

Annual Meeting of the “Svenska Rymdforskarens Samarbetsgrupp” (SRS) Lund Observatory, Lund, 23-24 March 2011

The SRS Meeting 2011 was hosted by Lund Observatory, which is part of the Department of Astronomy and Theoretical Physics at Lund University. The main sessions were held in Lundmarksalen, Astronomihuset, Sölvegatan 27. The meeting had 77 registered participants. The first session started at 13:00 on the 23rd March and the meeting closed at 16:40 on the 24th March 2011. In addition to the oral presentations minuted below, a number of posters were presented in the entrance hall of Astronomihuset. Lunches were taken at the Ideon Restaurant. A meeting dinner on the evening of the 23rd March was held at Gamla Biskopshuset. A pre-dinner talk by Lennart Nordh (SNSB) recalled Swedish space activities and the role of SRS over the past 40 years.

Minutes of the Meeting

1. Opening of the meeting

- SRS Chairman Mark Pearce (KTH-Physics) opened the meeting
- Dainis Dravins and David Hobbs (LU-Astronomy) welcomed the participants on behalf of the local organizing committee and provided some practical information.
- Mark Pearce was appointed chairman of the meeting and Lennart Lindegren (LU-Astronomy) was appointed to take the minutes.

2. First topical session: Earth-Sun system (Chair: Lars Blomberg, KTH-Space & Plasma Physics)

- *Space Weather* (Peter Wintoft, IRF-Lund)
- *The Earth's magnetosphere* (Mats André, IRF-Uppsala)
- Discussion. Topics raised included man-made interference; how accurate the forecasts are and what can be done to improve their accuracy (more detailed observations); what kind of predictions are needed; how can the warning time be increased, and how much are we/companies/society prepared to pay for it?

3. Second topical session: Microgravity, life sciences, radiation (Chair: Kristine Dannenberg, SNSB)

- *ELIPS: ESA's research on ISS and related platforms* (Christer Fuglesang, ESA-ESTEC)
- Discussion. Questions concerned, among other things, ESA's plans (if any) for manned flights to the Moon and/or Mars (ESA cannot do anything by itself); whether the new suborbital aircraft (e.g., Virgin Galactic) can be used for microgravity experiments. KD asked what can be done to get more Swedish groups involved in the experiments (approach existing consortia who are generally open to more collaborators, approach topical teams and attend their conferences) - to a question from the audience KD answered that such initiatives could get support from SNSB.

4. Third topical session: Astronomy, astrophysics and cosmology (Chair: René Liseau, OSO)

- *Missions currently under discussion at ESA* (Sofia Feltzing, LU-Astronomi)
- *Gaia: Mapping the Milky Way* (Lennart Lindegren, LU-Astronomi)
- In the discussion related to future ESA missions, it was remarked that none of the M3 proposals with Swedish involvement (e.g., NEAT) had been selected for further study. Many scientifically good proposals had been rejected for technical/cost reasons. Concerning Gaia, the need for ground-based complementary (spectroscopic) or follow-up observations was discussed. ESO are now looking rather favourably on such proposals.

5. En svensk Rymdagenda (A Swedish Space Agenda) - Anna Rathsmann (SSC) gave a status report on the ongoing work to develop a Swedish Space Agenda, a work initiated and led by SAI (Swedish Aerospace Industries). The aim is to produce a “coffee table book”, targeted at politicians and decision-makers, with a number of contributions on various topics, basically addressing what space can do for society. During the discussion several speakers thought it was a good initiative, but some concern was also expressed about the low level of university involvement, that there is a need for a national space policy that will survive political changes, and that Swedish companies might be better at taking advantage of international opportunities.

6. SRS formalia (Chair: Mark Pearce, KTH-Physics)

- The Minutes of the previous SRS meeting (Stockholm, March 24-25, 2010), which had been on the SRS web pages for almost a year, were **approved**.

- Election of a new Beredningsgrupp (Working Committee). There has been an election committee consisting of Göran Marklund (KTH-Space & Plasma Physics; Chair), Göran Olofsson (SU-Astronomi) and Jacek Stegman (SU-MISU). Göran Marklund presented the proposed composition of the Working Committee, viz.:
 - Donal Murtagh (CTH), Chair
 - Kay Justtanont (OSO, CTH), Astronomy
 - ** Mark Pearce (KTH-Physics), Astroparticle physics, Astronomy
 - ** Jörg Gumbel (SU-MISU), Atmospheric Physics
 - Nickolay Ivchenko (KTH-Space & Plasma Physics), Space Plasma
 - Hans Nilsson (IRF-Kiruna), Space Physics
 - Lars Gustafsson (KI), Microgravity
 - Lars Eklund (LU-Earth and Ecosystem Sciences), Remote sensing
 - Wolf Dietrich Geppert (SU-Physics), Astrobiology

** indicates renewed tenure. In accordance with SRS statutes, these persons must be replaced within two years after the new committee is convened. All other positions have a three-year mandate.

The proposed composition of the Working Committee was **adopted**.

- Change of SRS statutes. The statutes (<http://www.snsb.se/sv/Mediebank/Forskare/SRS/Stadgar/>) can be changed by a decision at a regular SRS meeting. The chairman proposed the following two changes/amendments:
 1. It was proposed that in the first paragraph concerning the election of the Working Committee, “En valberedning bestående av 3 personer utses ...” is changed to “En valberedning bestående av 3 personer, ej alla av samma kön, utses ...”.
 2. It was further proposed that the second paragraph in the same section of the statutes is amended by: “samt eftersträva en jämn könsfördelning.”Both changes were **adopted** by the meeting.
- Date and place of the next meeting. Lars Blomberg (KTH-Space & Plasma Physics) offered to host the next SRS meeting at the Alfvén Laboratory, Stockholm, in March 2012. The precise dates were to be proposed by the new chairman as soon as possible.
- Kay Justtanont (OSO, CTH) announced that “Astronomidagarna 2011” will be held at CTH on 29 Sept to 1 Oct 2011.

7. **Fourth topical session: Atmospheric physics** (Chair: Jacek Stegman, SU-MISU)

- *10 years of Odin* (Donal Murtagh, CTH)
- *Scientific opportunities with the ESRANGE Lidar* (Peggy Achtert, SU-MISU)
- Discussion. Among the questions discussed were whether the solar cycle could be seen in the Odin trends; about the possibility to monitor also methane with Odin; and whether the ESRANGE Lidar could be operated continuously.

8. **Fifth topical session: Astrobiology** (Chair: Nils Holm, SU-Geology)

- *Astrobiology's history and philosophy* (David Dunér, LU-Pufendorf)
- *A historical perspective on astrobiology* (Gustav Holmberg, LU-Research Policy Institute)
- *Impacts and life* (Magnus Ivarsson, SMNH)
- Discussion. Among the topics were whether public interest in astrobiology would disappear if we don't find any extraterrestrial life, or whether many false alarms might be more damaging. Lennart Nordh (SNSB) remarked that the questions raised in the first two talks are very much in the minds of funding agencies.

9. **Sixth topical session: Solar system** (Chair: Mats André, IRF-Uppsala)

- *The Solar System - current missions* (Gabriella Stenberg, IRF-Kiruna)
- *The Solar System - the future* (Lars Blomberg, KTH-Space & Plasma Physics)
- Discussion. The technical problems associated with radiation damage were discussed, for example whether generic radiation-hard components are, or should be, being developed by ESA.

10. **Seventh topical session: Earth observations and remote sensing** (Chair: Leif Eriksson, CTH)

- *Vegetation monitoring using optical remote sensing* (Lars Eklundh, LU-Earth and Ecosystem Sciences)
- *Forestry remote sensing in Sweden: history and outlook* (Håkan Olsson, SLU-Umeå)
- Discussion. About the need for higher resolution to estimate total biomass, and the increasingly important role of remote sensing in monitoring forest clearance and reforestation.

11. **SNSB session** (Chair: Mark Pearce, KTH-Physics)

Several shorter presentations were made of the various ongoing and planned activities in SNSB:

- *Strategy of the SNSB* (Olle Norberg, SNSB)
- *Highlights from Optional ESA Programmes and National activities* (Kristine Dannenberg, SNSB)
- *Evaluation of Space Research* (Per Magnusson, SNSB)
- *Cosmic Vision timeline* (Johan Köhler, SNSB)
- *SNSB as a funding body for space research* (Lennart Nordh, SNSB)
- Discussion. Among the topics were lessons learned from the M3 call, and how we can prepare nationally for technology that is not mature now, but may be needed 10 years from now.

12. **Closing of the meeting**

The meeting chairman thanked the speakers and the local organizing committee. The new SRS Chairman, Donal Murtagh, thanked the resigning Chairman and Working Committee.

Vid protokollet: Lennart Lindegren

Mötesordförande: Mark Pearce

List of abbreviations

CTH	Chalmers University of Technology (Chalmers tekniska högskola)
ESA	European Space Agency
IRF	Swedish Institute of Space Physics (Institutet för rymdfysik)
KI	Karolinska Institutet
KTH	Royal Institute of Technology (Kungliga Tekniska högskolan)
LU	Lund University
MISU	Department of Meteorology (Meteorologiska institutionen), Stockholm University
OSO	Onsala Space Observatory
SLU	Swedish University of Agricultural Sciences (Sveriges lantbruksuniversitet)
SMNH	Swedish Museum of Natural History (Naturhistoriska riksmuseet)
SNSB	Swedish National Space Board (Rymdstyrelsen)
SRS	Svenska Rymdforskarens Samarbetsgrupp
SSC	Swedish Space Corporation (Rymdbolaget)
SU	Stockholm University