

Press Release

SSC Space advances optical communications – New ground station ready in Santiago, Chile

Stockholm, Sweden – 10 March 2026

SSC Space announces a new Optical Ground Station (OGS) ready for operations at its site in Santiago, Chile. This cutting-edge technology, supported by the European Space Agency (ESA), marks a significant leap forward in satellite communications, delivering higher data rates and enhanced security compared to traditional methods.

The station was successfully installed and has passed site acceptance testing. It is now ready to enable free-space laser communication between satellites and the ground, strengthening the capabilities of SSC Space in next-generation communication solutions.

A major step for future space communications

The new station is part of the SSC Space optical service development project NODES within the European Space Agency's (ESA) Optical and Quantum Communications – ScyLight program, designed to accelerate the development of optical ground capabilities. Manufactured by Safran Space, this new OGS complements traditional RF links with laser-based optical links, offering:

- Data rates up to 10 Gbit/s,
- Narrow, directed beams which are difficult to intercept or jam and resilient to interference and cross-talk,
- No spectrum licensing and regulatory bottlenecks,
- Multi-mission capability and bi-directional communications (throughout 2026) with integrated modems supporting CCSDS and SDA standards.

“The station in Santiago is not just another node – it’s a leap forward. We’re moving satellite communications into a new era of speed, security, and resilience. As part of the NODES network, this station brings us closer to fulfilling tomorrow’s mission needs, with interference-resistant transmission capable of meeting heavy data demand,” says Hanna Sundberg, Optical Program Manager at SSC Space.

“At ESA, we’re working with our partners to showcase the ‘Made in Europe’ innovations that will provide connectivity to our Member States that’s faster, more secure and more resilient than ever before. Our Optical and Quantum Communications – ScyLight program is an essential tool to keeping our partners at the leading edge of the global satellite communications market, and this partnership with SSC Space shows just how we’re delivering connectivity solutions beyond Europe and Canada,” said Laurent Jaffart, Director of ESA Resilience, Navigation and Connectivity.

Housed on a 100-hectare site protected by the Andes foothills, the station already runs on locally generated solar power – 350 kWh from a 624-panel array, cutting emissions by roughly 8 percent – and represents SSC Space’s commitment to carbon-neutral operations by 2040.

Operational trials of the SSC Space optical infrastructure began in Western Australia in early 2025, and with the installation in Chile, the network of two OGSs is ready to support direct-to-Earth laser links. Pilot users and early adapters are now invited to be the first to experience the system.

This achievement is the result of close collaboration between SSC Space, the European Space Agency (ESA), and Safran Space.

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About SSC Space: SSC Space (formerly known as Swedish Space Corporation) is a leading global provider of advanced space services, with more than 50 years of experience. We help space organizations, research institutes, commercial and institutional actors from all over the world to get access to space. With local presence on all continents and about 750 committed employees, we offer specialist expertise in satellite communications and satellite control services, spacecraft operations, rocket and balloon systems, launch services and flight test services, as well as engineering, operations and consultancy services for space missions. We enable successful space projects within Earth observation, telecommunications, security, meteorology, navigation and positioning, scientific research and other applications. Among our strongest assets are Esrange Space Center in northern Sweden, set out to be a leading provider of satellite launch services from mainland Europe, as well as one of the world’s largest commercial ground station networks for satellite communications. For more information, visit www.sscspace.com.

About ESA’s Optical and Quantum Communications – ScyLight programme: The European Space Agency (ESA) is Europe’s gateway to space, coordinating the financial and intellectual resources of its Member States to conduct space programmes and activities. Part of Advanced Research in Telecommunications Systems (ARTES), the Optical and Quantum Communications – ScyLight programme focuses on advancing optical and quantum technologies to revolutionise satellite communications. ScyLight supports the research, development and utilisation of these technologies, for instance through the HyDRON project for seamlessly integrating space assets into terrestrial communication networks. ESA is enabling future quantum communication networks with ultra-secure global connectivity by advancing space-based quantum key distribution and maturing technologies already available today. Through supporting industry to develop and extend its manufacturing capabilities, ScyLight helps prepare European and Canadian industry stakeholders to seize related market opportunities. Learn more at <https://connectivity.esa.int/artes-4-0-programme-overview/optical-quantum-communications-scylight>.