

Cosmic Vision 2015-2025 Technology Plan

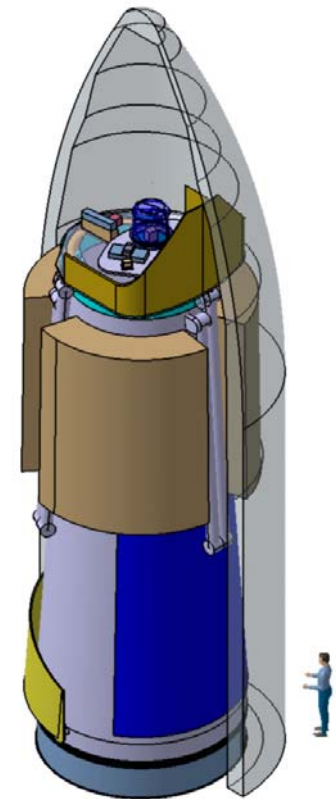
Industry day, Estec 21 November 2008

This file corresponds to one of a series of presentations made during this meeting. The complete set of presentations is available to download from:

<http://sci.esa.int/CVIndustryDay2008>

Overview of L-class Missions

- **IXO (International X-ray Observatory) replaces XEUS (ESA/JAXA) and Con-X (US)**
 - ✓ XEUS ESA/JAXA Formation Flying internal study completed
 - ✓ Mission not compatible with available CV budget
- **IXO baseline for ESA/NASA/JAXA joint study:**
 - ✓ Single large X-ray mirror assembly, HEW 5 arcsec
 - ✓ Deployable bench for reaching ~20-25 m focal length
 - ✓ Main instruments: Wide field imager, high resolution non-dispersive spectrometer and dispersive spectrometer using X-ray gratings
 - ✓ Compatibility with Ariane V and Atlas V launchers
- **IXO internal study is just completed, with NASA and JAXA participation**
 - ✓ Industrial studies should start by mid 2009
- **IXO will be the input to both US decadal survey and CV L1 selection**
- **ESA/NASA/JAXA respective contributions and roles not yet defined**



Relevant technology activities in T.D.P.

- ✓ Low mass X-ray optics (mission enabling): Si pore optics development and validation, alternative technology using slumped glass
- ✓ Cryogenic coolers (required by Narrow Field Instrument)

Technology Development Plan will be updated according to IXO re-direction and results of ongoing study

- ✓ Deployable structure required to increase focal length (extension mechanisms, deployable shroud).
- ✓ Instrument exchange platform (mechanism).

