

**Report on the  
3<sup>rd</sup> General Assembly of ASAPE  
the Alphasat Aldo Paraboni Propagation Experimenters (ASAPE)  
22<sup>nd</sup> Ka and Broadband Communications Conference  
October 18<sup>th</sup>, 2016, NASA Glenn Research Centre, Cleveland (Ohio), USA**

The collaborative **Group of the AlphaSat Aldo Paraboni propagation Experimenters (ASAPE)** is an open forum of researchers performing propagation campaigns with the Aldo Paraboni payload and other satellite payloads at Ka band. Topics include: instruments, design and execution of campaigns, data analysis, use of remote sensing and meteorological data and use of numerical weather products. The group intends also to be a reference on the use of measurements for the development of models and theoretical advances and to actively pursue transfer of results to industry and into radio regulations.

The group held its 3<sup>rd</sup> General Assembly on October the 18<sup>th</sup> 2016, during the 22<sup>nd</sup> Ka and Broadband Communications Conference at NASA Glenn Research Centre in Cleveland (Ohio), USA. People who could not attend the meeting in person also followed the meeting via WEBEX teleconference session.

The main objective of this meeting was to present and discuss the progress of the campaign and to plan ASAPE activities for the following period. In particular it addressed:

- Status of the campaign and extension of the operations of Alphasat Aldo Paraboni payload:
- Presentations from Experimenters
- ASAPE WGs and Programmatic WS in 2016 (24-25 October 2016)
- Planning for ASAPE activities in 2016 and 2017.

The meeting was organised and chaired by:

Prof. Carlo Riva (Politecnico di Milano, Italy)

Dr. Antonio Martellucci (ESA/ESTEC, Noordwijk, The Netherlands)

The final agenda of the meeting was:

**1. Opening**

- Welcome (NASA)
- Introduction and list of Participants (C. Riva)
- Approval of the Agenda (C. Riva)
- Approval of the minute of the last meeting (C. Riva)

**2. Report on the ASAPE campaign**

- Status of the experiment at the end of the third year of campaigns (C. Riva)
- Extension of the operation of the Alphasat Aldo Paraboni payload to 2019 (A. Martellucci)

**3. Presentations of ASAPE Experimenters:**

- First year analysis of Alphasat Ka- and Q- band beacon measurements in Ljubljana, Slovenia (A. Vilhar)
- Alphasat campaign in France (X. Boulanger, WEBEX)
- Attenuation events from Alphasat measurement in Prague (CZ) (M. Grabner, WEBEX)
- Educational Alphasat TDP5 beacon measurements (F. Teschl, WEBEX)
- Update on ASAPE receiving station and research activity in Rome, Italy (A. Marziani, WEBEX)

**4. Planning of ASAPE activities**

- Short Summary on WGs activities (C. Riva, 15 min)
- Programmatic WS in 2016 (24-25 October, 2016) (A. Martellucci, 10 min)
- Planning for ASAPE activities in 2016 and 2017 (C. Riva and A. Martellucci, 15 min)
- Round the table discussion (all, 15 min)

## 5. Conclusions/AoB

List of organisations that attended to this meeting:

- ASI
- ESA
- Politecnico di Milano (Italy)
- Joanneum Research (Austria)
- University of Virginia (USA)
- Jožef Stefan Institute (Slovenia)
- Technical University of Graz (Austria)
- CMI (Czech Republic)
- FFI (Norway)
- National technical University of Athens (Greece)
- UCL (Belgium)
- ONERA (France)
- University of Aveiro (Portugal)
- University of Rome La Sapienza (Italy)
- FUB (Italy)
- UPM (Spain)
- BUTE (Hungary).

## Summary of the meeting

At the beginning of the meeting C. Riva commemorated F. Gargione, who sadly passed away on October the 3<sup>rd</sup>, 2017) and reminded his appreciation of propagation activities and continuous support to the ASAPE group in the frame of the Ka and Broadband Conference.

C. Riva presented the status of the experiment at the end of the third year of campaigns.

In general the campaign has progressed significantly since the 2<sup>nd</sup> GA of ASAPE, on October 2015, with a significant increase of the number of propagation stations and the production of the initial statistics from a number of locations.

A. Martellucci presented the extension of the operation of the Alphasat Aldo Paraboni payload to 2019:

- ASA TDPs operations extended up to 2019. Refer to paper presented by P. Sivac (ESA) at Ka Band Conference for details on space and ground segment.
- ESA activities (TRP, PECS and ARTES contracts) are running and extensions of activities for payload operations are being implemented (ARTES 8 Large Platform Program).
- Some PECS activities (Slovenia and Hungary SCIEX) are being proposed for extension.

Presentations by experiments showed the good progress of the measurements campaign.

ASAPE Working Groups and responsible are:

- WG1 Data Format (A. Graziani)

- WG2 Data processing (D. Vanhoenacker-Janvier)
- WG3 Scintillation analysis (M. Rytir)
- WG4 Design of Propagation Terminals (A. Rocha)
- WG5 Data calibration without radiometers (L. Luini)
- WG6 Submission of experimental tables to SG3 (A. Martellucci)
- WG7 Planning for a test-bed of a European network of terminals (S. Ventouras)
- WG8 Synergies with other experiments and other national/international projects Ka band experiments, LEO/MEO L. Castanet)

A. Martellucci presents the organisation of the The Alphasat Aldo Paraboni Experiment Programmatic Workshop for 2017-2019 and ASAPE WG Meetings (24-25 October 2016). The objectives are: 1) To review the results of the first, three years of campaign (2013-2016) and update current or define new scientific objectives for the continuation of the campaign in the next years (2017- 2020). 2) To hold meeting of the WGs of ASAPE.

The ASAPE group will hold an intermediate meeting on January 19<sup>th</sup> 2017 ( or January 13<sup>th</sup>, as backup date), by WEBEX Teleconference, to report and progress on the work of the WGs. A 2nd Intermediate teleconference meeting is planned in July (TBD by January 2017).

Plans for Propagation school and ASAPE Workshop at Erice on 4-7 October 2016 and on 9-10 October 2017 are presented. They will be confirmed by end of 2016.

The 4<sup>th</sup> GA will be probably held in Trieste TBC in the period 16-19 October in conjunction with the 23<sup>rd</sup> Ka and Broadband Conference.

The participants to the ASAPE 3<sup>rd</sup> GA expressed their gratitude to NASA for the great effort in the organization of the GA at NASA Glenn Centre and to the organisers of the Ka and Broadband Communications Conference for their support to the activities of this group.

The documents of this meeting will be made available by the end of October, on a ESA Daptiv platform accessible to registered ASAPE members. More than 25 participants attended the meeting, some of who followed the meeting by WEB videoconference.