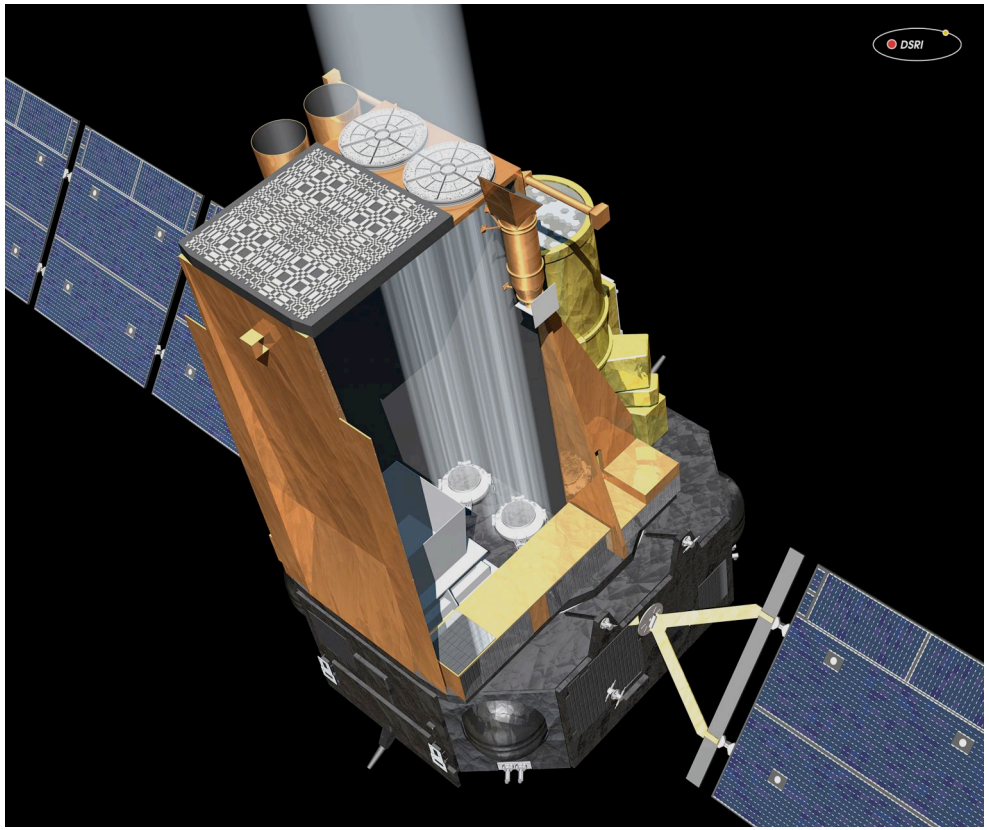
Technical University of Denmark

DTU

JEM-X Status, April 2008

S. Brandt



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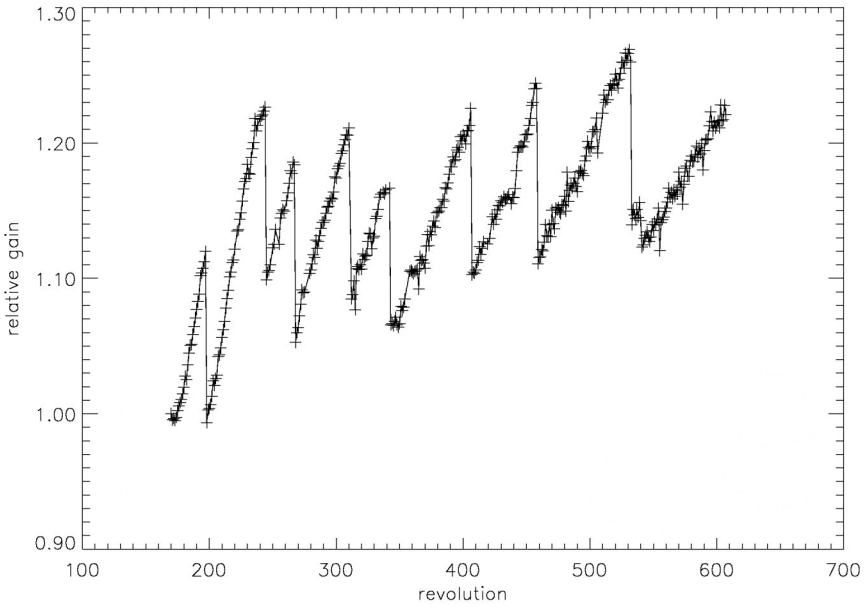
Gain evolution

- JEM-X1 DV setting was lowered in orbit 533 to DV=73, and most recent lowering to DV=72 took place in orbit 623
- Next lowering expected by end of 2008



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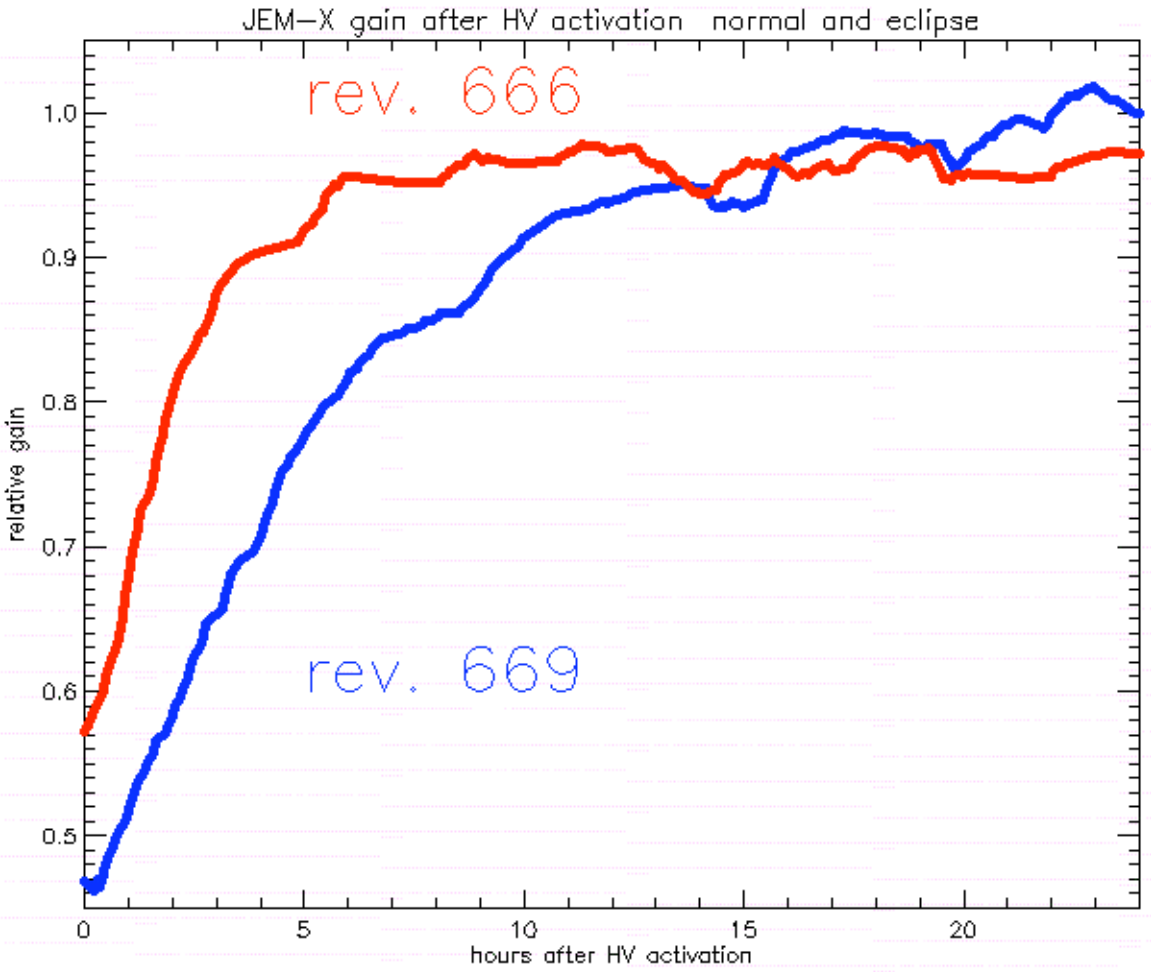
Gain after HV activation

- Cold start after eclipse results in slower gain recovery (10 h vs. 3 h to 90% level)



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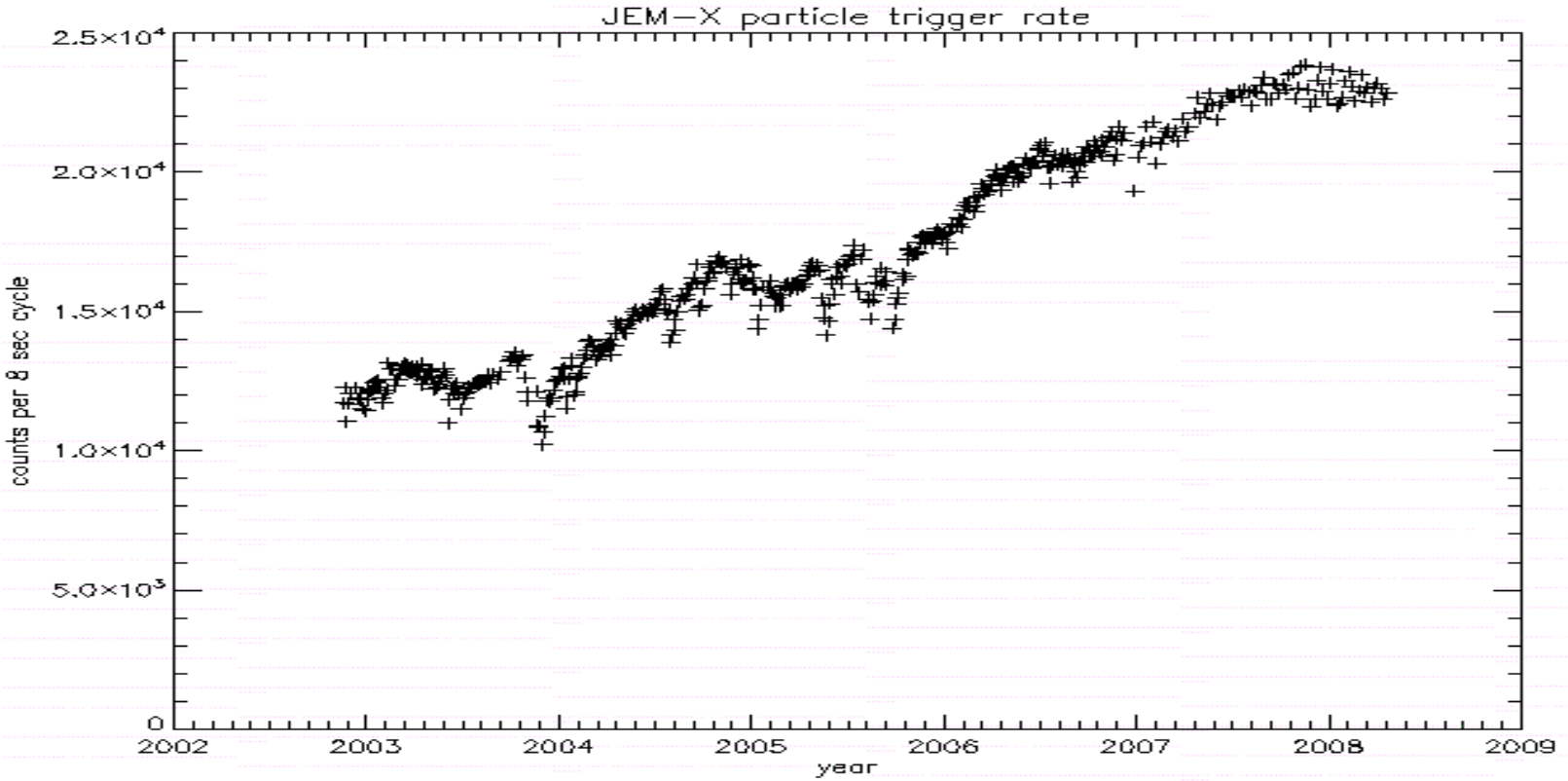
Anode status

- ~So far – on average 2-3% loss per year
- However, no loss for the past 9 months!!
- JEM-X1 (~500 orbits of use)
  - 54 of 256 anodes affected
    - 32 dead (4 pre-launch)
    - 14 neighbor
    - 11 unstable or low
- JEM-X2 (~175 orbits of use)
  - 49 of 256 anodes affected
    - 31 dead (9 pre-launch)
    - 15 neighbor
    - 3 unstable or low

JEM-X particle trigger rate

- Maximum passed in late 2007
  - But no serious decline yet



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JEM-X issues

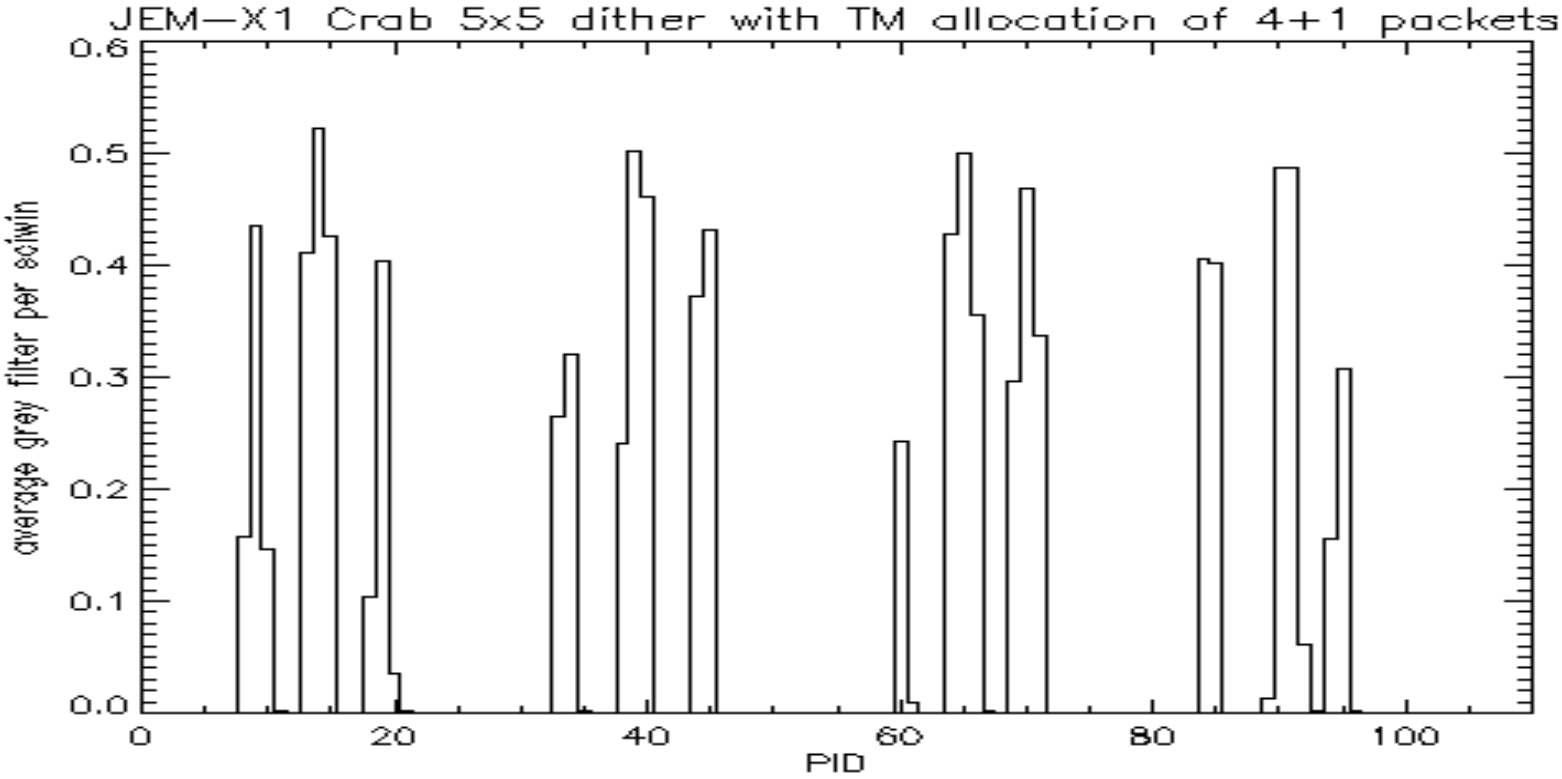
- Electronic efficiency as function of gain is understood and measured
  - Full implementation is OSA still ongoing
- Calibration: Source detection sensitivity is determined by systematics (collimator)

JEM-X TM allocation

- Current default is 8 (7 science + 1 HK)
  - Allows sustained transmission of background + sources corresponding to ~0.6 Crab on-axis
- For one strong source in FOV useful TM allocation (strongly) depends on off-axis angle

Example of reduced TM rate

- Crab 5x5 dither in 666 with 5 TM packets



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