

Abstract Title:

**“Test and Evaluation of INTA Aerial Platforms for Research.”**

Presented by:

*Maria Molina Martínez* [molinamm@inta.es](mailto:molinamm@inta.es)  
*Aerial Platforms for Research Engineering*

*Jesús Javier Fernández Orío* [oriojj@inta.es](mailto:oriojj@inta.es)  
*Flight Test Department:*

*INTA Instituto Nacional de Técnica Aeroespacial*  
*Carretera de Ajalvir km.4*  
*Torrejon de Ardoz MADRID SPAIN*

Aerial Platforms for Research are unique tools for the performance of many scientific projects, especially related with environmental sciences. These infrastructures allow performing scientific research from the atmosphere and are modified and instrumented for that purpose.

In Atmosphere research campaigns, Aerial Platforms are needed for troposphere complete sampling, allowing physical and chemical characteristics analysis. Another field of science that requires these infrastructures is Remote sensing or Earth observation, with degraded areas studies, coastal bathymetry projects, plantations, natural resources mapping, etc...

Occasionally the implementation of measurement equipment and special devices for research, may lead to a new configuration of the Aircraft.

Instrument integration and Flight and Ground tests development are core tasks in Aerial Platforms for Research operation that must be analysed for every different configuration and/or scientific campaign to carry out.

In this paper there is a description of the different processes that take place when analysing a new configuration, and the main tasks associated with Aerial Platforms for Research operation.