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JEM-X SDAST meeting 27b, Febuary 17, 2004 at Max Planck Society, Munich, Germany

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1 Participants

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This was a very brief meeting held during the Nucleosynthesis session of the Fifth INTEGRAL Workshop in Munich. The following is a fairly brief summary of our discussion.

- PK started by identifying some known problem areas:
  - Multi-SCW images, mosaicking
  - Weak source detection
  - Source flux determination below 10 KeV. e.g. Crab response drops off at about 7 KeV
- Shared software functions was discussed with the the following conclusions:
  - Common data interfaces essential
  - Developers must get together and agree on *external* data interfaces
  - Code exchange between developers also essential
  - Global variables should NOT be used, they make integration and debugging too difficult
  - All code needs cleaning up before being shared

AI MMM.1: On PK,SL: Agree on spectrum output function/code prototype. Due: 19/03/04 AI.MMM.1

AI MMM.2: On NJW: Code image output function prototype. Due: 19/03/04 AI.MMM.2
AI MMM.3: On SL,PK,JC,NJW: Make list of needed modelling functions. Due: 19/03/04 AI.MMM.3
AI.MMM.4 **AI MMM.4:** On CAO: Make Shared Function Marketplace webpage. Due: 19/03/04

- PC still working with NL on imaging:
  - He'll come to Copenhagen to work on this
  - His ISDC-friendly version runs much more slowly than NJW's version
  - Could be run parallel to NJW's software
  - There is a danger that the subtleties of COR, GTI etc. are lost since NL's original version works directly on raw events
- SM's been having problems delivering components because he's never done it 'cleanly' before. i.e. doesn't know his dependancies
- All users should use PK's script to discover which dependancies their components use

AI.MMM.5 **AI MMM.5:** On PK: Send dependancies script to CAO for SDAST forum. Due: 19/03/04

- Everyone must use double precision for calculations to minimise OS-dependant numerical variations in test output
- Such differences can indicate bugs, but ISDC will accept code with components with these differences

AI.MMM.6 **AI MMM.6:** On ALL: Send shared function desires/offers to CAO. Due: 19/03/04

- Mosaicking is developing apace:
  - RW's tools part of OSA since version 1.0
  - Very noisy rims much better now
  - RW needs to incorporate NJW's variance maps
  - JC's tool is a private tool at DSRI to handle NL's and CBJ's images
  - When RW's software includes all of NJW's output, then ISDC general users will be able to do what IT can do now
- It was agreed that chat topics are a good idea even if we don't cover one with every chat. Once a month would be better than nothing
- Use of background models and verification is patchy:
  - Have been waiting for new models for some time
  - SL's components don't implement SM's models
  - BKG verification in different components should be a regular and recurring chat topic
  - Need shared functions for reading in background models
  - SM needs results of verification to move forward
  - SM sees the mask support ring structure in his BKG models

- The flux problem is worrying, we should do better:
  - SMN gets a sharp step in spectrum of J011705.2-732634, PHA1 output
  - Sm thinks this could be Ni calibration line
  - Response function is badly off at low energies: NJW's working on Crab spectrum from SCW 102
  - SL suggests step is due to off-axis correction that isn't quite right. Vignetting is very sensitive to both off axis angle and energy.

AI MMM.7: On ALL: Check OSA spectra for the sharp step. Due: 19/03/04 AI.MMM.7

- OSA output anomalies should be a regular chat topic, so that these can be itemised and followed up
  - Chat topic for 1st week of March: Spectral Reconstruction Anomalies
  - We should have a webpage to catalogue and track analysis anomalies
- Next meeting April 26–27th at DSRI. SMN may attend through IRC.
- Next chat: March 3rd 2004, at 11.00. Topic: Spectral analysis anomalies.

AI MMM.8: On CAO: Set up analysis anomalies webpage. Due: 19/03/04 AI.MMM.8

2 New Action Items

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AI.MMM.2	NJW: Code image output function prototype	Due: 19/03/04
AI.MMM.3	SL,PK,JC,NJW: Make list of needed modelling functions	Due: 19/03/04
AI.MMM.4	CAO: Make Shared Function Marketplace webpage	Due: 19/03/04
AI.MMM.5	PK: Send dependancies script to CAO for SDAST forum	Due: 19/03/04
AI.MMM.6	ALL: Send shared function desires/offers to CAO	Due: 19/03/04
AI.MMM.7	ALL: Check OSA spectra for the sharp step	Due: 19/03/04
AI.MMM.8	CAO: Set up analysis anomalies webpage	Due: 19/03/04