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ANGELS, France's first commercial nanosatellite designed by Hemeria, Thales Alenia Space and Syrlinks in partnership with CNES, gets operational life extension on the back of two successful years in orbit.

ANGELS, France's first commercial nanosatellite designed by Hemeria in collaboration with CNES, has completed two years in orbit, marking the end of the initial contract between the two partners.

Ten times smaller than its predecessors but delivering five times more performance, ANGELS has proven its reliability, service lifetime and operability, integrating seamlessly with the existing Argos constellation. This result is a testament to the rigour of the teams at Hemeria in charge of the spacecraft bus and satellite integration, and those at Thales Alenia Space and Syrlinks who developed the Argos-Neo instrument payload. It also marks the culmination of a win/win partnership between manufacturers Hemeria, Thales Alenia Space and Syrlinks and the French space agency CNES.

On the back of this success, CNES and Hemeria have signed an agreement to extend the satellite's lifetime for a further two and a half years.

Hemeria CEO Nicolas Multan commented: *"Over the last two years, our satellite has been put through its paces and then finally integrated in the existing Argos constellation. Its reliability, service lifetime and operability have exceeded all expectations, so I think it's important to highlight this operational success. The other great news is the extension of ANGELS's lifetime for another two and a half years, making nearly five years in all, which demonstrates CNES's faith in our solution and is a quite remarkable achievement in this product range, especially for a first like this."*

For CNES Director of Orbital Systems Caroline Laurent, *"ANGELS is a first for French industry and CNES in terms of demonstrating new miniaturization and flight agility capabilities in orbit, thanks to breakthrough technologies developed by Hemeria, Thales Alenia Space and Syrlinks."*

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It is the precursor of a series of commercial satellites tailored to the needs of a new generation of space missions complementing traditional programmes. It was also a major milestone step for CNES into the world of New Space, based on new ways of doing things and an innovative organization and methods, with CNES and Hemeria working together on the same platform, co-funding of an in-orbit demonstrator and the agency's shareholding in Kineis to support the wider service project."

ANGELS's technical prowess augurs well for the future Kineis IoT constellation for which Hemeria and Thales Alenia Space are designing all the nanosatellites. "This bodes well for the Kineis constellation that recently completed its Critical Design Review and is set to start orbiting satellites in the first half of 2023" said Nicolas Multan.

Kineis CEO Alexandre Tisserant added: "ANGELS is a marvel of technology that meets all our performance expectations for the Internet of Things and has helped us smooth the path for our constellation by validating satellite and instrument technologies and deploying miniaturized, very-low-power terminals. And the twofold extension of ANGELS's lifetime is great news for us and our thousands of users!"

"We're proud to have contributed to this success," said Benoit Broudy, head of Thales Alenia Space's Navigation business unit. "Argos-Neo is the miniaturized instrument serving the new expectations of New Space and its recently uplinked features will enable Kineis to test on ANGELS the frequency spectrum required to develop its future IoT constellation."

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About

CNES – www.cnes.fr

CNES (Centre National d'Etudes Spatiales) is the public establishment responsible for proposing French space policy to the Government and implementing it in Europe. It designs and puts satellites in orbit and invents the space systems of tomorrow; it promotes the emergence of new services that are useful in everyday life. CNES, created in 1961, initiates major space projects, launchers and satellites and is the natural partner of industry for pushing innovation. CNES has nearly 2,400 employees, men and women who are passionate about space, which opens up infinite, innovative fields of application; it intervenes in five areas: the Ariane launcher, scientific research, observation, telecommunications and defence. CNES is a major player in technological innovation, economic development and industrial policy in France. It also establishes scientific partnerships and is involved in numerous international projects. France, represented by CNES, is one of the main contributors to the European Space Agency (ESA).

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HEMERIA - www.hemeria-group.com

Hemeria develops and manufactures high-criticality products for the defence and space markets. As France's flagship nanosatellite manufacturer, Hemeria, working together with CNES, built the first French commercial nanosatellite, ANGELS, orbited in 2019. In 2023 it will be supplying the 25 satellites of the Kineis constellation set to deliver connectivity for the Internet of Things (IoT). The company also has numerous other projects in development. Based mainly in Toulouse, Hemeria employs 250 people and generates €45 million in annual revenues

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KINEIS - www.kineis.com

Founded in 2018, Kineis is a satellite operator offering global connectivity. It draws on a 40-year heritage acquired with the Argos system built by the French space agency CNES and operated by CLS (Collecte Localisation Satellites) to develop a reliable technology designed to afford easy access to useful satellite data. With a view to simplifying and democratizing applications for professionals and citizens alike, Kineis locates and connects objects anywhere on the planet, leveraging all of its technological innovation capabilities to combine New Space and the Internet of Things (IoT). In 2020, Kineis raised €100 million in funding from CLS (32%), CNES (26%), Bpifrance (20%), Ifremer, Thales, Hemeria, CÉLAD, BNP Paribas Développement, ETHICS Group, MJKD, Consuls Développement, Invest Marel and others, and posted €7 million in revenues, up 40% on 2019. In 2021, Kineis joined the French Tech Next 40 programme.

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THALES ALENIA SPACE - www.thalesaleniaspace.com

Drawing on over 40 years of experience and a unique combination of skills, expertise and cultures, Thales Alenia Space designs and delivers innovative solutions for telecommunications, navigation, Earth observation, environmental management, exploration, science and orbital infrastructures. Governments and private industry alike count on Thales Alenia Space to design and build satellite-based systems that provide anytime, anywhere connections and positioning, monitor our planet, enhance management of its resources, and explore our solar system and beyond. Thales Alenia Space sees space as a new horizon, helping to build a better, more sustainable life on Earth. A joint venture between Thales (67%) and Leonardo (33%), Thales Alenia Space also teams up with Telespazio to form the parent companies' Space Alliance, which offers a complete range of services. Thales Alenia Space posted revenues of approximately €1.85 billion in 2020 and has around 7,700 employees in 10 countries, with 17 sites in Europe and a plant in the United States.

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