

Space Research Organisation Netherlands

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SRON
SPACE
RESEARCH
ORGANISATION
NETHERLANDS

SRON Overview

One Institute, two locations, 210 staff (165 Leiden, 45 Groningen)

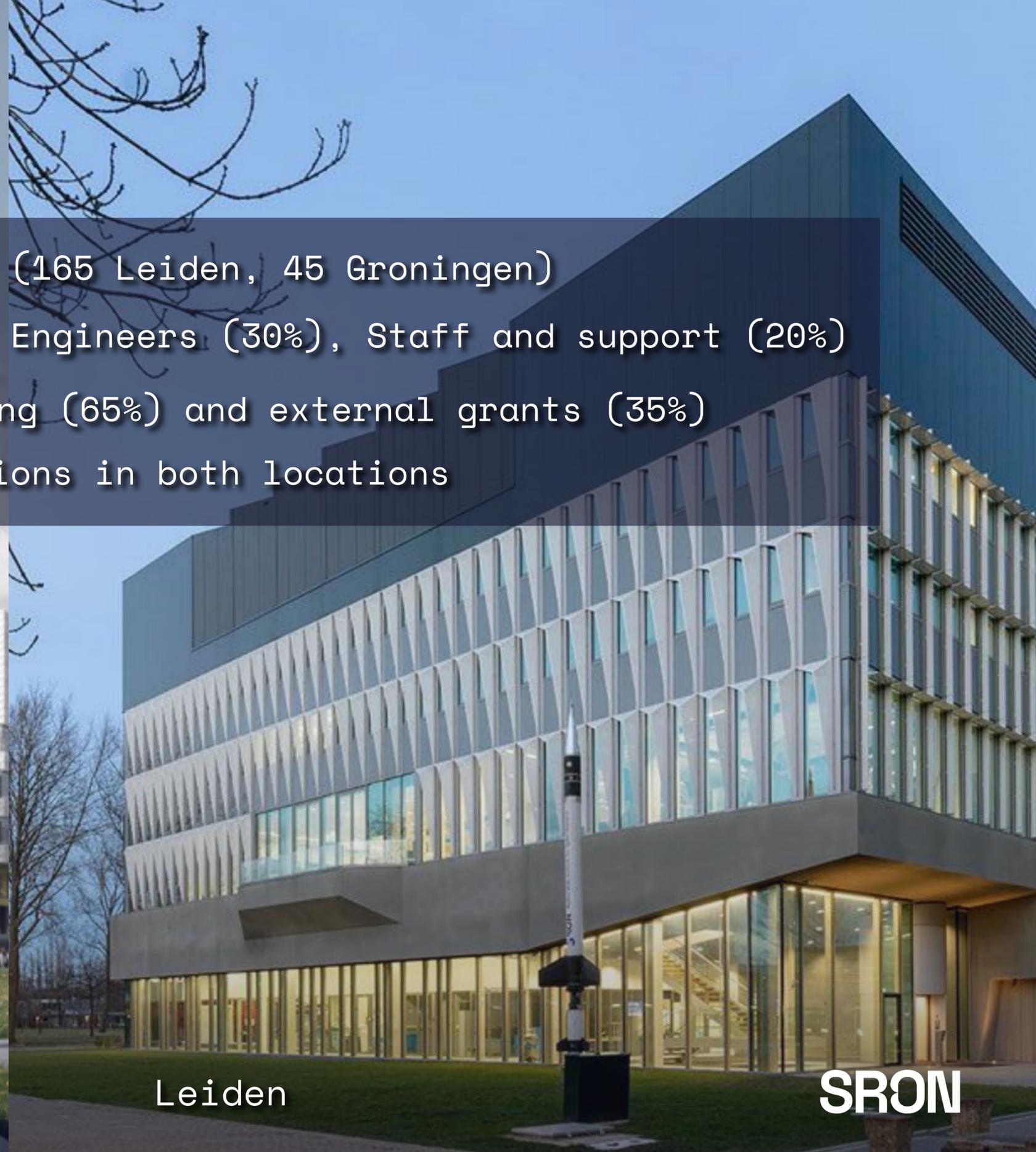
Scientists/Instrument Scientists (50%), Engineers (30%), Staff and support (20%)

Funding ~35M€/yr, mix of NWO base funding (65%) and external grants (35%)

Strong scientific and technical connections in both locations



Groningen



Leiden

SRON

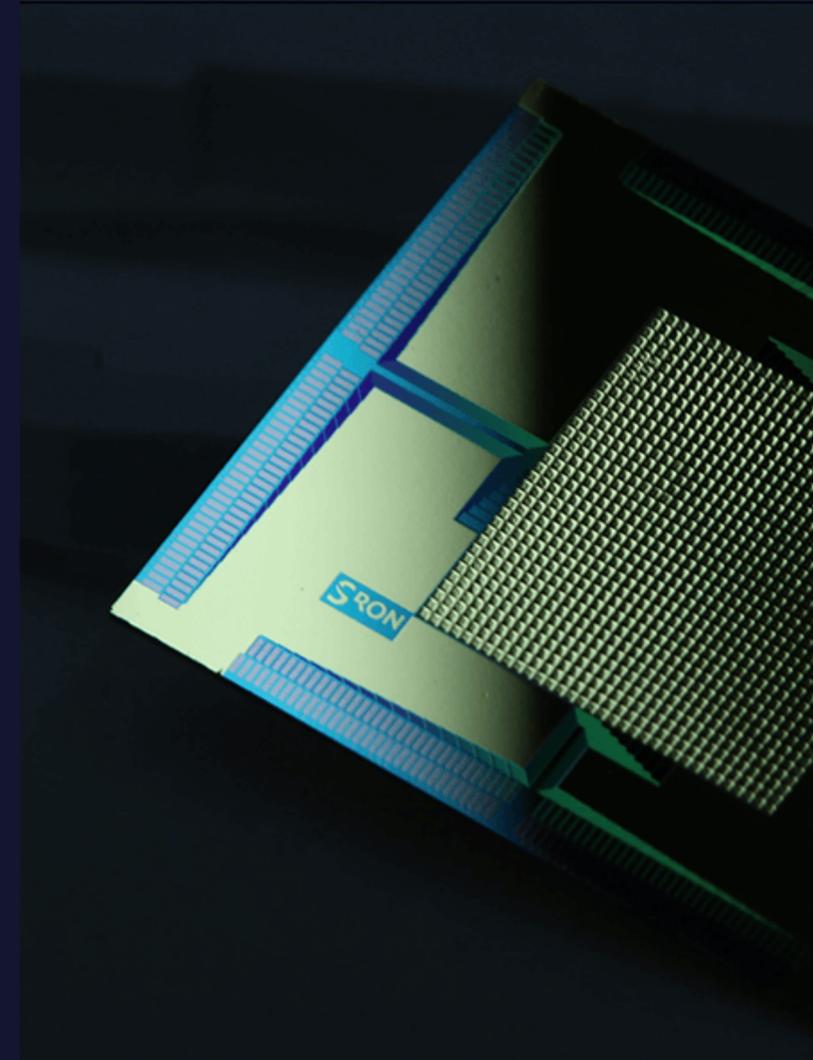
SRON Research



ASTROPHYSICS



EARTH

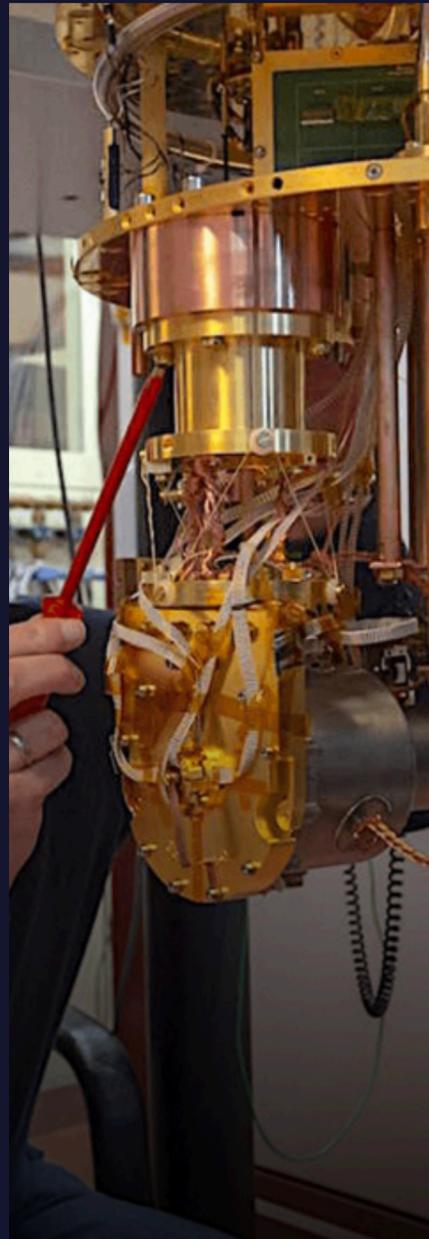


TECHNOLOGY

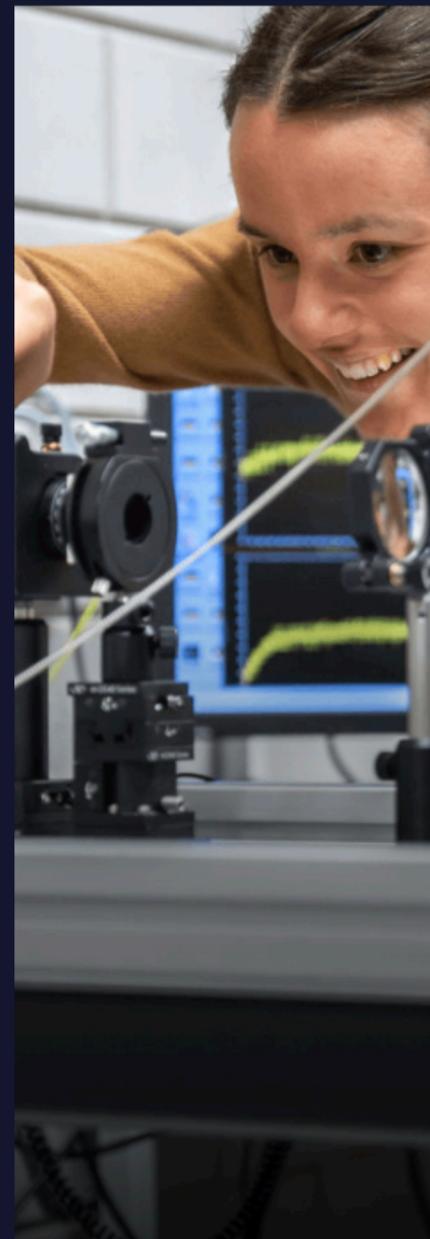
SRON Instrument Science and Engineering



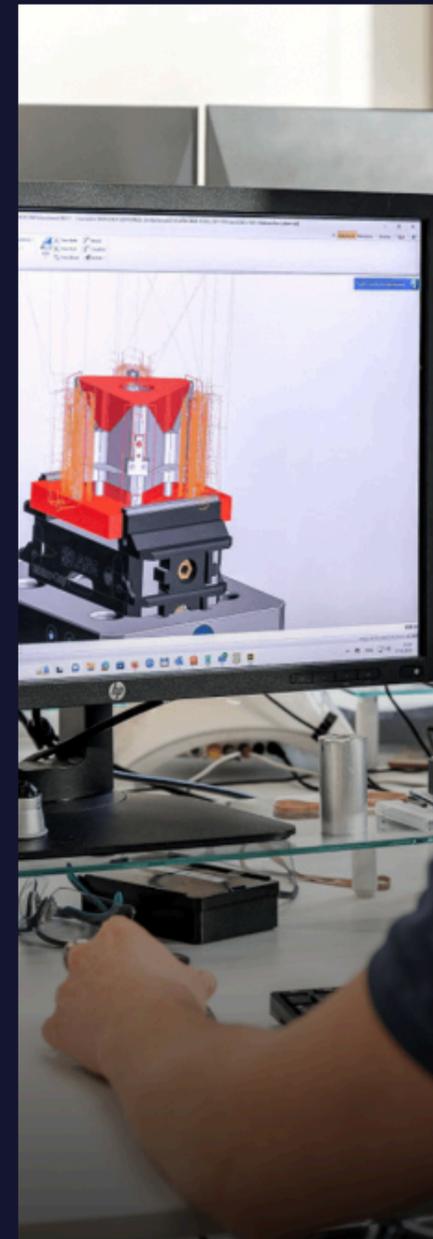
**NANO
TECHNOLOGY**



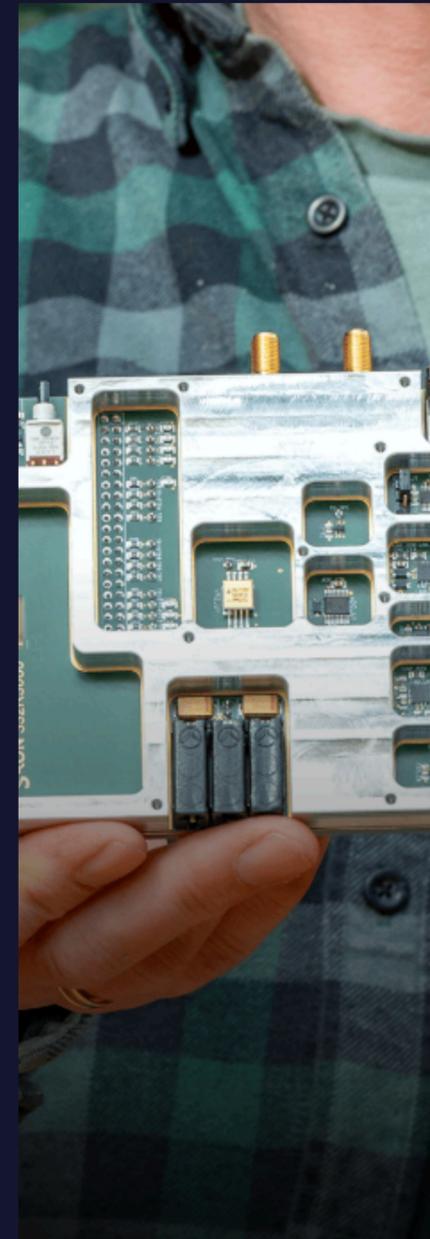
CRYOGENICS



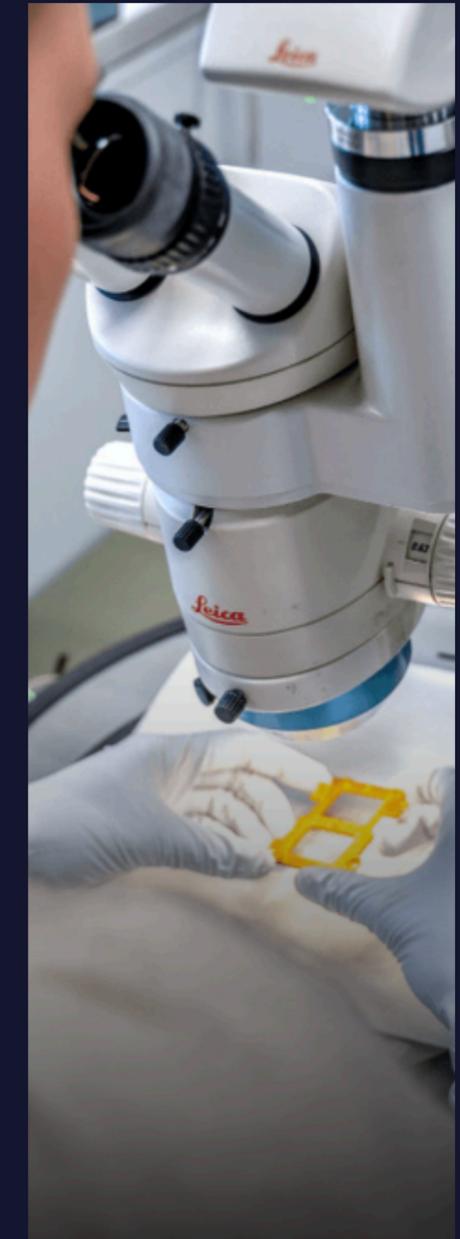
OPTICS



MECHANICAL



ELECTRONICS



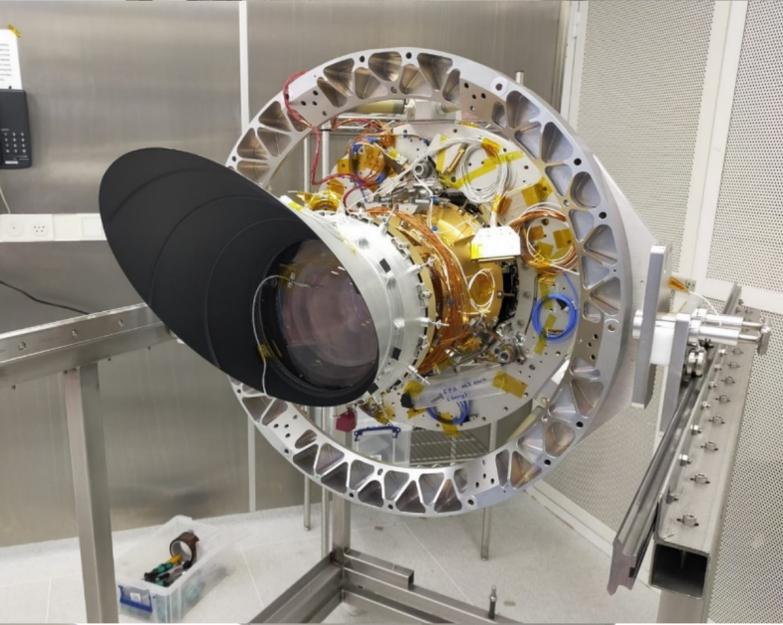
**QUALITY
ASSURANCE**

SRON Leiden Clean Room and Fabrication Labs

State of the art lithography, cryogenics, space-qualified electronics, mechanical engineering, and test facilities

SRON

SRON Groningen Space Simulator **Test Facility**



Develop and calibrate a space simulator for testing PLATO cameras

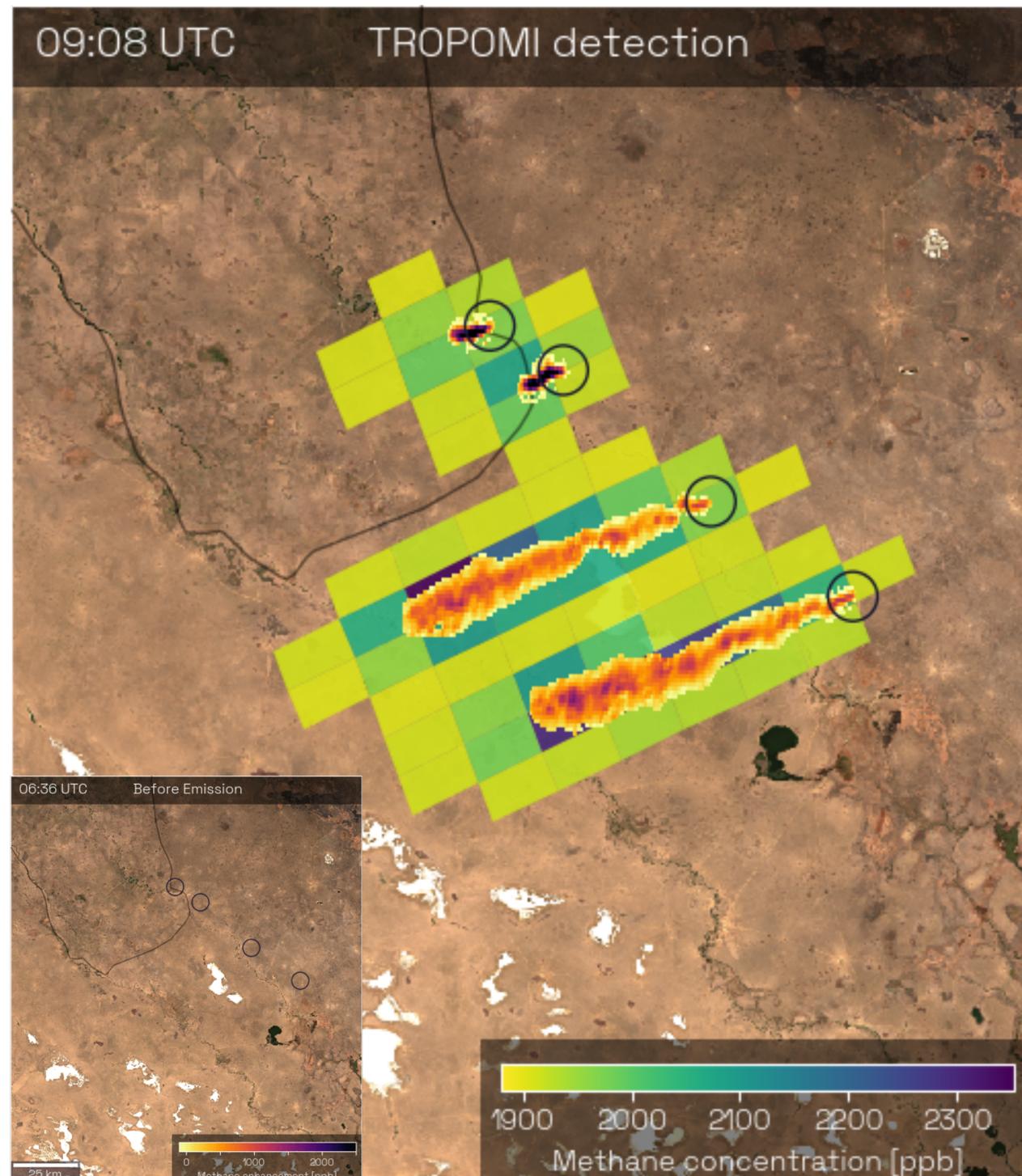
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SRON Societal Impacts

- Driving world-leading space research
- Transfer of knowledge to NL industry
- Training of research and technical staff
- Public outreach and engagement



Large Brief Methane Releases with TROPOMI



SRON scientists discover dozens of methane plumes every week using the Dutch space instrument **TROPOMI**. To locate their sources, they then zoom in with other satellites. However, brief methane releases have typically ended before those satellites arrive at the scene. The team has now developed a new method that is fast enough to catch the largest of such emissions.

de Jong, T. A., Maasackers, J. D., Irakulis-Loitxate, I., Randles, C. A., Tol, P., & Aben, I. (Geophysical Research Letters, 52)

(April 24, 2025)

ESA Scout Mission **TANGO**

ESA SCOUT “Science-as-a-Service”

3 years from Kick-Off to Launch, 35 M€ budget

Two small satellites (Carbon & Nitrogen) flying in tandem

Collocated CO₂/CH₄ and NO₂ measurements

Facility-level emissions (300 m)

Launch scheduled for 2028



TNO



SRON

Student Mission Training with **NEBULA XPLORER**



Mission to be designed,
built, tested, and operated
fully by students



High quality Dutch satellite for Dutch scientific community to study X-ray binaries
Real world training for next generation of scientists, engineers, and technicians
Coaching by world-leading staff from SRON, universities, and industry partners

Candidate mission for ESA mini-F call

SRON

Groningen Next

Comprehensive initiative to future-proof Groningen site

- Capitalize on momentum from the move to the Feringa building
- Address needed and overdue maintenance for technical capabilities
- Optimize efficiency within the SRON matrix organization
- Increase benefits of local embedding





SRON Groningen **Refurbished**

Instrumentation and facilities (3.0M€)

- Replacement and upgrades to existing equipment and facilities due to age or performance
- New instrumentation which will enhance the SRON-G capabilities
- Additional technology and equipment in which SRON-G will not directly invest (i.e., additive manufacturing, advance piezo-materials) which will be done in a partnership with the RUG, Innovation Cluster Drachten, and local SMEs.

Scientific and technical staff (1.25M€)

- System and mechanical design
- Product assurance
- Detector R&D (heterodyne)
- Instrument and calibration scientists (FIR)
- Mission Principal Investigator (FIR)
- Strategic alignment with missions (POEMM, PRIMA, LiteBIRD, LETO, FOSSIL, etc.)



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