



**Protokoll från mötet av Svenska Nationalkommittén för astronomi (NK; National Committee for Astronomy, NCA) inom Kungl. vetenskapsakademien (KVA)**

**Tid:** 2021-06-22, 9.00 – 12.05, paus 10:35 – 10.50 (after point 5).

**Plats:** on-line (Zoom möte)

**Närvarande ledamöter:** Elvire De Beck (ordförande, EDB, CTH), Oleg Kochukhov (viceordförande, OK, UU), Jouni Kainulainen (sekreterare, JK, CTH), Thomas Bensby (TB, LU), John Conway (JC, CTH), Jon Gudmundsson (JG, SU), Henrik Hartman (HH, MU), David Hobbs (DH, LU), Cathy Horellou (CH, CTH), Camilla Jakobsson (CJ, VR), Jorrit Leenaarts (JL, SU), Karin Lind (KL, SU), Per Magnusson (PM, SNSA), Felix Ryde (FR, KTH), Gabriella Stenberg Wieser (GSW, IRF), Göran Östlin (GÖ, SU), Jan-Erik Wahlund (JEW, UU)

JL leaves at 11:20 (during point 6).

CJ and PM leave at 11:30 (end of point 6).

TB leaves at 11:45 (during point 8)

**Anmält förhinder:** Ulrike Heiter (UU), Barbro Åsman (SU).

**Frånvarande:** -

**Övriga närvarande:** Theo Khouri (TK, CTH), participates until Point 4.

[LU Lunds universitet, KTH Kungliga Tekniska högskolan, UU Uppsala universitet, CTH Chalmers tekniska högskola, SU Stockholms universitet, IRF Institutet för rymdfysik, VR Vetenskapsrådet, RFI råd för forskningens infrastrukturer, SAS Svenska Astronomiska Sällskapet, SNSA Swedish National Space Agency]

**1. Meeting is opened**

The meeting is opened by EDB.

**2. Approval of the meeting agenda**

GÖ mentions topics to be discussed in Point 9 of the agenda: discussion on actions regarding quiet and dark skies, and the role of NK in making nominations for the Crafoord prize 2024.

JC proposes an agenda item regarding communications in astronomy for the next NK meeting.

Agenda approved.

**3. Förra mötets protokoll**

Ulrike Heiter (the previous NK secretary) will finalize the notes of the previous meeting and upload them on the SAS webpages, <https://www.astronomiska.se/nationalkommitten/>.

**4. Astronomdagarna**

**Report from TK about the meeting preparation:** The preparations are progressing: the meeting website is online, the SOC and LOC have been assembled, the main organizational elements (venue etc.) have been fixed. The public engagement session is being considered, it is likely a panel discussion about public engagement. The Nordenmark lecture likely takes places on Thursday. The meeting website:

<https://www.chalmers.se/EN/CONFERENCE/ASTRONOMDAGARNA2022/Pages/default.aspx> .

Discussion on how to reach as many astronomers as possible (TK, JC). Conclusion: SOC members contact the members of their respective institutes. PM: Discussion about how to reach space community outside professional astronomers.

Discussion on the registration deadline and its effect on participation. GSW: It is important for long distance participants to get an early deadline, because of the high flight/plane ticket prices from, for example, Kiruna. A discussion followed on what is the impact of having/not having a talk for participation. GSW: Space physicist form a minority in an astronomy conference. A discussion followed on the topical extent of the Astronomdagarna. Conclusion: A short extension for talk deadlines done now (12<sup>th</sup> Aug), poster submission will be possible later than that. Registration possible until close to the meeting.

EDB: The question about KVA contribution to the budget. Also, can one transfer unused Astronomdagarna funds from past years to this year? EDB will enquire about it from Physics Klass secretary Peter Branden and academy secretary Thérèse Tietjens.

TK leaves the meeting.

EDB: Updated guidelines for Astronomdagarna prepared by Sofia Feltzing. There are some changes regarding the SOC composition. Discussion on inclusion of PhD students in SOC. The minutes from last NK meeting show a need for further updates. Conclusion: the updated guideline document will be circulated by EDB and it will be discussed in the next meeting.

## 5. Presentation of NC members

EDB: KVA and IAU have been updated about the new composition of the NK.

Introduction round of the NC members (abridged in the notes below).

HH (MU): Deputy head of Dept. of Material Science and Applied Mathematics (Physics/Atomic Astrophysics); Research fields kilonova afterglows, mostly experimental. ELT/4MOST, line calibrations at ELT, low density plasmas.

JL (SU): Professor, 4-5 years in NK. Director of the institute for Solar physics; Runs the 1-m Solar telescope, works towards European Solar Telescope, involved in Astronet future plan for astronomy (solar physics subgroup).

OK (UU): Professor; Research fields stellar astrophysics, variability and activity, magnetic fields. Facilities: High-res spectroscopy, polarimetry in optical in NIR. Building future instruments, developing methods for data reduction and processing. Member of the ELT project science team. Involved in space missions TESS, PLATO, candidate M7 missions.

JK (CTH): Assoc. Professor, Head of Astronomy & Plasma Physics division at Chalmers; new member at NK; Research fields Galactic interstellar medium, star formation, radio/infrared observations, astrophysical turbulence.

DH (LU): Assoc. Professor; Research fields Gaia data solution development, dynamical astronomy projects, clusters, galactic structure. Working on near-IR version of Gaia. Working on the detectors for the new mission, preparation of proposals for ESA.

TB (LU): Senior lecturer, director of PhD studies in astronomy and theoretical physics; Support astronomer at VLT in the past; Research fields abundances of stars in the Milky Way, Galactic thin and thick disk, and bulge, large spectroscopic surveys (e.g., ESO-gaia, 4MOST), new spectrometer WEAVE at WHT on La Palma, ELT/ANDES high resolution spectrograph science team.

GSW (IRF): Researcher; Research fields solar wind interaction with planetary bodies and atmospheres, especially comets. Science with the Rosetta mission. Planet Venus (Venus express). Involved in the JUICE mission, PEP operation manager. Appear in the Swedish TV as a part of expert panel in program Fråga Runt.

JC (CTH): Professor, director of the OSO national infrastructure that supports Swedish radio-mm astronomers. Involved in instrumentation, software, user support, and science in radio-mm science. Setting up data center for SKA at Chalmers/OSO. Research fields compact objects with VLBI, member of the EHT consortium, fast radio bursts, LOFAR and polarization.

CH (CTH): Bit. Professor; Research fields extragalactic astronomy, radioastronomy, AGNs, radiogalaxies, LOFAR magnetism key-science project, Swedish representative in the board of directors of A&A. Can report from that in the next meeting (e.g., Open access, etc.).

FR (KTH): Research fields high energy astrophysics, physics of extreme environments, relativistic jets from GRBs, shocks, FERMI gamma-ray space telescope, monitoring of GRBs. Balloon experiment astrogam (ESA M7), Zeus. Polarisation of X-rays and gamma/rays. Member: Advisory board for RFI (VR), SRS board member.

KL (SU): Assoc. Professor, In the department board at SU; new member at NK. Research fields stellar spectroscopy, theory and atmospheric models and synthetic spectra, Galactic archeology, transit spectroscopy, stellar surveys, 4MOST.

JG (SU) Research fields CMB, balloon borne experiment Spider(?), polarisation of the CMB, cosmic inflation, Planck satellite calibration. Future surveys, successor of Planck. A ground-based experiment in the Atacama deserts. Starts a Lab in SU to study effect of cryogenics to observed signals, holography, mm wave optics.

GÖ (SU); Professor, previous prefekt of the Astronomy department. Research fields galaxies, star formation in galaxies; blue, metal-poor galaxies. Cosmic evolution of galaxies, ionized ISM. UV-optical-NIR stellar population studies. Member of the Consortium for MIRI. Swedish PI for two infrastructure grants in ELT, SELTIC, MOSAIC. In the VR NT council, member of Royal Academy. Chairperson for the VR Klass of astronomy and space sciences.

JEW (UU): Research fields EISCAT, sounding rocket flights from Esrange, Freja satellite, manager of one of the instruments on CASSINI, Titan, Enceladus. Dust-plasma interaction. PI for the instrument RPWI on JUICE. Vice-chair of KVA class of astronomy and space sciences. Involved in ESA studies for future projects.

EDB (CTH): Asst. prof.; Research fields outflows from evolved stars, observations in FIR/mm APEX, ALMA, Herschel. ESO User committee representative of Sweden. Coordinator of Space Research Initiative at Chalmers that includes various stakeholders in the Swedish space scene. Represents Chalmers in Rymdforum.

CJ (VR): Research officer; represents Sweden as an administrative representative in the ESO council.

PM (SNSA): Background in astronomy. Research council of SNSA. Member of the ESA science program committee. KVA -- Swedish representative in the council of COSPAR.

## **Break 15 min until 10:50**

### **6. Status reports**

#### **VR (CJ):**

CJ introduces VR's role and activities in funding science and infrastructures.

News from VR (cf, the presentation slides by CJ): Moved to a new address. New GD: Katarina Bjelke. RFI decides today about new SNIC. New call for centers of excellence with aim to fund about 10. Hard funding situation due to the global situation and circumstances. Possibility to comment on VR's forskningsöversikter. New leaders for the RFI advisory groups.

Radioastronomy: New director searched for JIVE. SKA membership handled in July possibly.

ESO: Observatories are up and running but pressed hard on funds in the current situation. Various problems and ways forward described related to instrument projects.

Possibility for in-kind contributions to the ELT project. Mainly looking for (senior) engineers. Beyond radio astronomy, Sweden has been answering to similar calls very little. Short discussion on the situation and connections to scientific topics in Sweden.

GÖ points out there's increase of activities from the VLT development side. Difficulty with staffing, as the expert people are needed locally (as opposed to sending them to ESO). Could be interesting to discuss more. CJ: Can contact her for details.

JEW: Q: Regarding tracking of space debris (now done with EISCAT). Large number of satellites is a problem for astronomical observatories on the ground. Also, space debris is a problem. Sweden can contribute to tracking space debris. Can funding for such activity be introduced? CJ: No further knowledge on the funding possibilities. VR can always be contacted with the specific question.

#### **Rymdstyrelsen (PM):**

PM: SNSA moves to new premises. New space law to be force in 2023; PM describes the framework. Most relevant for astronomers: one needs a license for space projects, e.g., CubeSats. Problems as Russian launcher has been abandoned.

Career grants (2021-C): 21 applications, 5 approved. One in Astro/space research. Success rate around 20-25%, in par with the project grants (2021-R).

2021-N: Grants for FERMI involvement and JUICE instrument development.

Regarding ESA: Ministry meeting in November, decides the scale of funding. Russian launcher abandoned. Substantial problems. Collaboration with China difficult due to the pandemic. Political situation makes it difficult to establish new collaborations with China. Many activities on hold. Comet Interceptor mission adopted. Large cost increases expected in large missions ATHENA and LISA; cannot continue with both as planned. Political

discussions on-going. ATHENA downscaled. Strategy regarding M, F, and other missions being discussed.

JEW: Q: Does this affect M7 / F2 missions? PM: There are no guarantees for anything from the ESA side. Perhaps problems are not connected, because the cost for the planned missions comes much later. No clear immediate threat.

## 7. IAU General Assembly 2022

EDB: No planned business meeting in the IAU this year (Busan) – no representation needed.

OK: Describes the background and elaborates: NK is a link between Sweden and IAU. NK nominates a representative to the business meetings of IAU GAs.

Discussion on the situation. It seems that KVA is not properly informed about the current situation and about the fact that the online version of business meetings has taken place in Aug 2021 and was attended by Ulrike by the appointment of NK. Proposition to add this as an information item to be included in the minutes of the forthcoming meeting.

One reason for KVA's confusion can be the fact that the official repository of NK meeting minutes (<https://www.astronomiska.se/nationalkommitten/>) is lacking minutes from our Oct 25, 2021 meeting which included Ulrike's report on the IAU business meeting.

OK: For 2024, NK should appoint a representative. Business meetings last 2 weeks, KVA pays the expenses.

## 8. Possibility for PhD representation on the National Committee

EDB: Introduces past discussions on PhD representation in NK, including Garrelt Mellema (previously a member of NK). Do we consider representation relevant and useful?

JK: There is no body from which to make a candidate selection from. NK topics do not generally appear relevant/interesting to PhD students. A significant process if a body of PhD students need to be established for this.

Discussion on perspectives to PhD student representation. Conclusion: While NK is generally open to inclusion, there does not seem to be a strong rationale to it. Revisited if topics of the future seem beneficial/relevant for students.

## 9. Relevant topics for the NC's future discussions (all)

EDB: Calls for discussion on what topics are relevant for NK to discuss in the near future. Reminds NK of its mandate:

- to promote research and education in their field, especially by representing Sweden in the International Astronomical Union (IAU),
- to bring about planned collaboration with related disciplines, and
- if necessary to be available as advisory bodies to universities and others parts of the education system, and
- to act as an expert body for the Royal Academy of Sciences (KVA), which is the chairman of the committee.

GÖ: Raises several topics for discussion:

- Quiet and dark skies.** KVA committee has been established to discuss this, and it has identified the question important. Increasing the relevance for NK to engage. Three levels identified: decision makers at national level, astronomical community, and public. KVA

communicates with the national/international decision makers. NK could coordinate the engagement of the astronomical community. NK could reach out broader to public – this is to be taken up in the next meeting, led by JEW and GÖ. This will likely be a longer-term topic.

- **Crafoord prize 2024.** In general, international community at large can nominate. Usually, invitation to nominate sent to a list of astronomy professors. It would be good to revise the list and make it electronic. Suggestion to ask NK to propose names to be included in the list of nominations, GÖ will circulate - no coordination needed from NC.

**JC: Communication within Swedish astronomy community.** JC raises a question about continuation of the committee that discusses the topic. Discussion and clarification of the current communication channel situation. JC will circulate a document that summarises it. A PhD student (Katrin Ross) is keeping the list. Resources needed on some 5% FTE level for upkeep. Topic to be brought up again in the next Fall's meeting.

EDB: Confirmation for new IAU members (2) and junior members (5).

## 10. Next meeting

EDB: Suggests next meeting in connection to Astronomdagarna 6<sup>th</sup> October. Travel to NK meetings is paid by KVA.

## 11. End of meeting

EDB ends the meeting at 12:05.

Vid protokollet:

Justerat:

Jouni Kainulainen (sekreterare)

Oleg Kochukhov (viceordförande)