EE11 Mission Information Day (MD) for Industry

Overview of the Earth Explorer 11 Process & Lessons Learned about technical preparation

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21 October 2021

Earth Explorers

World Class Earth Science driven missions

Science Excellence

Innovative Concepts

EE-11 Boundary Conditions (1/2)

Required level of Technical maturity

- End of Phase B1: TRL 5 on critical elements and TRL 6 on selected critical items
- End of Phase A: Technical, cost and schedule evidences that TRL 5 can be reached at the end of Phase B1

Required level of Scientific maturity

- End of Phase A: Minimum of SRL 5
- End of Phase 0: Minimum of SRL 4

Launcher and launch time frame

- Payload allocation policy for institutional missions launched on Vega or Arianne 6 to be followed
- Target launch in 2031/2032

ESA rules and ESA standards:

- To be implemented in accordance with tailored approach for ESA rules and ESA standards

EE-11 Boundary Conditions (2/2)

Cost

- Cost cap = 450 M€ cost at completion at 2020 economic conditions
- Strict target of 250 M€ at 2020 economic conditions for the Space Segment industrial developments (phase B/C/D/E1), including Level 1 Ground Processor Prototype (GPP)
- Space segment industrial developments excludes
  - Launch services
  - Operations
  - Ground Segment
  - Level-2 processor
  - ESA internal cost

- In case mission requires a launch with Ariane 6, the additional launcher costs to be offset from Space Segment industrial development

Key Objectives to be met by the end of Phase A

Determine technical and programmatic feasibility of the mission

Maximize mission science return within the EE-11 call boundary conditions

Phase 0 and Phase A

Phase 0 and Phase A are periods of time with several activities on-going

- System studies
- End-to-End performance simulator developments
- Science studies
- Campaigns

Phase 0/A ITT timing

- ITT issue planned between mid November and mid December 2021

Lessons Learned – What's new in EE-11?

- **Reinforcement of iterations between MAG, ESA and industry (TT-4, TT-5, TT-6, TT-7)**
- **Earlier cost estimates during Phase 0 (TT-8)**

What's new in EE-11?

- Science first approach – Initiation of science studies in advance of system studies
- Initiate end-to-end performance simulator activities in Phase 0
- Fostering a more agile working approach between ESA, industry and MAG.
- Fostering a more agile working approach to conduct Phase 0 and Phase A system studies
- Early cost estimates and continuous cost and programmatic discussions during Phase 0 and A
- Work in Phase 0/A, focused on critical areas/elements