Press release

Toulouse, 19 February 2018

A new airplane at ISAE-SUPAERO to improve aviation safety

In the aeronautics field, it is particularly true that interactions between operators (pilots, controllers, airports and airline companies) and systems have a decisive impact on air transport performances and safety. From the cognitive sciences to human factors analysis, from engineering methods to the study of new forms of interfaces, ISAE-SUPAERO has developed research expertise combining skills and diverse experimental resources.

The ninth airplane in the Institute's fleet

Alongside the light aircraft that the establishment owns – the TB20, Robin DR 400 and Aquila – our latest acquisition, the Vulcanair P68 Observer, will be equipped with on-board and ground instruments that will enable ISAE-SUPAERO and its students to develop in-flight experiments with new concepts in man-system interactions or for remote crews to pilot drones.

Equipped with advanced autopilot functions and GNSS navigation capacities, the plane will have synchronized test equipment with crew monitoring sensors (eye-tracking, neurophysiological helmets and cardiac measurement devices). It will thus be possible to track pilots' eye movements and to measure their brain activity in order to better understand their performances. Equipped with a glass cockpit and a ventral compartment, the plane will also be able to embark experimental sensors to measure the environment. The 18-member human factors and neuroergonomics team has interdisciplinary expertise in neurosciences, signal processing, computers and human factors. This research group's activities notably focus on understanding the neural mechanisms behind human errors in aeronautics and the implementation of solutions to avoid their occurrence.

"This is an important line of research for our laboratory, which studies man-machine interfaces," indicated Olivier Lesbre, Director General of ISAE-SUPAERO. "This instrumented airplane rounds out our collection of research resources dedicated to aerospace engineering, which is exceptional among European institutions of higher education," he pointed out. This new twin-engine aircraft will also be used as a teaching support for engineering, masters, specialized masters and doctorate students, as well as for continuing education activities.

Patrons and alumni together for innovation and scientific outreach

ISAE-SUPAERO's acquisition of a Vulcanair P68 Observer led to a sponsorship agreement's being signed between Zodiac Data Systems, the School and its Foundation. This partnership symbolizes their shared ambition for developing aerospace engineering.

Through this sponsorship agreement, Zodiac Data Systems, the Zodiac Aerospace Group's Business Line and world leader in on-board and ground telemetry and instrumentation, has agreed to provide a complete telemetry system to equip the Vulcanair P68 Observer's cockpit, from on-board data acquisition to ground visualization. "We are proud to contribute to ISAE-SUPAERO's scientific reputation," said Jean-Marie Betermier, CEO of Zodiac Data Systems and a Supaero 86 alumnus. "Our donation is proof of Zodiac Data Systems' desire to help the Institute to benefit from state-of-the-art solutions with the on-board and ground instrumentation used by the leading names in the sector, and to pursue the 5-year partnership between ISAE-SUPAERO and Zodiac Data Systems," he said. "This is a key moment marking the start of a fruitful alliance between our two organizations, both of which seek to promote the sustainability of a talent pool adapted to the needs of the sector as well as the professional integration of young people into the industrial world. Internships, theses and miscellaneous cooperation programs will be vehicles for this collaboration," Jean-Marie Betermier concluded.

For its part, the ISAE-SUPAERO Foundation mobilized SUPAERO 82 alumni for the School's first Classgift. Their close involvement through an exceptional donation of €90,000 was a contribution that covered 14% of the aircraft's purchase price. "A class donation is an opportunity for an entire class to come together for a collective project, in this case the purchase of a twin-engine plane, and to get together in a friendly setting. We hadn't seen some of our classmates in years and our objective was met!" said Vincent Guermonprez, 1982 alumnus and Classgift 82 ambassador, enthusiastically.

Vulcanair Aircraft P68 Observer at the Lasbordes Operational Center ©ISAE-SUPAERO

From left to right: Jean-Marie Betermier, CEO of Zodiac Data Systems, Olivier Lesbre, Director General of ISAE-SUPAERO, Philippe Forestier, President of the ISAE-SUPAERO Foundation, and Vincent Guermonprez, donor and Classgift 82 ambassador
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About the ISAE-SUPAERO Foundation
Recognized as a public interest foundation in 2008, the ISAE-SUPAERO Foundation's goal is to contribute to the domestic and international renown of the Institut Supérieur de l'Aéronautique et de l'Espace (ISAE-SUPAERO). It carries out its actions in close cooperation with the Institute, providing support for missions in favor of students and research professors. Its actions are organized around five objectives: taking actions in favor of developing research in the aerospace sector, consolidating the innovative teaching tools available, promoting entrepreneurship, supporting international mobility for research professors and students, and encouraging the Institute's social openness policy.
www.fondation-isae-supaero.org

About ISAE-SUPAERO
A world leader in higher education in aerospace engineering, ISAE-SUPAERO offers a unique range of advanced higher education programs including the Ingénieur ISAE-SUPAERO program and the CNAM –ISAE apprenticeship program, 1 Master's in Aerospace Engineering delivered in English, 5 research masters, 15 advanced masters and 6 Doctoral schools.
The ISAE-SUPAERO learning community includes 100 professors and researchers, 1,700 undergraduate and post-graduate students, and 1,800 lecturers from industry. It shares its campus with ONERA's Toulouse center. Every year, over 30% of the Institute's 650 graduates are international students, and the alumni network includes over 21,500 former graduates from all continents. It has developed a research policy focusing on the future needs of the aerospace and high-tech industries, with which it has developed ten teaching and research chairs.
On the international level, ISAE-SUPAERO cooperates with leading universities (Caltech, Stanford, Georgia Tech, UC Berkeley, EP Montreal, TU Munich, TU Delft, etc.).
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