Mission Description

- Non-imaging X-ray energy & timing observatory in ≤600km, ≤5.2° inclination LEO, 4.25 + 1 year mission duration
- Investigation of neutron star structure, Equation of State of ultra-dense matter in strong g-field conditions
- **LAD**
  - deployed 10m^2 effective area at 8 keV, collimated FoV ~1° FWHM, location accuracy 1’, 2-30 keV nominal energy range, 10 µs time accuracy, 200 eV (FWHM) energy resolution, nominal Field of Regard 35% of the sky, degraded Field of Regard 50% of the sky
- **WFM**
  - 1pi steradian FoV, location accuracy 1’, 2-30 keV nominal energy range, 500 eV (FWHM) energy resolution, 10 µs time accuracy, burst-alert service to x-ray astronomy community
Interface Description

- **LAD**: ~1000 kg, 1.5 kW, 960 kbps
- Building block: ~520x350x40mm **LAD Module**, ≥123 required to provide the 10m^2 of effective area at 8 keV
  - LAD Module volume envelope the critical I/F
  - Driving requirements:
    - 200 eV detector energy resolution - combined function of radiation dose (orbit) and operating temperature
    - 5K temporal and spatial temperature stability
    - LAD effective area response stability (jitter)
    - 40% observation availability
- **WFM**: ~100 kg, 110 W, 90 kbps
- Building block: **Camera Unit**, 5 required to provide wide FoV
  - Temperature stability driven by coded mask thermo-elastic distortion
  - Fast burst-alert service (30s to end user)