Area Detector Systems Corporation

DIALS–WEST–1 Workshop

Information in Image Files:
Formats, Telemetry, and What Users Want

Chris Nielsen

Area Detector Systems Corporation

ADSC
Area Detector Systems Corporation

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Image Files

Basic information found in most detector image files provides what is required to process the data.

Additional vendor information useful for diagnosis and documentation (from vendor point of view).

Beam line specific information nice to have for diagnosis and documentation (from point of view of beam line staff).

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Users and Image Files

Users want image files they can use in their favorite data processing package.

Simpler is generally better; the less external infrastructure necessary, the better.

Displaying images should be easy.

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Beam Line Telemetry Info

Telemetry: Beam line data: (angle, ion, …).

Information known before an image starts does not present problems. The info can be sent along with the data start request.

Information collected during or just after an image is collected is more difficult to handle in a general, reliable manner. This is especially true when data is collected continuously.

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Beam Line Telemetry Info

Difficulty depends on whether or not telemetry is stored with the image files (customary practice).

May impact reliability of image production.

Is beam line telemetry mostly a diagnostic tool for the staff? Should this information be stored separately from image files?

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Data Processing Toolboxes

May never take the place of standard data
processing packages, but might become
state of the art, even peer-reviewed,
descriptions of best practices.

Would allow developers and vendors to
experiment with improvements in detectors
and calibration without involving the
authors of standard data processing
programs.

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Data Processing Toolboxes

Peer review and publication:
   -- individual modules in the toolbox
   -- a proper wiki for the modules
   -- leading to a user guide

Archived data (SG initiatives).
   -- open access by toolbox developers

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