

8th IACHEC MEETING SUMMARY

Matteo Guainazzi
ESAC/ESA



Evolution of participants

IACHEC year	Number of participants	Number of talks
2006 (Iceland)	36	26
2007 (California)	35	30
2008 (Germany)	36	26
2009 (Japan)	35	34
2010 (Massachusetts)	45	50
2011 (Italy)	44	38
2012 (California)	40	29
2013 (UK)	40	48 (20 plenary)



Paper status

Paper	Missing	[green=published]	Submission by IACHEC ...
1E0102-7219	Final fits		2013
Suzaku clusters	Done		December 2012
Blazar sample	Calibration consolidation		2013
Capella	High-resolution spectroscopy line census		2014
Cluster	Done		June 2010
Crab	High-energy effective area		2013
G21.5-0.9	Done		August 2010
N132D	Fitting the model		2014
PKS2155-304	Done		August 2011
G21.5-0.9	Broad-band effective area		2013
WD	Soft X-ray effective area		?

Long-term planning



9th IACHEC (2014): US/East Coast (thanks to D.Burrows!)

10th IACHEC (2015): Northern Europe (Iceland, Estonia, Finland ...)

11th IACHEC (2016): China (thanks to prof. Fangiun Lu!)

Agreements last year



1. Improve the homogeneity of the IACHEC public Wiki pages - **NOT DONE**
2. Write a document of “IACHEC best practises” - **NOT DONE**
3. Improve the coordination with future missions - **NOT DONE**
4. Propose a scheme of an exercise to test calibration changes which aim at improving the cross-calibration status (the “**grand-calibration scheme**”) - **DONE**
5. Orienting the IACHEC meetings to a more interactive format - **DONE**

Outcome of the fractal table discussion



We decided to take actions in the following areas:

1. IACHEC activities (Working Groups)
2. Long-term IACHEC legacy
3. IACHEC visibility and international recognition
4. Funding

Working Groups organization



Problem: neglected areas of IACHEC activity exist, on which we committed to do something

Solution: (Re-)activate dormant WGs

- *Statistics*: [A.Pollock](#) will call for a constituency meeting by **May 30**
- *Contamination*: [E.Miller](#) will call for a constituency meeting by **May 30**
- *Background*:
 - [K.Madsen/Y.Terada](#) will search for colleagues who could lead the work on “background above 10 keV” by **September 30**
 - if this fails (or even if it does not), we will consider including a specific special session at the 9th IACHEC (possible goal: define mission-dependent background models)
- *Timing*: [Y.Terada](#) will investigate the possibility of re-activating this WG by the **next meeting**
- *Legacy*: [M.Guainazzi](#) will circulate a draft charter of the WG scope to the IACHEC mailing list, calling for membership by **May 30**

Meeting of the IACHEC Working Group Chairs in June 2013 to revise the above actions

Legacy observational database



Problem: we need to systematize our effort to provide future mission with a long-term database of calibration observations

Solution: preparation of a IACHEC-led observational proposal, to be submitted to the “mission manager” of each operational mission, together with endorsement letters from “mission managers” of future missions and (possibly) chairs of the user's committees

Timeline:

- call for ideas from the WGs: M.Guainazzi by April 15
- WG inputs: WG Chairs by June 30
- first draft: M.Guainazzi by August 31
- final version: M.Guainazzi+WG Chairs by October 31

Visibility



Problem: the visibility and recognition of the IACHEC work is still not optimal. This becomes more and more an issue in time of financial difficulties

Solution: PR campaign

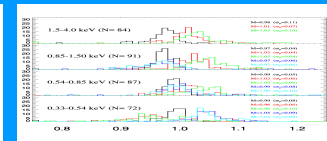
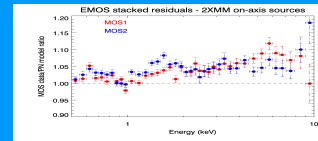
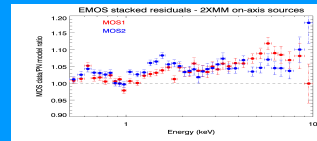
- *Preparing a summary of the IACHEC meeting to be posted on arXiv: M.Guainazzi+WG Chairs by April 30*
- *Bring posters to international large conferences*
 - . *S.Sembay*: circulate the poster presented at the Bologna X-ray Conference in (gulp!) 2010
 - . *NuSTAR*: HEAD (if possible)
 - . *H.Marshall*: SPIE
 - . *L.Natalucci*: COSPAR
- *Offer presentations on IACHEC at the local astronomical community*
 - . *M.Guainazzi*: update the IACHEC presentation by **May 31**

Cross-calibration matrix



Instrument 1 Instrument 2 Instrument 3 Instrument 4 Instrument 5

Instrument 1



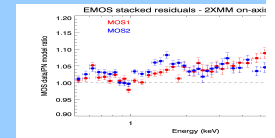
$\pm 5\%$

Instrument 2

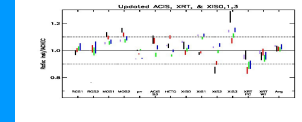
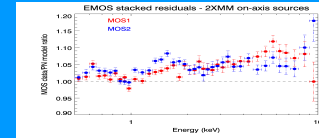
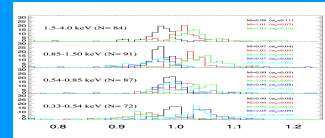
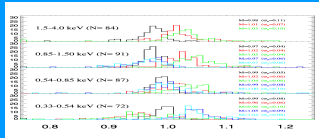
$\pm 10\%$

$\pm 10\%$

?

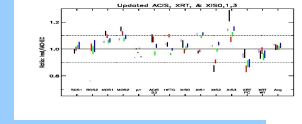
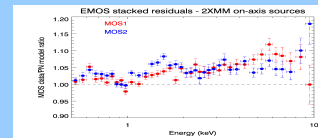
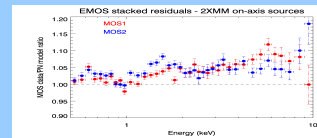


Instrument 3

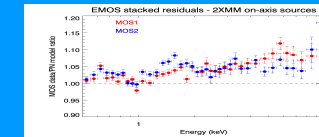
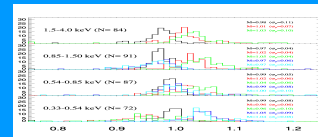
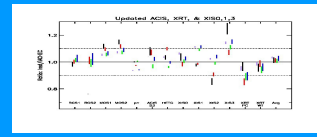
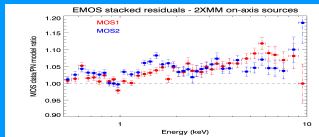


Instrument 4

?



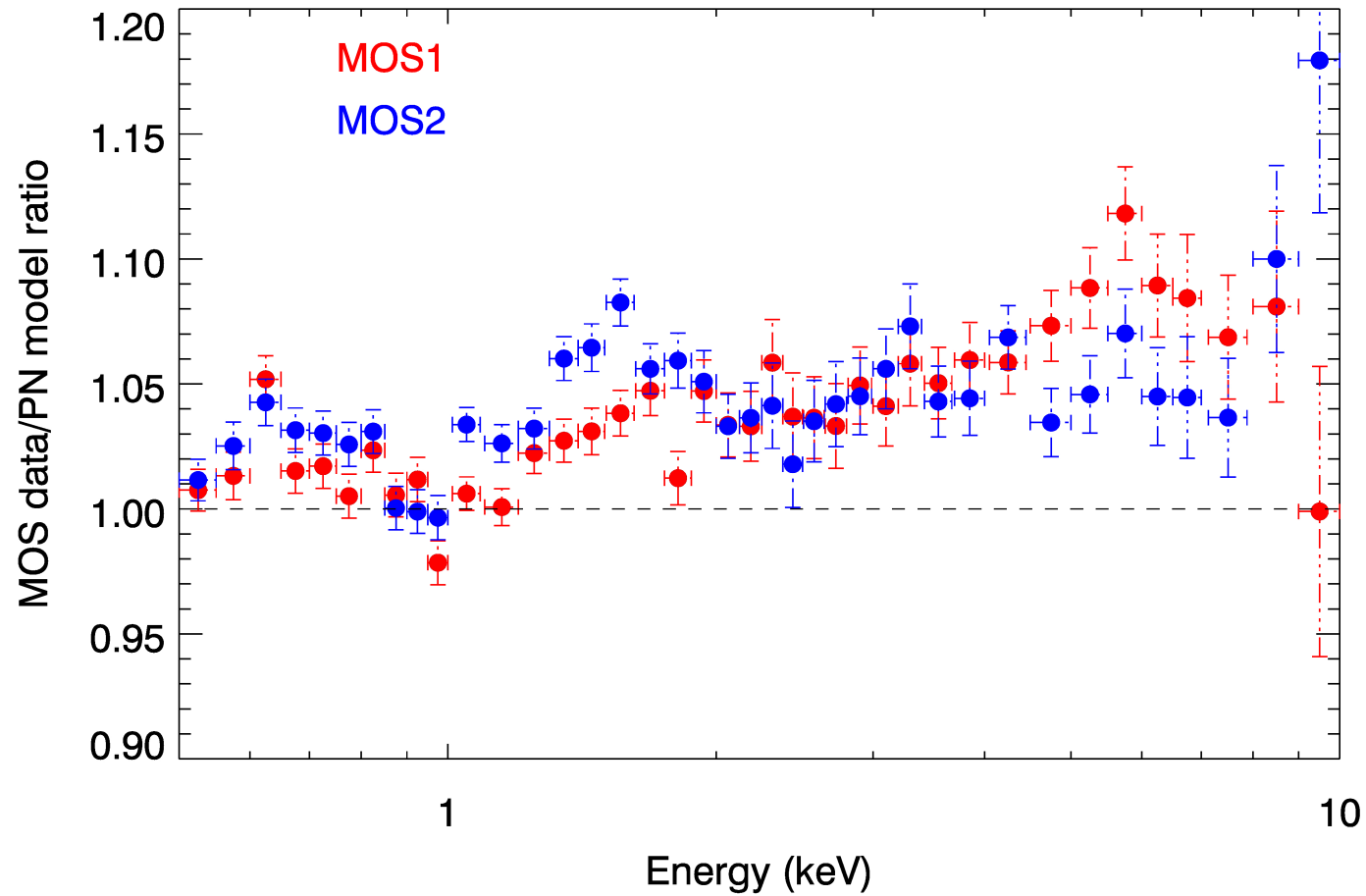
Instrument 5



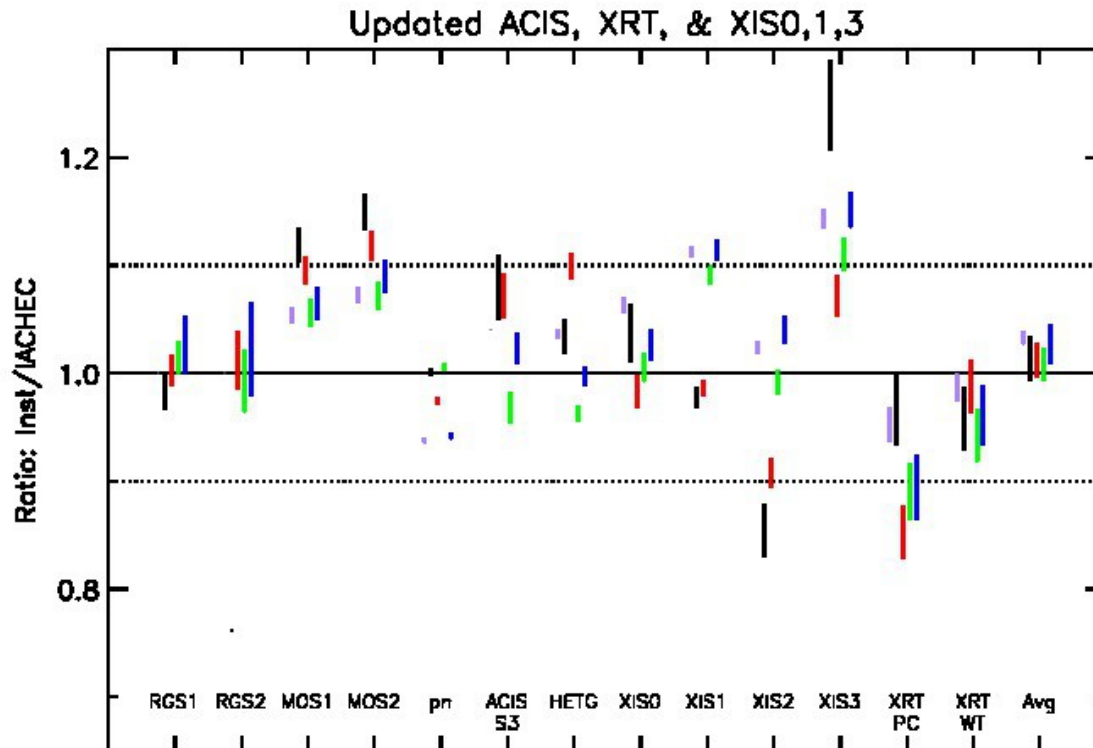
Clicking on a cell and ...



EMOS stacked residuals - 2XMM on-axis sources



Clicking on another cell ...



Funding



Problem: IACHEC has been so far primarily funded by Agencies, which suffer increasing financial constraints

Solution: search for alternative source of funding for (minimal) meeting funding or (more ambitious) FTEs to support the creating of an efficient infrastructure to support the astronomical community

- . **European Union**: S.Sembay, L.Natalucci
- . **ESA**: M.Guainazzi
- . **US**: D.Burrows
- . **Japan**: Y.Terada
- . **Astrium**: M.Kirsch

Review by September 15

Gran-calibration exercise



In July 2012, Andy, Steve and myself posted a proposal for a “grand-calibraion exercise” on the IACHEC Wiki:

https://wikis.mit.edu/confluence/download/attachments/82340885/Cross_calibration.txt

Proposal scheme:

- Definition of the cross-calibration problem
- Definition of the cross-calibration “platform” (source samples, models, data reduction)
- Definition of the calibration elements to be tested
- Joint fit of astrophysical and calibration parameters
- Verification of the calibration results on a control sample

Proposal: each instrument interested to implementing the test science case therein described should identify a person responsible. [M.Guainazzi](#) volunteers to coordinate. We should try between **October 15** and **December 15**

Many thanks to **Steve S^{ay}, Andy R.**, and the
**support from the X-ray Astronomy
Group of the University of Leicester**