WHO IT'S FOR

Built for the next generation of Sun-Earth scientists

Researchers at every career stage (PhD students, postdocs, research teams) and innovators from industry and operations who want to test new methods before they go operational.

TRAINING & INNOVATION

Annual Training Schools

Sun-Earth coupling plus hands-on training on RAISEARTH services such as EISCAT, LOFAR and AI tools.

Datathons & hackathons

Use-case challenges with mentors, curated datasets and GPU access.

Open training materials

Recorded lectures and tutorials, free on the RAISEARTH Knowledge Hub.

Co-creation with industry

Innovation hubs with GNSS, aviation, satellite-operations and power-grid users.

First Training School:
Fall 2027 | Prague, Czechia

Get involved

VISIT US

JOIN US

https://raisearth.eu/

info@raisearth.eu

The Consortium

21 partners from 14 European countries, including EISCAT (ESFRI Landmark) and LOFAR (ERIC).

Coordinator: Dr Anna Belehaki | IAASARS, National Observatory of Athens (NOA)

Duration: 1 October 2026 - 30 September 2030

Granting Authority: European Research Executive Agency (REA)

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RAISEARTH

Research Infrastructure Services Advancing Frontier Knowledge in Sun-Earth Interactions

Integrated Sun–Earth Research

Open Access to Research Infrastructures

AI-Powered e-Science

Training, Innovation & Collaboration

ABOUT RAISEARTH

One research infrastructure, from the Sun to the ionosphere

RAISEARTH links Europe's observations, experiments, data and models across the whole Sun–Earth system, enhanced with AI/ML tools, so you can trace spaceweather events end to end.

Sun
Radio telescopes, flare detection

Heliosphere
L1 solar wind, CME and SEP catalogues

Magnetosphere
Magnetometers, riometers, GIC indices

Ionosphere
Radars, Digisondes, GNSS, Doppler sounders

Thermosphere
Coupled models, AI-assisted 3D reconstructions

21 partners

14 countries

4 yrs 2026-2030

TRANSNATIONAL ACCESS (TNA)

Bring your science to our instruments

Propose your own experiment or campaign at a RAISEARTH node and work side by side with the team that runs it.

4 weeks - 6 months on site, with training and hands-on work

Open calls every 4 months, peer-reviewed selection

Support for on-site access for selected projects

- **Incoherent scatter radars**: EISCAT UHF, VHF, Svalbard
- **Radio telescopes**: LOFAR, CALLISTO
- **Digisondes & ionosondes** across Europe
- **GNSS arrays**: TEC, ROTI, scintillation
- **Magnetometers & riometers**, from the Arctic to Greece
- **Continuous Doppler sounders**: global CDSS network
- **KAIRA VHF array** & all-sky imagers
- **Sun-to-Earth simulation**: VSWMC, EUHFORIA

Coordinated multi-instrument campaigns welcome, e.g. EISCAT + KAIRA + LOFAR + Doppler sounders.

VIRTUAL ACCESS (VA)

Open, FAIR data and models online

Data archives
ISR, ionosonde, GNSS TEC, Swarm, Cluster and DSCOVR data

Event catalogues
Flares, CMEs, SEPs, geomagnetic storms, TIDs

Prediction services
EUHFORIA, TEC/ROTI and MUF maps, AI.RadBelt

Cross-domain event explorer
CME → geomagnetic storm → ionospheric storm

AI-POWERED E-SCIENCE CENTRE

AI workspace
Notebooks with ready ML pipelines and GPUs

Automated event detection
Flares, CMEs, ionospheric irregularities, substorms

ML forecasting
Kp, Dst, GICs, LSTIDs, SEP probabilities

Data quality & discovery
Anomaly detection, gap-filling, semantic search

Connected to EOSC · aligned with FAIR, SPASE and ISO 19156 · building on PITHIA e-Science Centre