

SmartSat and European Space Agency's Φ -lab to collaborate on Earth Observation Research

Adelaide, 21 July 2023 – [SmartSat Cooperative Research Centre \(SmartSat\)](#), Australia's leading space research centre, has signed a new agreement with [European Space Agency's \(ESA\) \$\Phi\$ -lab](#) to collaborate on Earth Observation (EO) research.

The European Space Agency's Φ -lab is a world-leading research centre with a mission to accelerate the future of Earth Observation through transformational innovations and new technologies, including artificial intelligence (AI) and on-board processing.

The agreement builds upon SmartSat's existing relationship with Φ -lab, who supported cosine to develop the HyperScout imager payload. This payload is currently being integrated into the SmartSat-led South Australian Kanyini satellite, following consultations with Φ -lab regarding its Φ -sat-1 satellite mission. The synergies between these missions offer significant collaboration opportunities between SmartSat and Φ -lab regarding onboard intelligence for EO applications, creating a solid foundation for further research activities under the new agreement.

SmartSat CEO Professor Andy Koronios, who signed the agreement in Rome, said, "We are delighted to embark on this new chapter of our partnership with ESA's Φ -lab through this Letter of Intent. Our relationship with Φ -lab has been growing stronger over the past few years through our shared strategic research initiatives in the Kanyini and Φ -sat satellite missions. Φ -lab is at the forefront of Earth Observation technologies, and we are very proud to collaborate with them to further showcase Australian expertise on an international level. This is a testament to the progress we've made in our national space industry."

"We have also identified new collaboration opportunities between researchers at the Queensland University of Technology and Φ -lab to develop advanced AI capabilities using hyperspectral satellite imagery. This will create the next generation of predictive intelligence that can forecast and monitor agricultural and environmental activities and disaster events with greater accuracy," he added.

As part of the new agreement, SmartSat and Φ -lab plan to establish an exchange program for research personnel and SmartSat PhD students to undertake internships at Φ -lab. The internship program is slated to commence in early 2024 for PhD students specialising in Onboard AI and Synthetic Aperture Radar.

Simonetta Cheli, ESA Director of Earth Observation Programmes, said, "I see this letter of intent as a major opportunity to harness the complementary expertise of the Earth Observation Directorate and SmartSat. With ESA Φ -lab as the lead on our side in conjunction with SmartSat's broad-based consortium, the collaboration will undoubtedly yield significant results in the areas of onboard AI and edge computing in space. The exchange programme will also be an excellent chance for European

and Australian researchers to optimise knowledge sharing in this field, and I look forward to seeing the fruits of their endeavours.”

Enrico Palermo, Head of the Australian Space Agency, said, “Australia and the European Space Agency have been strong partners in space for decades, and this agreement will build on that relationship. Earth observation is one of the strongest examples of how space technologies improve life on Earth – from forecasting the weather to responding to natural disasters and mitigating climate change. This agreement will help bring together bright minds in Australia and Europe to develop space solutions integrating AI technologies and research.”

Professor Koronios has also met with the Italian Space Agency (ASI)’s new President Teodoro Valente, along with Gabriella Arrigo, Director of International Affairs, and Danilo Rubini, Head of International Relations and Space Diplomacy, to discuss international research collaboration that will enable strong space research and development and innovation between Australia and Italy.

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ABOUT THE SMARTSAT CRC

The SmartSat Cooperative Research Centre brings together over 100 national and international partners who have invested over \$190 million, along with \$55 million in Federal Government funding under its Cooperative Research Centres Program, in a \$245 million research effort over seven years. Working closely with the Australian Space Agency & Defence, SmartSat is making a strong contribution to the Australian Government’s goal of tripling the size of the space sector to \$12 billion and creating up to 20,000 jobs by 2030. Priority industry sectors for SmartSat include telecommunications, agriculture and natural resources, and defence and national security. <https://smartsatcrc.com>