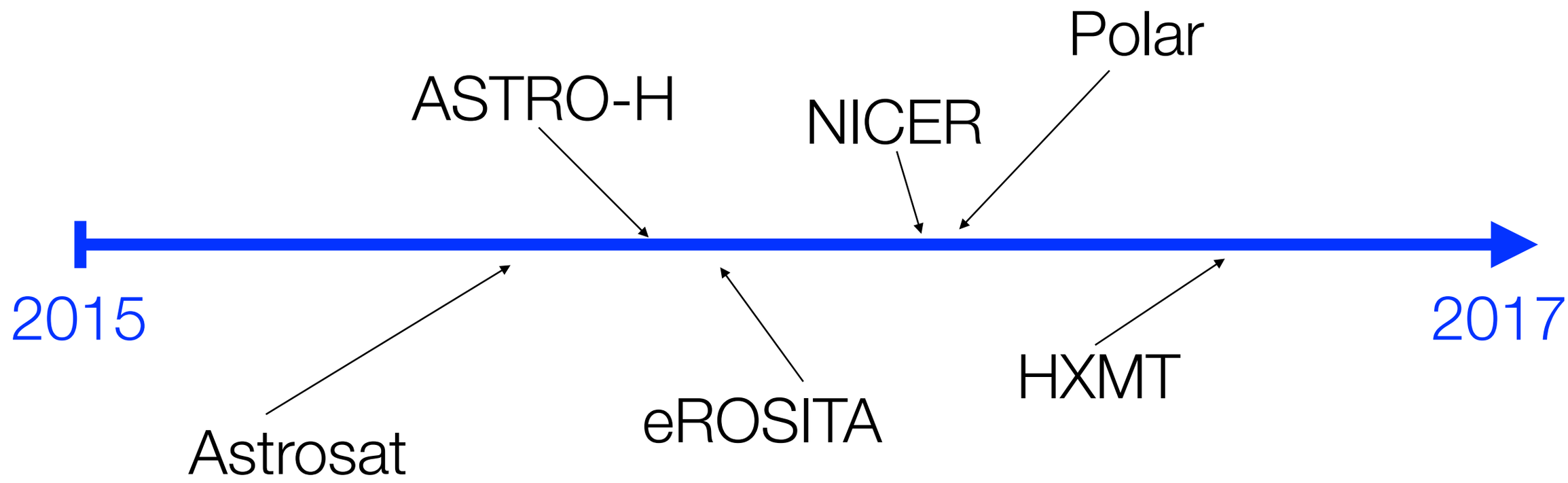
10th IACHEC meeting: concluding remarks and agreements

Matteo Guainazzi (ASTRO-H ESAC SOC & JAXA SOT)

せん　　おうごんき
X線天文学は黄金期に入って、楽しみにしています。



Shen Zhou (1427-1509), *Crossing a Wild Bridge*

No one travels
Along this way but I,
This autumn evening.

Basho, Matsuo (1644-1694)

“I learn about myself from those who are similar to me”

prof. Meng, yesterday

Evolution of attendance

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)	36 (+6 seq.ed)	48 (20 plenary)
2014 (Virginia)	51	54 (24 plenary)
2015 (RPC)	**57 + 37 students**	**45 (25 plenary)**

My 10 take-home highlights of the 10th IACHEC (I)

- new (and different!) golden era of X-ray astronomy
- new missions join the IACHEC spirit and work - and ask the IACHEC for support!
- calibration is a core topic in planning future mission operations
- calibration remains a core topic of current mission, despite shrinking resources (INTEGRAL …)
- only spatial dependence of ACIS contaminant composition still to be understood

My 10 take-home highlights of the 10th IACHEC (II)

- new model of EPIC-pn redistribution (spin-off of eRosita calibration, 15 yrs after launch!)
- NuSTAR calibration *completed* and *nominal*
- **`PyBlocks`** released and (preliminarily) extended to EPIC-pn and (soon) to NuSTAR
- we agreed on a structured procedure to carry out coordinated calibration observations
- we agreed on a scientifically-motivated process of *effective area variance minimisation*

Agreements on cross-calibration status at 9th IACHEC

1. Get a global picture of the published cross-calibration status

   - Done (see IACHEC 2014 report)

2. Compile a list of astronomical topics for which calibration uncertainties are a limiting factor

   - Open (Guainazzi w/IACHEC WG Chairs)

3. Propose a mechanism for the effective area variance minimisation

   - Done (see Point#10 above)

4. Extend the pool of IACHEC “standard candles” to objects originally observed for scientific purposed (“Secondary standards”?)

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   - Open (Burwitz, Forster)

Agreements on future missions at the 9th IACHEC

1. Organise a special session on in-flight calibration plans for future missions

   - Done

2. Select IACHEC meeting venues facilitating the contact between calibration teams of future missions and the IACHEC community

   - Done

3. Pursue WG activities related to future missions:

   - in-flight calibration plans paper, contamination White Paper, data reduction standards technical note, `PyBLocks(4all)`

Dimmi quando, quando, quando …

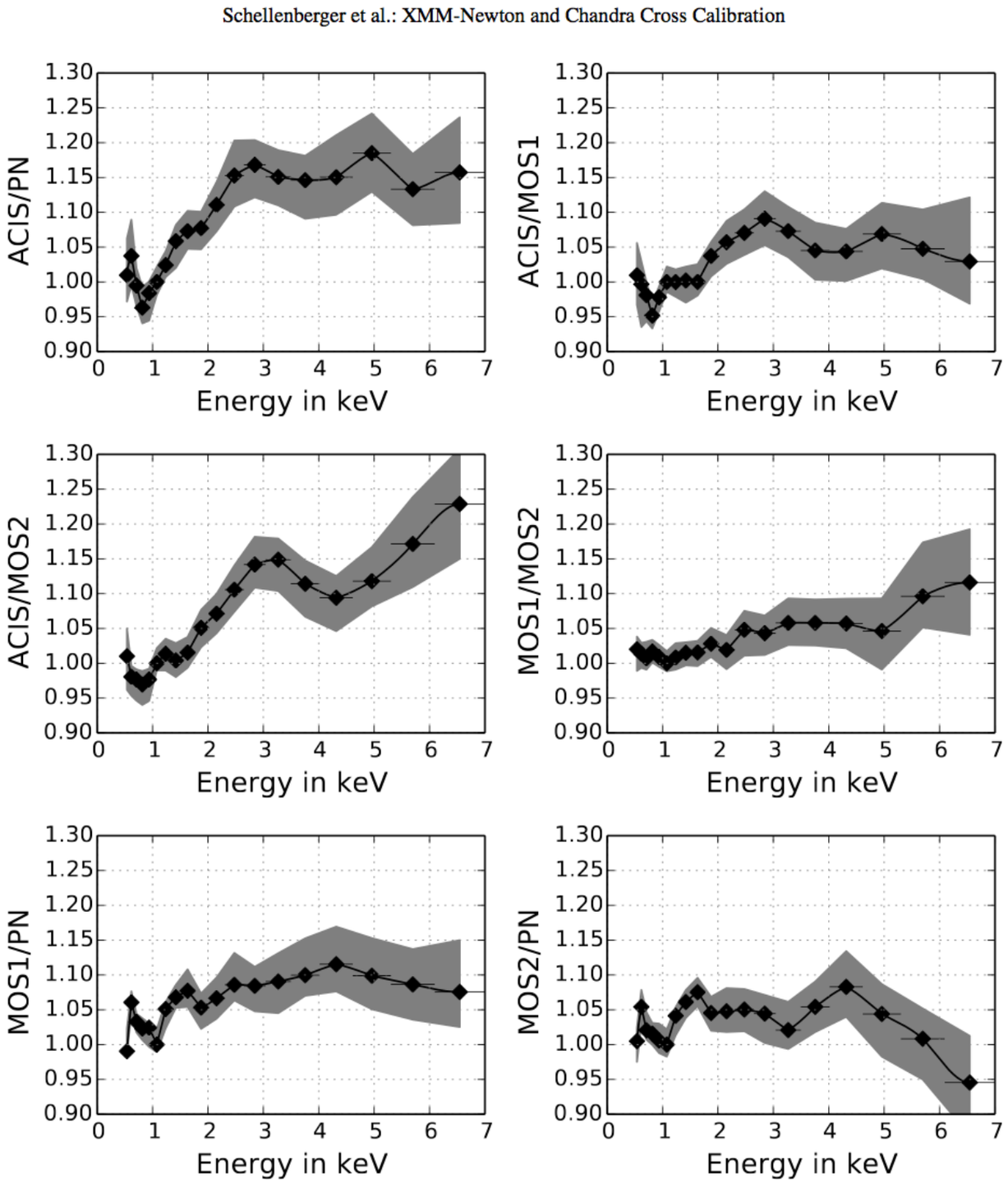
bold = progress

Paper	Status now	Status last year
1E0102-72	wrapping up	wrapping up
3C273 + PKS2155-304	**30-50% draft**	**not existing**
blazar sample	wrapping up	wrapping up
Crab	advanced draft	advanced draft
G21.5-0.9	maybe to be started	to be started
in-flight plans	**to be submitted**	**not existing**
N132D	to be started	to be started
WD	to be started	to be started

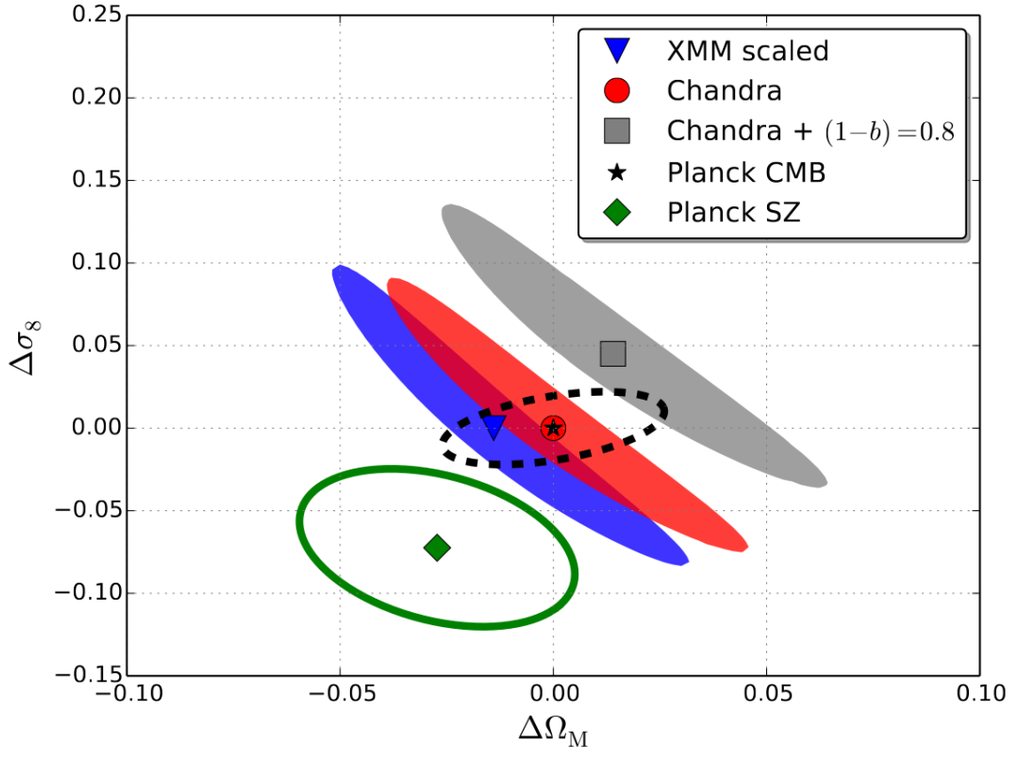
+ Schellenberger et al. (2015) - HIFLUGCS

Calibration and cosmology: *Rage against the ~~machine~~ calibration*

Schellenberger et al., 2015, A&A, 575, 30



Calibration differences do matter as far as the determination of cosmological parameters via cluster mass function is concerned



Homework: I would be happy if by the next IACHEC …

1. we would publish some of the papers in the pipeline
2. we would publish the IACHEC calibration source “database”
3. we would proof with a couple of working examples that (a favour of) the effective area minimisation variance algorithm yields meaningful suggestions to the calibration teams

Shen Zhou (1427-1509), *Parting at Jing River*

Thanks to **Xiaobo**, **Shu** and all the IHEP colleagues for your hard work to make this IACHEC meeting another success!

see you at IUCAA in 2016!

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