

Calibration Uncertainty Working Group Report

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Vinay Kashyap

vkashyap@cfa.harvard.edu

Cal U WG

- Convened on 12 May 2014
- It is resolved that ...

systematic errors are important, and must be dealt with, either by working to eliminate them, or by providing people with means to deal with them.

Tools

Past, Present, and Future

- **Available now**

- `arfmunge` for ACIS-S and HRC-S/LETG (ask Jeremy Drake for other instruments: jdrake@cfa.harvard.edu)
- `pyBLoCXS` (pragmatic Bayes version) in Sherpa for inflating error bars

- **Working prototypes**

- full Bayes `pyBLoCXS` for combined parameter/effective area estimation
- ARF-like file format for carrying systematic error information
- gain as *response model* in XSPEC (Keith A)

```
XSPEC12> rmodel 2 gain
```

- **Planned**

- ingest full Bayes `pyBLoCXS` into Sherpa (Vinay K)
- add user response model to XSPEC (Keith A)
- spline-knot distortion of ARF (Herman M)
 - Technical note to software maintainers (Herman M., et al.)
- Compute library of EPIC (Matteo G) and Nustar (Kristin M) responses that encompass systematic uncertainties