

# 23rd ESA Symposium on European ROCKET & BALLOON

programmes and related research 11-15 June 2017 · Visby · Sweden







European Space Agency

# **Second Announcement and Call for Papers**

European Space Agency Programme Advisory Committee on the Special Project Concerning the Launching of Sounding Rockets

# 23rd ESA SYMPOSIUM ON

## EUROPEAN ROCKET AND BALLOON PROGRAMMES

## AND RELATED RESEARCH

11-15 June 2016

Visby - Sweden

# Symposium Programme Committee

#### Chairman

K. Dannenberg – Swedish National Space Board (Sweden)

## Members

K. Bøen – ASC (Norway)
V. Dubourg – CNES (France)
M. Egli – HSLU (Switzerland)
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J. Moen – University of Oslo (Norway)
M. Pearce – KTH (Sweden)
M. Viertotak – SSC (Sweden)
A. Verga – ESA

# Symposium Organising Committee

*Chair* S. Kemi – SSC (Sweden)

## Members

A.K. Grenevall – SSC (Sweden) M-P Havinga – ESA U. McCabe – SSC (Sweden) L. Poromaa – SSC (Sweden)

## **Submission of Abstracts**

Please submit your abstract by 27 January 2017, following the instructions given on the Symposium website.

## Registration

Register by 27 March 2017 via the Symposium website in order to obtain the early registration rates.

**Symposium Website** http://pac.spaceflight.esa.int/

Symposium Email Address

pac@esa.int

# **Point of Contact**

Ms Marie-Pierre Havinga ESA/EASP Office ESTEC Postbus 299 2200 AG Noordwijk The Netherlands

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## Introduction

The 23rd ESA Symposium on European Rocket and Balloon Programmes and Related Research is organised and sponsored by European Space Agency (ESA) and the Swedish Space Corporation in coordination with the Swedish National Space Board. The symposium programme will be defined by the Programme Committee, which is composed of the experts from all five member states of the Esrange Andøya Special Project (EASP) for the launching of sounding rockets and balloons, and the European Space Agency.

## Purpose of this Symposium

This Symposium is the twenty-third in a series of conferences initiated in 1973 by the member states of EASP to provide a forum for scientists and engineers using sounding rockets and balloons for their research, and to advance the progress in the related scientific disciplines. The scope of the Symposium also includes new developments in technology and improvements of rocket and balloon launching facilities as well as ground based aircraft and satellite research, complementary to sounding rockets and balloons. The symposium also covers related Space education

Symposium participants are given the opportunity to report on their latest achievements and plans for the future, within the various scientific and technical fields.

These symposia have become widely recognised occasions for efficient communication between scientists, engineers, Space agency representatives, project managers, range personnel as well as students, and thereby have become the starting point for intensified collaboration.

Invited keynote speakers will address topics of general interest and present the state of scientific and technical knowledge in fields of specific interest. Oral and poster contributions are solicited.

There will be opportunities for splinter meetings and working group discussions.

The Proceedings of the Symposium will be published by ESA and distributed in digital format and will be made available on-line to all participants approximately three months after the Symposium.

# **Outline of the Symposium**

The Symposium will have sessions on the following topics:

## **General Topics**

- National Reports (EASP member states and invited reports)
- New Techniques and Instrumentation (incl. Range Facilities)
- New Trends and latest Developments in the use of Sounding Rockets and Balloons for Scientific Research
- Space-related Education
- Combined In-situ, Ground-based and Satellite Projects related to Sounding Rocket and Balloon activities.

## Scientific Topics

- Atmospheric Physics and Chemistry
- Ionosphere and Magnetosphere
- Life and Physical Sciences and Applications in Space
- Astrophysics, Astronomy and Cosmology
- Space Weather Impacts on the Earth Atmosphere.

## Exhibition

- Ranges
- Agencies
- Companies

During the symposium there will be an exhibition area available to display and exhibit specific products, such as, service systems for balloons and sounding rockets, experiment hardware, new technologies, diagnostic tools/measurement systems, application software, etc. Facilities for holding small meetings and working group discussions outside the main symposium programme will be available. Please contact the ESA/PAC secretariat in advance to make the necessary reservations.

# **Invited Symposium Keynote Speakers**

- Alexander Kinnaird (ESA) Michael Becker (DLR- DE) Education –
- Marc Lessard (UNH USA) Ionosphere-Magnetosphere
- Daniela Grimm (Aarhus University DK) Life Sciences
- Henri Nguyen-Thi (IM2NP & Aix-Marseille University FR) Physical Sciences
- Jörg Gumbel (MISU SE) Atmospheric Physics
- Marc Pearce (KTH SE) Astrophysics

#### Venue

The Symposium will be held at the Wisby Strand Congress & Event, located in Visby, Gotland, Sweden.



In the middle age the town was the centre of the Hanseatic League – a mighty trade network of 30 independent cities. Today, Visby is a living world heritage with people living and working in beautiful old buildings. Visby is an extremely well-preserved medieval city with a network of narrow, cobbled streets. The many ruins of churches and abbeys give Visby, the "City of Roses and Ruins", its unique charm. It has also a rich tradition of arts, crafts and is the most restaurant-intensive city in Sweden.



# **Technical Equipment**

The lecture rooms will be equipped with a beamer (projector for PCs). Speakers are not allowed to use their own computer during their talks and should transfer their presentation (Microsoft OfficeWindows7<sup>®</sup> compatible or PDF) to a computer provided for by the organiser. Internet access will be available to participants throughout the symposium.

Requests for special equipment should be coordinated in advance with the Local Organising Committee (Stig Kemi: stig.kemi@sscspace.com)



Picture of Wisby Strand Congress & Event

## Abstracts

Papers for presentation will be selected on the basis of abstracts of maximum 500 words on one A4 page, no figures or pictures. These should be submitted with a quality suitable for publication in the abstract book.

Abstracts must be uploaded to the Symposium website by 27 January 2017 by following instructions on the symposium website. Abstracts longer than one page will be rejected.

The abstracts and titles should clearly outline the paper's major elements of interest and originality. Papers will be selected on the basis of:

- General interest of the subject
- Quality of the content
- Originality of the ideas presented

The centred title block should include:

- the title of the paper in CAPITALS
- the authors' full names, affiliations and mailing addresses including e-mail and telephone
- the name of the presenting author should be underlined.

The preferred session (see above) for the paper should be indicated.

The updated abstracts book and the draft programme of the symposium will be regularly uploaded on the symposium website and will be distributed to participants upon arrival on a memory stick.

# Proceedings

The European Space Agency will publish the proceedings approximately three months after the Symposium as an ESA Special Publication (SP). Instructions on how to prepare the manuscripts in camera-ready form will be sent out to all authors with the notification of acceptance. All registered participants will receive a digital copy of the proceedings.

# Exhibition

An exhibition area will be available in the area next to the session rooms, and floor space can be booked through the registration website by registering as an exhibitor by March 27th 2017 at the latest.

Exhibition space will be offered at a fee of SEK 1500 per day for a floor space of 2x3 meters (about 1x6 sqm).

If you have any other questions regarding the exhibition, please contact Mr Mattias Abrahamsson (Mattias.abrahamsson@sscspace.com)

27 January 2017	Abstract deadline
15 March 2017	Notification of acceptance / instructions to Authors; Issue of preliminary programme
27 March 2017	Hotel reservation deadline and "early-bird" registration deadline.
11 June 2017	On-site registration (16:00 – 20:00)
11-15 June 2017	23rd ESA/PAC Symposium; final manuscripts to Editor
September 2017	Publication of Symposium Proceedings

# **Calendar of Events**

# Registration

Symposium participants are requested to complete the registration form available on the Symposium website by 27 March 2017, in order to obtain the early registration rates.

# **Registration fee**

<u>Until 27 March 2017</u> SEK 6000,- regular participants SEK 3000,- student participants, retired, unemployed (please enclose proof of status). SEK 3000,- accompanying persons

After 27 March 2017 SEK 7500,- regular participants SEK 3750,- student participants SEK 3750,- accompanying persons

The registration fee for regular, student regular and students participants and accompanying persons includes access to the meeting rooms, display area, coffee breaks, lunches, welcome aperitif, Ranges and the Gala dinner. Abstracts and proceedings are only included for regular and student participantsa.

Details on payment of the conference fee will be provided on the conference website.

We reserve the right to amend prices, taxes and fees that are beyond our control.

Payment Schedule: Full payment upon booking.

#### Cancellation

Registration fee will be refunded if cancellation is received before <u>27 March 2017</u>. 50% of the registration fee will be refunded if cancellation is received before <u>19 May 2017</u> No reimbursement after <u>19 May 2017</u> For changes or cancellation please send the request by e-mail to pac-symposium2017@sscspace.com

## **Registration Desk**

The registration desk in the conference centre will be open on Sunday 11 June 2017 between 16:00 and 20:00 hrs. During the conference it will be open every day from 8:00 hrs until the last lecture of the day.

## Hotels

Rooms have been blocked at two hotels in Visby from 11 to 15 June 2017 with favourable rates.

- Clarion Hotel Visby – 150 rooms https://www.nordicchoicehotels.com/clarion/clarion-hotel-wisby/

- Best Western Strand Hotel – 100 rooms http://www.strandhotel.se/

More information will be found on the Symposium Website.

All bookings should be made as early as possible, not later than 27 March 2017 in order to benefit of the negotiated rates.



Clarion Hotel Visby



Best Western Strand hotel

# Travel

The Gotland Island lies 90 km east from the Swedish mainland. It is easily reachable by plane from Stockholm Arlanda airport or Stockholm Bromma Airport.

Visby Airport is located about 3,5 km north of Visby and is the only commercial airport on the Island with almost every hour a flight from/ to Stockholm.

Visby can also be reached by Ferry boat from the main land (Nynäshamn or Oskarshamn) in approximately 3 hours.

http://www.destinationgotland.se/en/ferry/

Learn more at Visit Gotland: http://gotland.com/en/



# Social Events (Covered by Registration Fee)

A welcome aperitif will be offered (19:00 - 22:00) on Sunday 11 June at the Wisby Strand and Event center during registration. Registration will start as from 16:00.

There will be a "Ranges Night" on Monday 12 June after the end of the sessions where participants will have the possibility to share life experiences with the organisers (Esrange, Andoya Space Center, DLR MORABA and CNES). This event will take place in the Pavillion on the back side of the Clarion Wisby hotel.

A free of charges guided city tour will be offered on Tuesday 13 June after the sessions.

The Gala dinner will be served on Thursday 14 June at the Wisby Strand Convention & Event



# **Excursions (optional)**

Optional excursions will be organized on Wednesday 14 June, in the afternoon, against a supplementary payment of 200 SEK.

All these excursions will be followed by a two-course dinner included in the fee.

Participants will make their selection, subject to availability, during registration through ESA's website. All excursions will be on a first come – first served basis.

## 1st option: The tour will start at 17:00

Västerhejde and surroundings (visit of medieval church Tofta, Fisherman's village Gnisvärd, demonstration of "Gutish multisport", scenic view from Högklint, Dinner will be served at Leva)

#### 2nd option: The tour will start at 14:00

The tour goes to the east side of the island to the parish of Ardre. (Visit of medieval church, Lamb farm with more than 300 lambs, Cousin Dan's brewery, and demonstration of "Gutish multisport. Dinner will be served at Hamnkrogen Herrvik)

## 3rd option: The tour will start at 14:00

Southern Gotland/ Storsudret and surroundings, the lushest and greenest part of Gotland, with a varied landscape of both coniferous and deciduous trees, agricultural land and lovely beaches. (seaside walk in Fröjel, demonstration of "Gutish multisport" and the famous sea stack Hoburgsgubben. Dinner at Gra Gasen)

#### 4th option: The tour will start at 14:00

Excursion to Farö, the "magical island" (land of Ingemar Bergman, medieval church, Langhammars sea stacks, Fisherman's village "Helgumannen". Dinner at "Stora Gasemora").

Please check the Symposium website regularly, as further information about the Symposium will be published as soon as it becomes available:

## http://pac.spaceflight.esa.int/

Any questions about the Symposium program shall be addressed to the ESA/EASP office by email to:

## pac@esa.int

Any questions about the local organization shall be addressed to Mr Stig Kemi :

## stig.kemi@sscspace.com

Any questions about registrations shall be addressed to:

## pac-symposium2017@sscspace.com

