



FENYX research aircraft: scientific operations and advantages

Laura Sánchez Muñoz, Rodrigo Corzo Martínez, Estefanía Gómez Mendez, Bertín Calvo Otero, Ana Corrales Sierra, Jesús Ortiz Serrano, and Bartolomé Marqués balaguer

INTA, Aerial Platforms for Research, Torrejón de Ardoz (Madrid), Spain (sanchezml@inta.es)

FENYX is a project supported by INTA and the Ministry of Science, Innovation and Universities of Spain for manufacturing an airplane to investigate the environment and develop new technologies based on data collection from the Earth's atmosphere.

The acquisition of this aircraft represents a great advance for Europe, experts will be able to investigate multiple fields like atmospheric science, remote sensing or develop new instrumentation.

The endurance of the airplane will allow researchers from different areas of study to perform their campaigns in the same flight, what means that specialists will be able to cooperate among them, developing and connecting the knowledge of many sciences. This will also help to improve the operations of the airplane during the campaigns, elaborating new processes and progressing in the aeronautical science.

The maximum altitude for which the aircraft will be certified is around 25000 ft, so it will be able to fly up to the high troposphere. This zone is interesting to study the flight conditions that a commercial airplane finds while flying. It will also allow to test new instruments in a higher altitude than nowadays, and it will let study the microbiology at high altitude in Europe.

INTA has been making campaigns since 1998. This institute has atmospheric and remote sensing instruments to measure parameters, like CAPS (Cloud, Aerosol and Precipitation Spectrometer), PCASP (Passive Cavity Aerosol Spectrometer Probe), or CASI 1500i (Compact Airborne Spectrographic Imager).

ACKNOWLEDGEMENTS

L. Sánchez Muñoz acknowledges the grant support received from Spanish Ministry of Science, Innovation and Universities (MICINN), which supplied the European Regional Development Funds (ERDF) used for the execution of the project.