

# Working Group Summary: Timing session

Member: Yuki Terada (Suzaku), Keith Jahoda (RXTE), Matteo Guainazzi (XMM), Takayoshi Kohmura (Suzaku)

## Current status:

- ✓ Absolute timing accuracy of **Suzaku** HXD was confirmed as ~ 230 microsecond via Crab monitoring observations & the simultaneous observation with RXTE, Swift, and INTEGRAL in 2007. (Yuki's presentation, and Terada et.al. 2008 PASJ 60 S28)
  - Systematic errors reaches to the hard limits of the system. / Done
- ✓ **XMM** EPIC timing was confirmed to have <100 microsecond accuracy via Crab monitoring observations with Chandra, RXTE.
  - (session 1.6 of <http://xmm2.esac.esa.int/docs/documents/CAL-TN-0018.pdf>)
  - Systematic errors reaches to the hard limits of the system. / Done
- ✓ **RXTE** timing was well confirmed within a few microsecond order
  - Reaches systematic errors of Radio period of Crab (average over a month vs. snapshot)

## Future plan:

- **We are satisfied with results of timing calibrations for the current missions. Finished.**
- Continue efforts on the timing calibration of our own mission(s) and **share** information with each other as IACHEC activities.
- Should discuss on timing calibrations of incoming future missions, MAXI, Astro-H, etc
  - (A/I) prepare WWW page to include updates of timing calibration with Suzaku (YT)  
<http://www.astro.isas.jaxa.jp/suzaku/analysis/hxd/>
  - (A/I) update WWW page of XMM timing calibration including PSRB0540 in addition to Crab (MG)
  - (A/I) Continue calibration works of Suzaku XIS Psum Mode (TK)