

Coordinated Observations WG

(né Effective Area WG)

Herman L Marshall, Lead

4/22/15

Working Group Objectives

- ❖ General

- ❖ Coordinate new joint observations

- ❖ Analyze joint observations

- ❖ Publish results

- ❖ Today

- ❖ Status of cross-cal projects

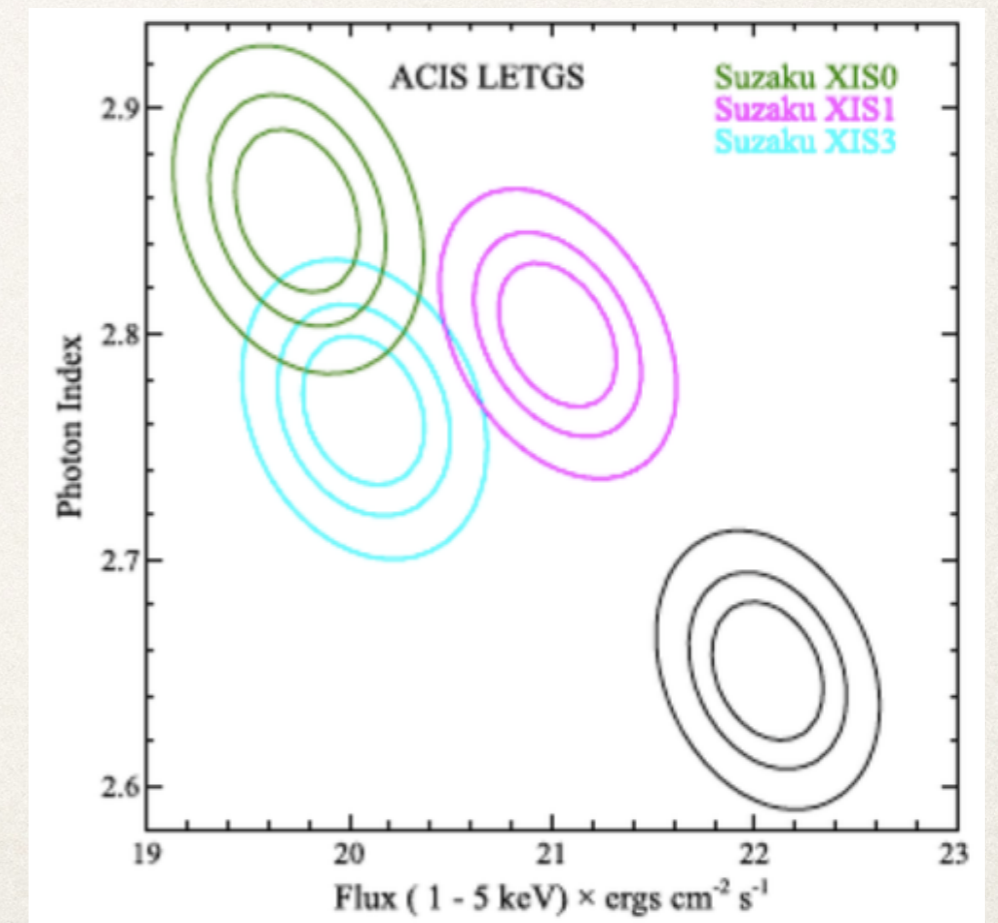
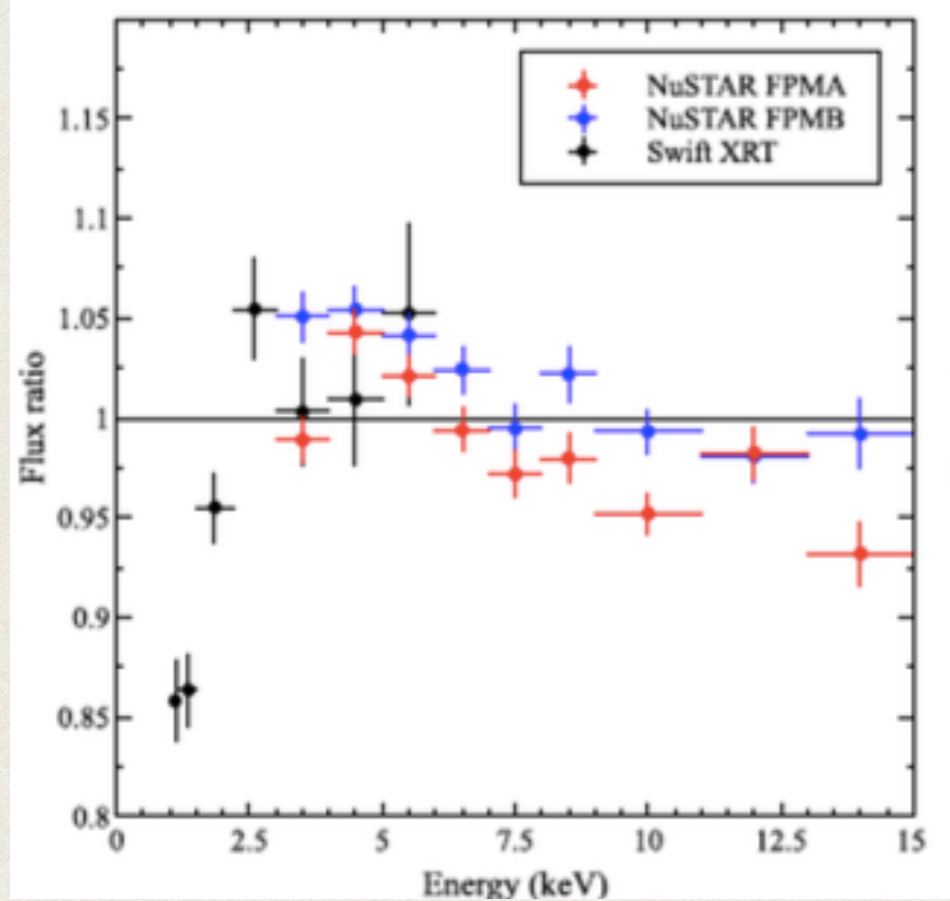
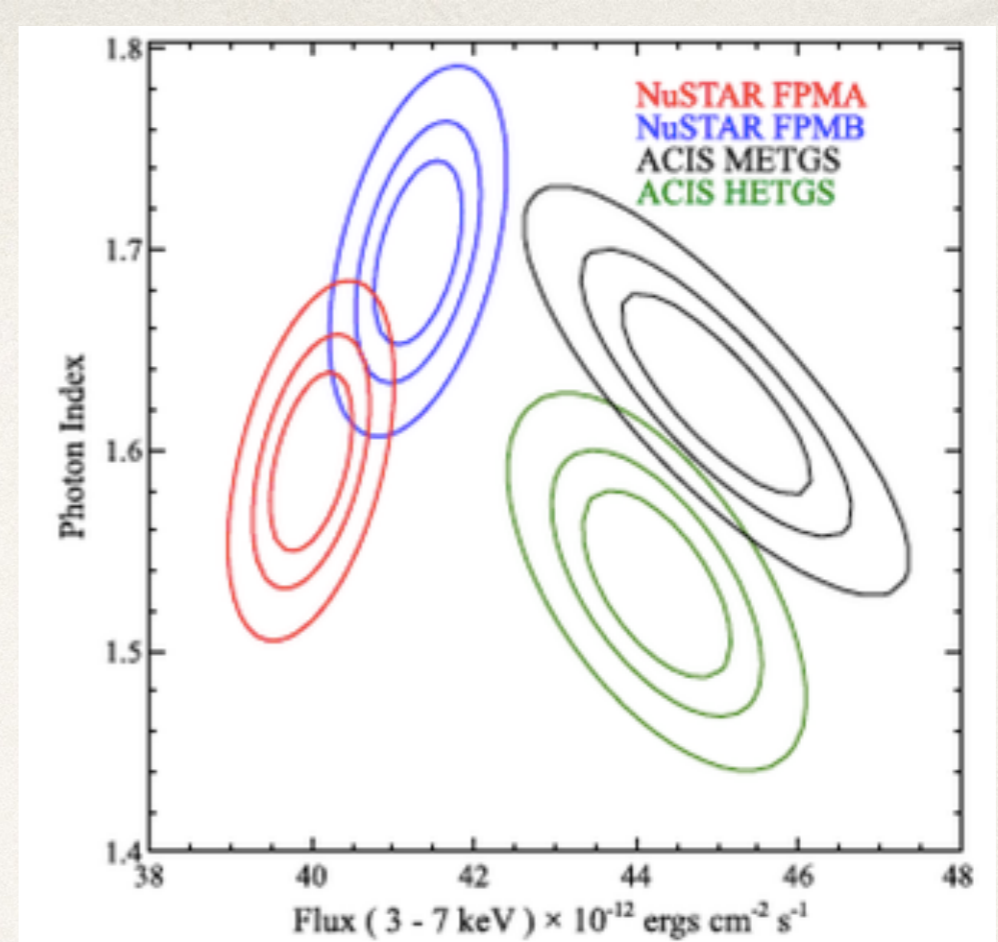
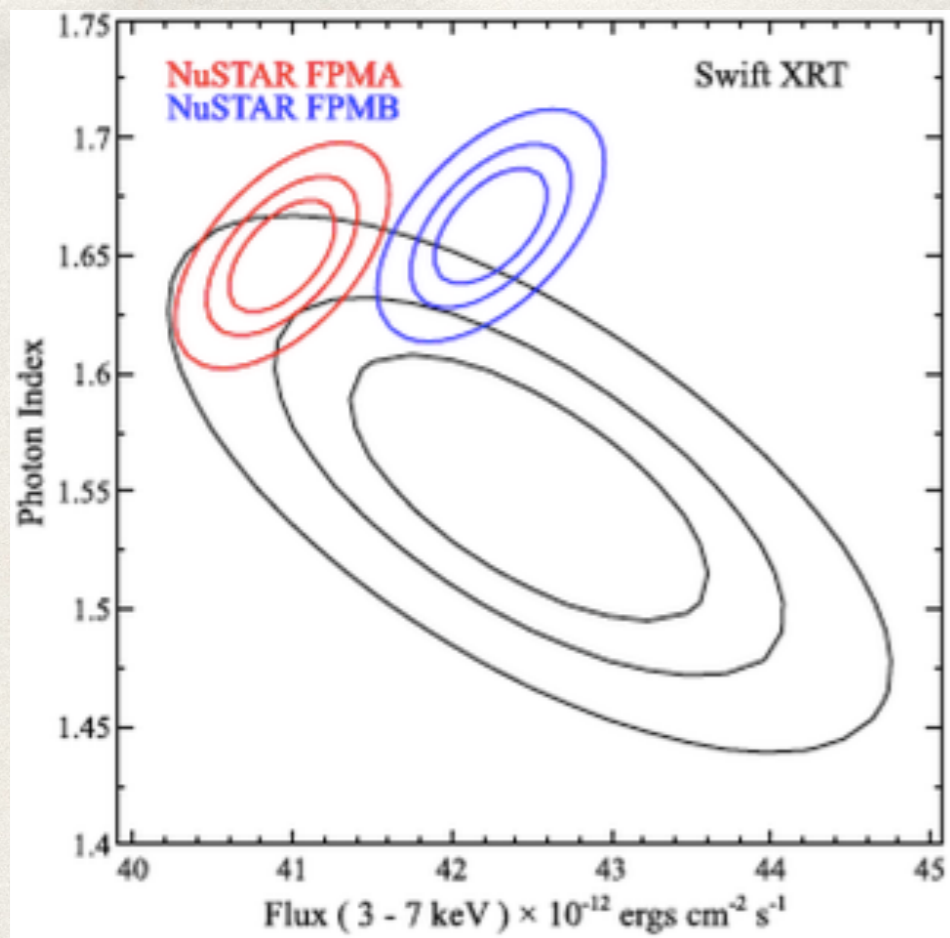
- ❖ Start planning for new coordinated observations

Status of Current Projects — 1

- ❖ XMM/Chandra blazar sample
 - ❖ M. Smith leads, analyzes with standard data and tools
 - ❖ H. Marshall verifies Chandra fluxes
 - ❖ Draft a paper after verification — no waiting for cal updates
 - ❖ Suggestion: post data on wiki when complete

Status of Current Projects — 2

- ❖ PKS 2155 and 3C 273 with NuSTAR and others
 - ❖ K. Madsen analyzes, others involved
 - ❖ First round of results now available, see presentation
 - ❖ Support: HLM (Chandra LETGS, HETGS), JK (Swift), EM? (Suzaku), MS (XMM pn & MOS) — each must review mission-specific results
 - ❖ Results
 - ❖ Chandra LETGS & HETGS fluxes are 12% high
 - ❖ Swift WT mode fluxes look deviant and depend on the spectral slope
- ❖ Suggestions
 - ❖ Test consistency across coverage gaps with light curves
 - ❖ Check/provide goodness of fit P-values
 - ❖ Fix Gamma between observation pairs — only flux changes



Status of Current Projects — 3

- ❖ Cross-cal at high energy with Crab (Lorenzo N.)
 - ❖ 2-500 keV: fit with PL broken at 100 keV
 - ❖ Joint fits for 10 epochs over 2005-12
 - ❖ NuSTAR data were very important < 10 keV
 - ❖ Recent (11 / 14): XMM / NuSTAR / INTEGRAL in
 - ❖ LN will try to add Fermi GBM and Swift BAT
 - ❖ Expect paper before next IACHEC meeting

Upcoming Campaigns

- ❖ April 2014: PKS 2155
 - ❖ Swift, NuSTAR, Chandra LETGS, XMM, Suzaku(?)
- ❖ Late June 2015: 3C 273
 - ❖ Swift, NuSTAR, Chandra HETGS, XMM, possibly Suzaku
- ❖ Analysis leads not yet identified

Upcoming Missions

	Launch	Cal/PV	Sources	Science Contact	Scheduler
Astrosat	10/15	10/15 - 4/16	Crab, Cen A Cyg X-1, 3C 273	Depankar Bhattacharya	
Astro-H	1-3/16	3-5/16	TBD	Rob Petre	
NICER	8/16	8-9/16	3C 273 Mk 421	Craig Markwardt	
eROSITA	12/16	01-03/17	TBD	Peter Predehl	Jan Robrade
HXMT	10/16	10/16 - 1/17	TBD	Shaolin Xiong	

Supporting Astrosat

- ❖ Crab: NuSTAR when needed, Swift in 2/16
- ❖ Cen A: possible with Chandra HETGS
- ❖ Cyg X-1: possible Swift, NuSTAR
- ❖ 3C 273: join large campaign in 6/16 (incl. Astro-H?)
- ❖ Others: XMM cross-check for sources now in plan
- ❖ All-sky monitor: cross-check with MAXI
- ❖ Lead analysis of selected joint observations

Supporting 2016 Missions

- ❖ Astro-H: HLM to review with RP to find candidates
- ❖ HXMT: Plan candidate campaigns at 2016 IACHEC
- ❖ NICER
 - ❖ EA cross-cal with Mk 421 & Chandra LETGS, add to 3C 273 campaign in 6/16
 - ❖ Timing campaigns TBD
- ❖ eROSITA: TBD, based on launch date

Action Items

1. HLM: poll projects to complete table of contacts and post cal observation plans, find leads for analysis of 2015, 2015 obs'ns
2. MS & HLM: complete XMM/Chandra blazar paper
3. KKM: contacts co-authors for flux verification (list is almost set)
4. LN: contact Fermi project for new rep
5. HLM: develop contact scientist e-mail list
6. CM: coordinated observation planning tool
7. HLM & RP: examine Astro-H target list for candidate campaigns