

# EUFAR – new perspectives in education and training for students and young researchers

## Case study: student's participation in the M55-AMMA-SCOUT-O3 campaign

Sylwester Arabas<sup>1</sup>, Aurora Stan-Sion<sup>2</sup>

1: Institute of Geophysics, University of Warsaw, Poland (slayoo@igf.fuw.edu.pl / Phone: +48-22-5546827 / Fax: +48-22-5546882)

2: Romanian National Meteorological Administration (aurora.stan@meteo.inmh.ro / Phone: +40-21-3163116 / Fax: +40-21-3163143)

Application process

### In short:

Sylwester Arabas joined the M55-AMMA-SCOUT-O3 campaign (see below) flight-planning team in Ouagadougou Base Aerienne 511 in Burkina Faso preparing both M55 Geophysica and DLR F-20 Falcon research flights over West Africa. The three-week campaign time was an opportunity to get acquainted with research themes of both instrument and forecast/modeling teams and take part in an airborne campaign logistics.

### On-site activities:

- MSG data collection and distribution among the team
- preparing MSG-based input for BOLAM model
- preparing after-flight MSG-based animations (fig. 1)

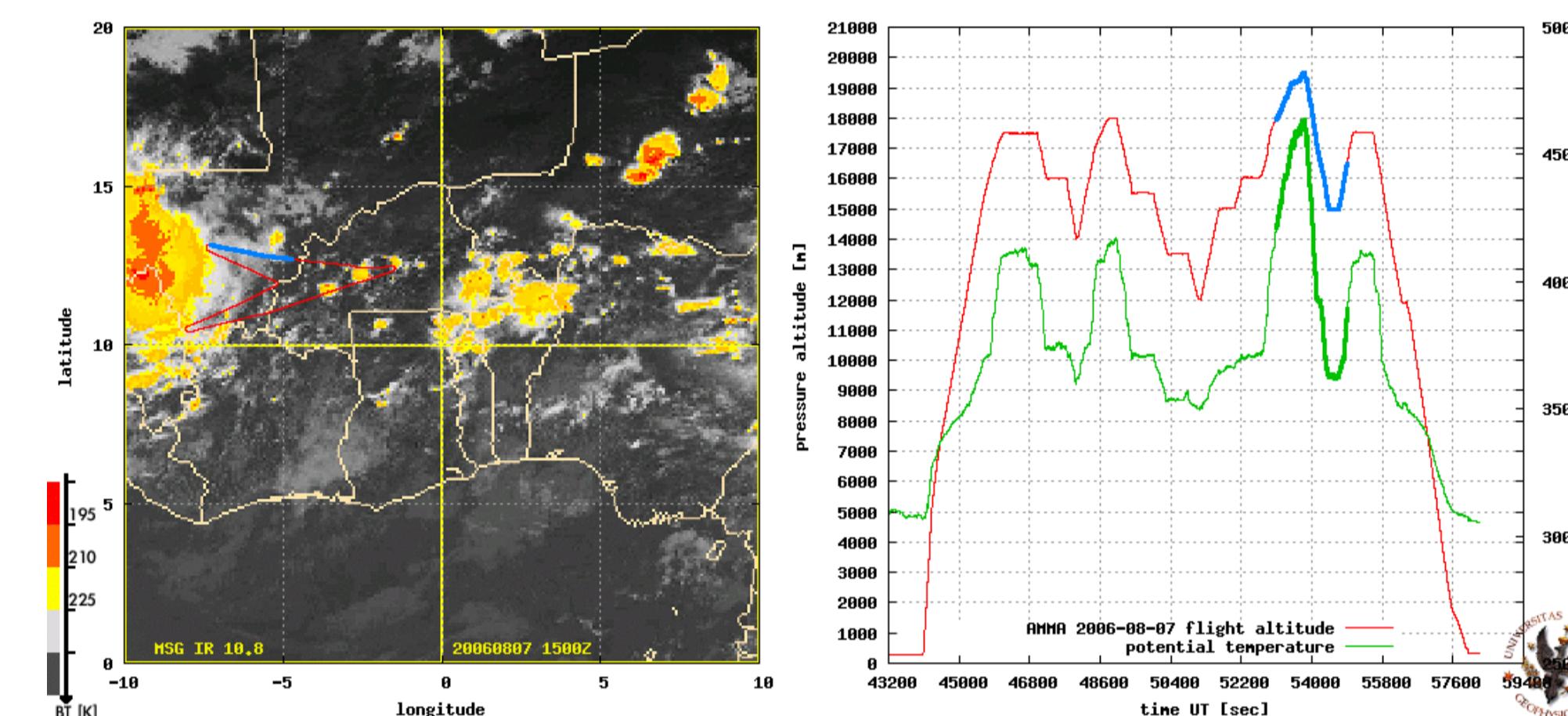


Figure 1: M55 flight summary; left: MSG picture and flight track; right: altitude and potential temperature profile during flight



Figure 2: M55-AMMA-SCOUT-O3 Campaign Team in front of the hangar after the last local flight of Geophysica (ph. S.Arabas)

- campaign website (fig. 3) construction and maintenance, particularly focused on after-flight reporting
- nightly MCS alerts attendance
- dealing with NWP data (ECMWF RDF trajectories)

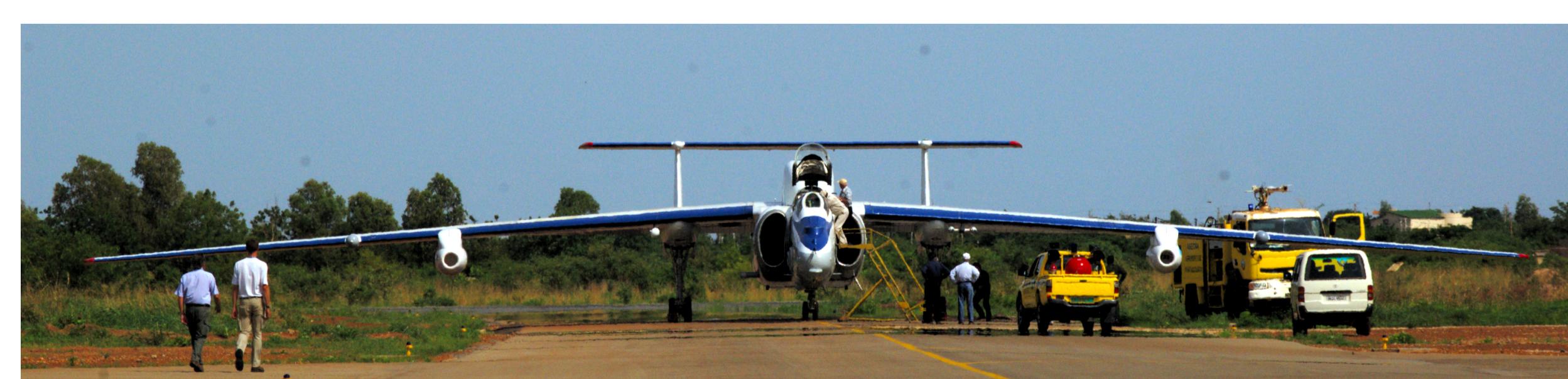


Figure 5: M55 on apron just after arrival from Marrakesh (ph. S.Arabas)

### The M55-AMMA-SCOUT-03 Campaign

#### The name:

- **M55** – The M55 Geophysica Stratospheric Research Aircraft
- **AMMA** – African Monsoon Multidisciplinary Analyses
- **SCOUT-O3** – Stratospheric-Climate Links with Emphasis on the Upper Troposphere and Lower Stratosphere

#### Time & Location:

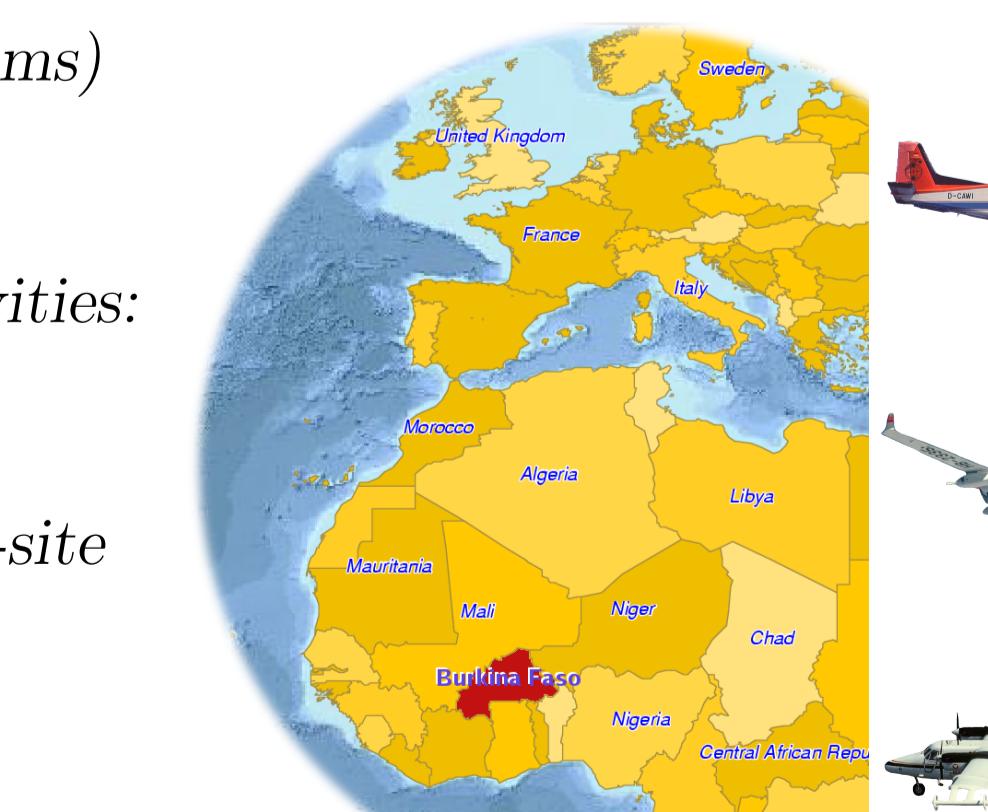
- July 31 – August 18, 2006
- Ouagadougou, Capital of Burkina Faso, West Africa

#### Key research topics:

- Upper Troposphere / Lower Stratosphere, Tropical Tropopause Layer
- African Monsoon and MCS (Mesoscale Convective Systems)
- Measurements of cirrus clouds – CALIPSO Validation

#### Facts about Ouagadougou AMMA Operation Center Activities:

- aircraft deployed: M55 Geophysica, DLR Falcon
- over 85 scientific, technical and logistic staff involved on-site
- 22 research flights carried out (incl. 8 transfer flights)



Sylwester Arabas's participation in the M55-AMMA-SCOUT-O3 campaign was supported by EUFAR Education & Training and by CESSAR (Centre of Excellence in Small Scale Atmospheric Research, University of Warsaw). EUFAR supported as well his participation in the EGU 2007. Poster presented during the ES3 Integrating Activities in Environmental Science Education - Approaches and Perspectives poster session on the EGU 2007 in Vienna.

### Training Experience



### In short:

EUFAR gives students the opportunity to get access to the airborne research campaigns by coordinating and funding their participation. The application process is supported by the EUFAR website by presenting the available opportunities as well as handling the on-line registration and reporting.

### A student's step-by-step guide to joining a research campaign with EUFAR Education & Training:

- choice of the campaign – information sources:
  - EUFAR website: [www.eufar.net](http://www.eufar.net)
  - \* EUFAR fleet database
  - \* campaign catalogue with training opportunities highlighted
  - \* brief campaign descriptions
- local EUFAR contact (Ela Grzeszczak at the University of Warsaw)
- local websites and bulletin boards

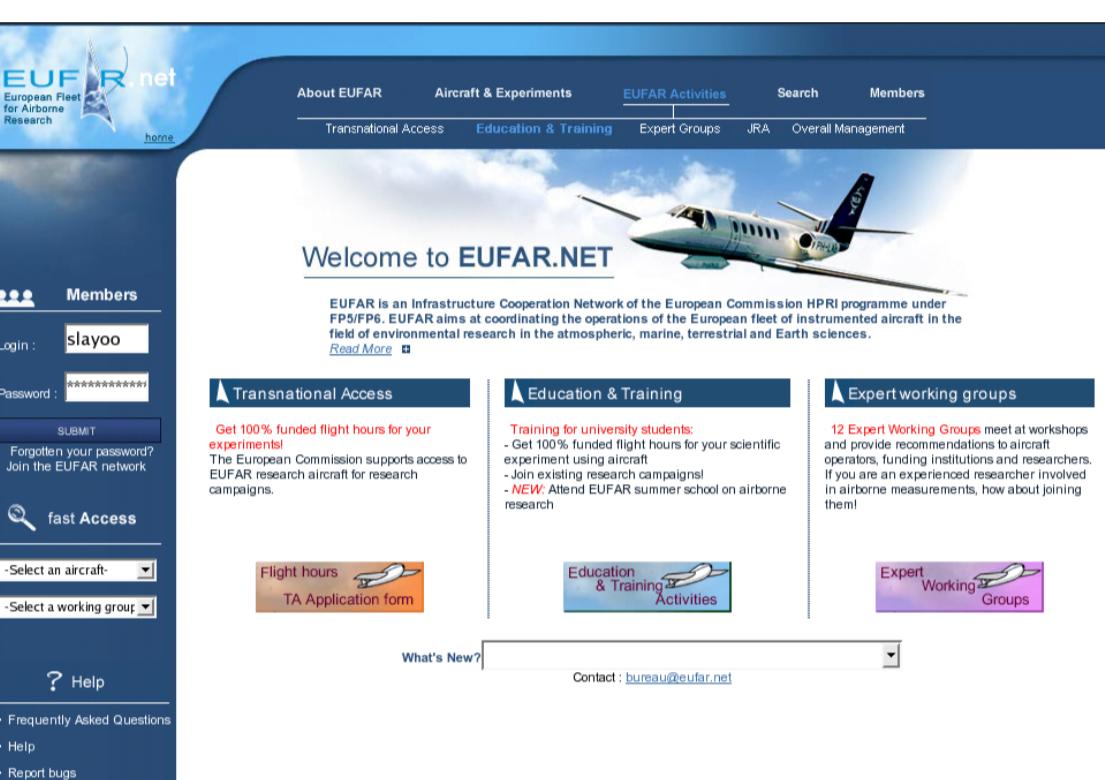


Figure 6: EUFAR website

- on-line application form – description of:
  - background and rationale
  - motivation
  - expectations
  - possible contributions

#### EUFAR decision

- scientific arrangements:
  - search for a host researcher
  - getting acquaintance with the campaign research programme
  - getting an assignment for on-site activities

#### logistic arrangements:

- hotel/transport/visa/medical issues (with help of EUFAR secretaries and campaign organizers)
- further search for funds (e.g. in case of out-of-Europe campaign)

- campaign on-site activities (see the left part of the poster)

- submitting the report to EUFAR

- reimbursement of the EUFAR-covered costs

Figure 7: EUFAR on-line application form



