

The Cosmic Vision Process

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Cosmic Vision process

- First "Call for Missions" issued in 1st Q 2007
- 50 proposals received by June 2007 deadline
 - LISA de facto L mission candidate
- Selection process by scientific community during summer
- Final selection in October 2007

Selected concepts for first slice of Cosmic Vision program (1/2)

- L mission concepts
 - *IXO* (large collecting area X-ray observatory)
 - *Laplace* (mission to the Jupiter system)
 - *LISA* (ex officio, gravitational wave observatory)
- All of them require significant technology development
- All of them are proposed to ESA as international collaborations

Selected concepts for first slice of Cosmic Vision program (2/2)

- M mission concepts
 - *Plato* (exoplanets finding by planetary transits and asteroseismology)
 - *Euclid* (Dark energy)
 - *Marco Polo* (NEO sample return)
 - *Cross Scale* (Magnetospheric physics)
 - *Solar Orbiter* (remnant of Horizon 2000+ added in 2008)
- Mission of opportunity
 - *Spica* (contribution to JAXA MIR-NIR observatory)
- No strong technology development required

Cosmic vision process for 1st slice: Initial planning

- 2 launch opportunities, for 2017/2018
- Initial planning 1 M (2017) plus 1 L (2018) mission
 - L cost capped ca. 650 M€ (ESA cost only)
 - M cost capped ca. 300 M€ (ESA cost only)
 - Payload funded separately by ESA member states
 - Other mixes of mission sizes possible
 - Programmatics to be reviewed according to budget evolution

Cosmic Vision process for 1st slice: Current planning

- 2 M missions in 2017/2018 (L missions postponed)
 - Missions of opportunity also possible
 - M mission cost cap increased to ~450 M€ (ESA cost only)
 - Payload funded separately by ESA member states
 - Based on 3.5% yearly nominal increase of Level of Resource from 2009 to 2013, approved by Council of Ministers on 26 Nov 2008

M missions selection procedure (1/2)

- 6 candidate M missions
 - Euclid, Plato, SPICA
 - Solar Orbiter, Marco Polo, Cross Scale
- Assessment studies have been completed:
 - 2 parallel industrial studies for the S/C and mission
 - Payload study by Instrument consortia selected via an AO
- Technical reviews almost completed, with independent SPC observers
- Public presentation on December 1, 2009
- Assessment Reports simultaneously posted on the web (<http://sci.esa.int>)
- Advisory structure deliberation & recommendation on 13-15 January 2010
- Final SPC decision in February 2010

M missions selection procedure (2/2)

- 900 M€ to be allocated for launches in 2017 and 2018
- 2 to 3 launches possible, depending on selected missions
- 3 or 4 mission concepts will be retained for Definition Phase (A/B1)
- The 2- year Definition Phase will start 2nd Q 2010
- Further down-selection end 2011 for implementation & launch (phases B2/C/D)

Summary of Cosmic Vision selection process

