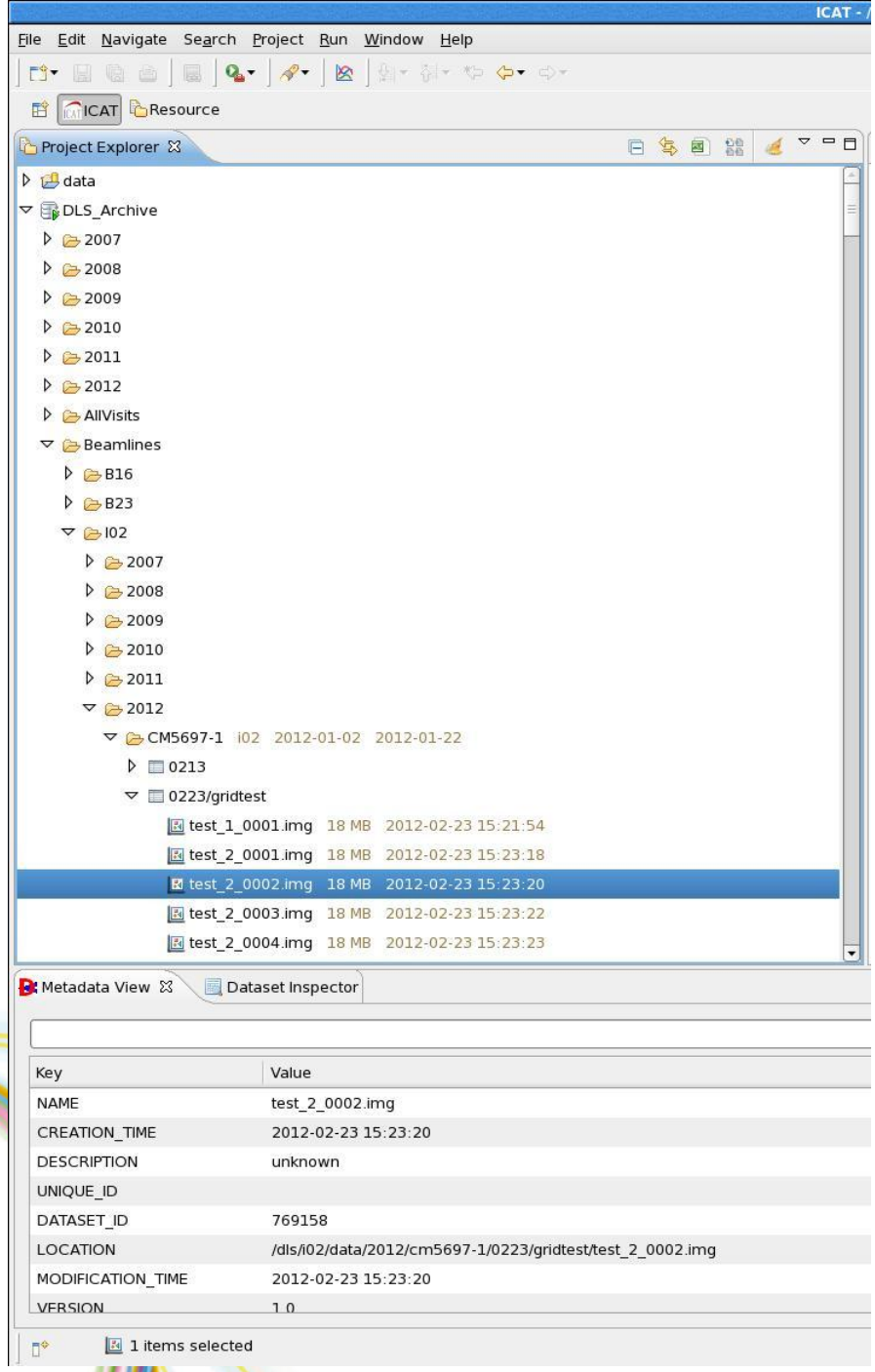


ICAT Explorer eclipse plugin

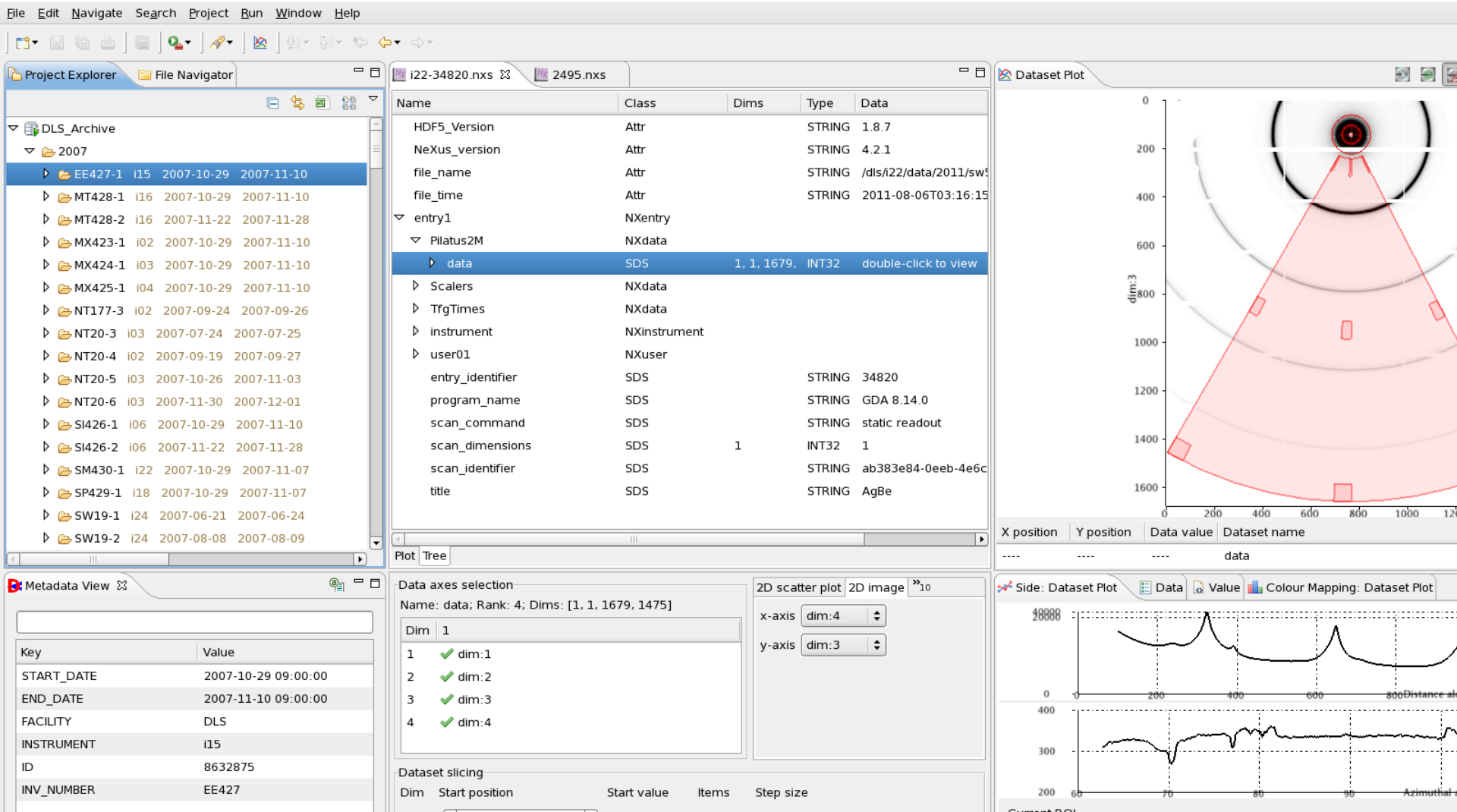
- Integrated with the SDA to allow the use of other plugins on user's data files.
- Linked to the ICAT hosted at STFC, webservice V3.3.4
- Security based on fedid/password authentication + HTTPS
- Drag-and-drop to local file system using SFTP
- A step-by-step tutorial cheat sheet
- GENERIC – can be easily customized to be used at any facility (ISIS, ILL, etc)

ICAT Explorer – connection wizard

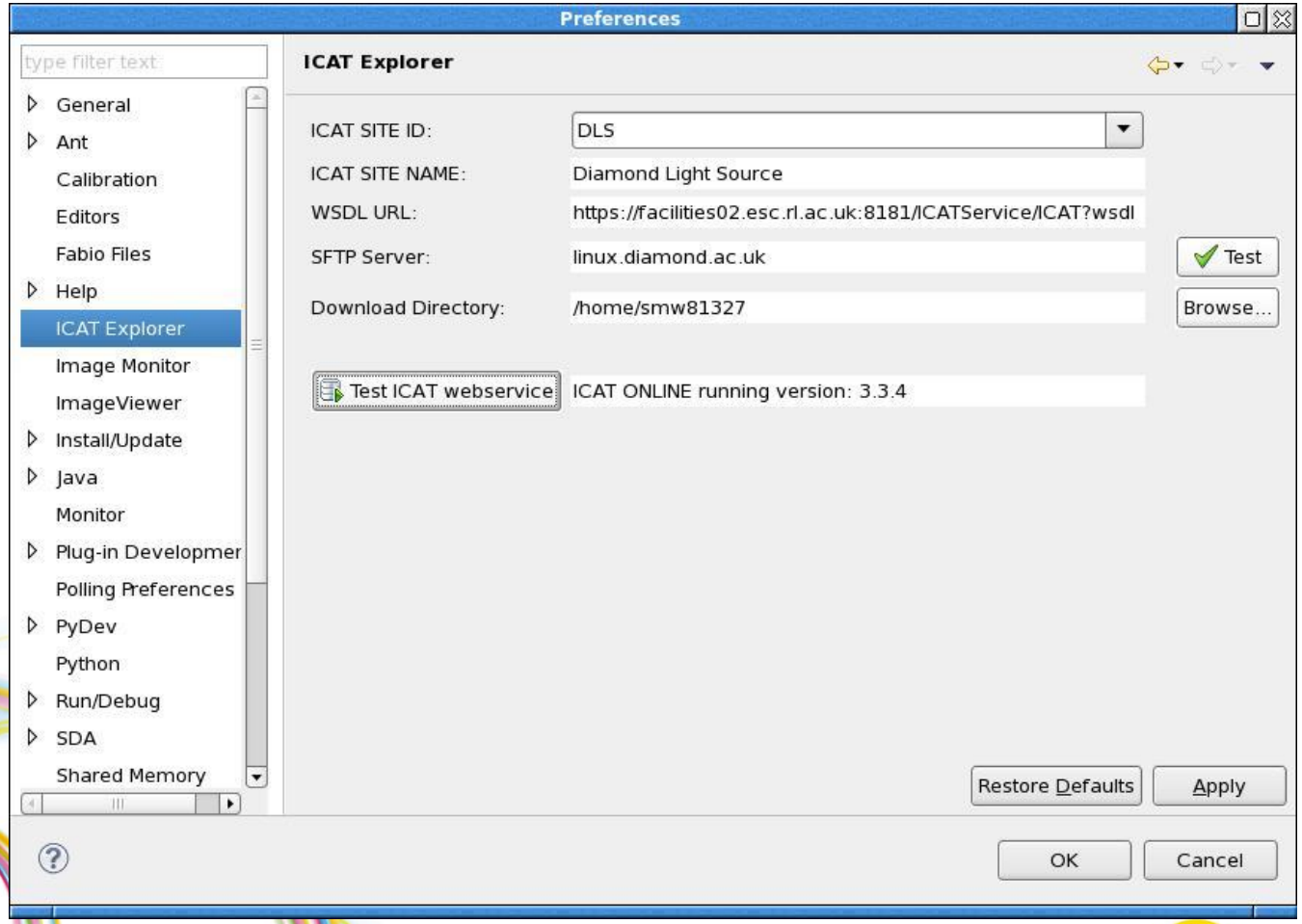



ICAT -
File Edit Navigate Search Project Run Window Help
ICAT Resource
Project Explorer
data
DLS_Archive
2007
2008
2009
2010
2011
2012
AllVisits
Beamlines
B16
B23
I02
2007
2008
2009
2010
2011
2012
CM5697-1 i02 2012-01-02 2012-01-22
0213
0223/gridtest
test_1_0001.img 18 MB 2012-02-23 15:21:54
test_2_0001.img 18 MB 2012-02-23 15:23:18
test_2_0002.img 18 MB 2012-02-23 15:23:20
test_2_0003.img 18 MB 2012-02-23 15:23:22
test_2_0004.img 18 MB 2012-02-23 15:23:23
Metadata View
Dataset Inspector
Key
Value
NAME
test_2_0002.img
CREATION_TIME
2012-02-23 15:23:20
DESCRIPTION
unknown
UNIQUE_ID
DATASET_ID
769158
LOCATION
/dls/i02/data/2012/cm5697-1/0223/gridtest/test_2_0002.img
MODIFICATION_TIME
2012-02-23 15:23:20
VERSION
1.0
1 items selected

ICAT Explorer – collaborating with the rest of SDA plugins



ICAT Explorer - customization



Future Possibilities

- DOI, exploring publishing DLS data with DOI
- Integration with workflows:
  - Linking in with future analysis tools
  - Building advanced searches/interactions with DB
  - High level tool to create archive pipeline (Alun can cope with since its as easy as bash but no python)

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Working on...

- Admin modes in project explorer: add, delete, modify
- Add search functionality/view
- More enhancements based on users feedback
- Make the code public on GitHub (https://github.com/)?

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