

The ESA Earth Explorer 11 Call for Mission Ideas

A Brief Introduction

Refer to ESA Documentation for
Definitive Information!

The ESA Call for Earth Explorer 11 Mission Ideas

- Call released in May 2020, part of the ESA Future EO-1 Programme
- EE11 will be a large-class EO science mission to be launched ~2031/2032
 - The 5th ESA EE Core Mission, following GOCE, Aeolus, EarthCare, BIOMASS and EE10 (3 candidates)
- Addresses priorities in the ESA Earth Observation Science Strategy
- Mission candidates will be selected on the basis of their innovation and scientific excellence
- Full information from the ESA call website:
 - <https://eopro.esa.int/earth-explorer-mission-11-mission-ideas>

Earth Explorer 11 Context



Living Planet
(SP-1304)

Earth Explorer

Research driven

Earth Watch

Operational Service driven
In partnership

Core Missions

- GOCE**
2009-2013
- Aeolus**
Aug-2018
- EarthCARE**
2021
- Biomass (EE7)** 2022

Call EE10 –
Phase 0
STEREIOD
Daedalus
G-Class:H2O

EE11 Mission

Opportunity

- CryoSat-2**
8 April 10
- SMOS**
2 Nov 09
- Swarm**
22 Nov 13

Initiating discussion
with NASA's
(Decadal Survey)

NGGM

Fast Track

- FLEX (EE8)**
2022

Call EE9 –
Selected for Ph. A
FORUM
SKIM

Other EarthWatch Missions in Development
including TRUTHS

Meteorology

- Meteosat**
- MSG - GEO**
(1 s/c x 4)
- MetOp**
(1 s/c x 3)
- MTG - GEO**
(2 s/c x 3)
- MetOp SG**
(2 s/c x 3)

Copernicus

- Sentinel 1 A/B/C/D**
- Sentinel 2 A/B/C/D**
- Sentinel 3 A/B/C/D**
- Sentinel 4 (on MTG)**
- Sentinel 5 precursor**
- Sentinel 5 (on MetOp SG)**
- Sentinel 6 (Jason)**

Copernicus Space Component Evolution:
Expansion: CO2M, LSTM, PICE, CIMR, CHIME, ROSE-L
Continuation: Sentinel-1/2/3 NG

EE11 Boundary Conditions

- Overall cost cap of 450 M€, to end of commissioning phase
 - 250M€ strict target for all industrial development costs for the space segment
- Technology and Scientific Readiness level
 - Evidence for the current Science Readiness Level (SRL) and Technology Readiness Level (TRL) shall be provided in the proposal
 - SRL 4 by end of Phase 0; SRL 5 achievable by end of Phase A.
 - TRL 5 achievable by end of phase B1
- In-kind contributions from ESA Member States (incl. Canada and Slovenia) are allowable, but not from non-ESA states
- Launch on Ariane 6 or Vega, 2031/32 timescale
- Implemented in accordance with ESA rules and standards

Deadlines and Schedule

Activity	Date
Release of the EE11 Call	25 May 2020
Letter of Intent deadline	18 September 2020, 12:00 CET
Letter of Intent Workshop	5 October 2020
Proposal submission deadline	4 December 2020, 12:00 CET
Evaluation of submitted proposals via peer-review panels	December 2020-April 2021
ACEO EE11 recommendation	April/May 2021
PB-EO – selection of three candidates to enter Phase 0	June 2021
ACEO EE11 recommendation	Q3 2023
PB-EO – selection of two candidates to enter phase A	Q4 2023
EE11 User Consultation Meeting	Q2 2025
ACEO EE11 recommendation	Q2 2025
PB-EO – selection for implementation	Q2 2025
EE11 launch	2031/2032

UKSA Support for Preparation of EE11 Mission Concepts

- UK Space Agency has agreed that some funding will be available for the development of EE11 mission proposals
 - Up to 5 proposals will be supported (tbc)
- Funding to allow
 - dedicated effort for development of EE11 proposal
 - Industrial support for improved mission concept and mission cost information
 - Review of proposal in advance of submission by UK team
- Prospective mission proposal teams will need to apply for UKSA funding
 - Full details of the competition will be released as soon as possible