Contamination WG
Summary
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Membership

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Steve O'Dell (Chandra)  
Paul Plucinsky (Chandra)  
Steve Sembay (XMM-Newton EPIC)  
Doug Swartz (Chandra)  
Masahiro Tsujimoto (Suzaku, Hitomi)  
Cor de Vries (XMM-Newton RGS)
Objectives (Revised 2017)

- comparison among instruments and missions
  - chemical composition
  - time dependence
  - spatial dependence (micron to cm scales)
  - temperature dependence (where is the coldest surface?)
  - environmental dependence (orbit)
- mitigation for current instruments
  - celestial monitoring targets
  - effects on calibration and science results
  - "bake-out" procedures
- mitigation for future instruments
  - design (cold traps, contamination blocking filters)
  - procurement
  - ground procedures
  - ground testing and calibration
  - on-orbit monitoring
Contamination WG Plan (2017)

- instrument-specific refereed papers (e.g. JATIS)
- Chandra/ACIS monitoring, modeling (Herman et al.)
  currently: a few SPIE papers
- Suzaku/XIS observational paper (Eric, XIS team)
  currently: Koyama+2007, Tech. Description, web pages
- XMM EPIC-MOS? RGS?
  currently: CCF documentation
- first step toward legacy white paper via Optics WG
Contamination WG Agenda

- 09:30-09:50 (15+5 min)
  H. Marshall, "Updating the Chandra ACIS Contamination Model"

- 09:50-10:10 (15+5 min)
  P. Plucinsky, "Monitoring the ACIS contamination layer with the IACHEC model for 1E0102.2-7219"

- 10:10-10:30 (15+5 min)
  A. Bogdan, "Monitoring the build-up of contaminant on the Chandra ACIS OBF"
Chandra/ACIS with A1795 and ECS (Akos)

- Contamination rate may be slowing on ACIS-I and -S.
- Contamination is so bad that Al K line in ECS can now be used to track spatial structure (Al K to Mn K ratio).
- New contaminant is less sensitive to center/edge temp. difference.
Chandra/ACIS Big Dither (Herman)

- Two components with different growth times $T = \tau(2018) / d\tau/dt$
  - Uniform: 6-9 yr (building up now)
  - Spatial: 10-15 yr (leveled off?)

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Chandra/ACIS with E0102 (Paul)

**E0102 O VIII Line Normalizations**

- S3 shows an increase in the apparent normalization in 2018, largest effect in the middle of the CCD, bottom of the CCD is consistent with previous measurements
- I3 shows an increase in the apparent normalization in 2017-2018

Contamination rate is slowing down?

S3 What will A1795 see? Stayed tuned! I3

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