



IACHEC Discussion on **Empirical Calibration**

Wednesday April 26th
14:20 CEST = 12:20 UT



Agenda

1. Felix Fürst - XMM Review of Calibration Changes
2. Kristin Madsen - NuSTAR Review of Calibration Changes
3. Group - Open Discussion



Discussion

1. Are changes to the calibration of one instrument based on flight data from another instrument *on the same mission* justified ?

Perhaps, if the other instrument provides clearly superior information.

For example, RGS has superior spectral resolution, pn has higher collecting area, *But*, are those sufficient to be considered “superior information” ?

2. Are changes to the calibration of one mission/instrument based on flight data from *another mission/instrument* justified ?

Perhaps, if the other instrument provides clearly superior information.

For example, RGS & HETG have superior spectral resolution. We used the RGS and HETG results in the development of the E0102 and N132D IACHEC models.

But, the use is limited, we use it to identify lines (Es and relative strengths). We do **NOT** adopt the normalizations of these lines from the RGS.

Another example, Chandra has superior angular resolution, the spatial distribution of the counts as determined by Chandra can be used by lower-resolution instruments



Discussion

3. Are changes to the calibration of one mission/instrument *with the sole purpose* of improving agreement with another mission/instrument justified ?

Is there a physical reason for the change ?

Are the calibration results/analyses from another mission/instrument *sufficient* to change the calibration of another mission ?

4. If the IACHEC disagrees with changes to the calibration *with the sole purpose* of improving agreement with another mission/instrument, should we consider writing a statement to community/projects expressing our disagreement ?

What was the rationale of the projects for making these changes ?

Does the work of the calibration scientists from the various missions need more support from the IACHEC ?

OPEN DISCUSSION