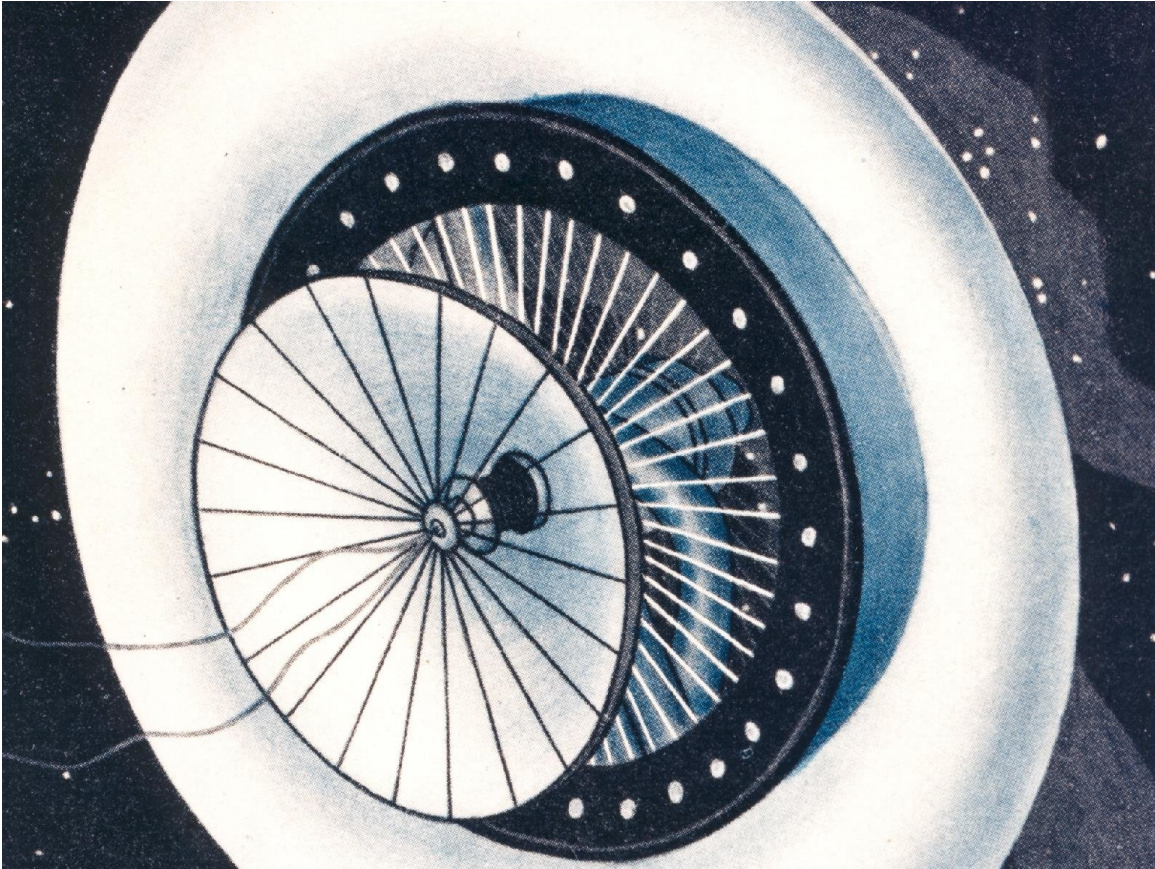


**Slovenia and space: yesterday, today and tomorrow**  
**Slovenija in vesolje: včeraj, danes, jutri**  
**Ljubljana, 20-21/10/2009**



Hermann Potočnik (1892-1929), better known as Herman Noordung, created the first detailed technical drawings of a space station. This 1929 image is a depiction of the space station's habitat wheel.

Herman Potočnik Noordung (1892-1929) je prvi narisal podrobne tehnične skice vesoljske postaje. Na zgornji risbi iz leta 1929 je bivalno kolo vesoljske postaje.

**basic information – osnovne informacije**

**town map – karta mesta**

**programme – program**

**participants - udeleženci**

# **Slovenia and space: yesterday, today and tomorrow**

**A workshop to be held at the University of Ljubljana, Faculty of Mathematics and Physics,  
Jadranska 19, Ljubljana**

## **Purpose**

The workshop is organized by the Faculty of Mathematics and Physics of the University of Ljubljana in collaboration with the Ministry for Higher Education, Science and Technology. The purpose is to bring together the local space-related scientific and technological community in view of the activities of Slovenia to become an European Cooperating State of the European Space Agency.

## **Time**

The workshop starts on Tuesday, October 20 2009 at 9.00 am and ends on Wednesday, October 21 at approx. 4 pm – see programme for details.

## **Venue**

The workshop will be held at the University of Ljubljana, Faculty of Mathematics and Physics, Jadranska 19, 1000 Ljubljana. The Faculty is reachable by public transport, a nice walk from the city centre takes about 20 minutes. See the attached detailed map.

Ljubljana's airport is located some 25 km from the city centre. Adria airways is the local airline which operates direct flights from most European capitals. The airport is served also by major European airlines.

## **Accommodation**

Ljubljana has many hotels suiting every need. As a guide we would recommend three choices, all located in the city centre's pedestrian zone. In all cases please drop us ([tomaz.zwitter@fmf.uni-lj.si](mailto:tomaz.zwitter@fmf.uni-lj.si)) a mail with your arrival/departure dates and we will book you a hotel using the agreed University discount. You pay the hotel directly unless agreed otherwise.

The prime choice is Grand hotel Union ([www.gh-union.si](http://www.gh-union.si)). A single room would cost you 127.10 Euro/night in Executive, and 116.70 Euro/night in Business class.

An alternative is hotel Slon ([www.hotelslon.com](http://www.hotelslon.com)), a single room would cost 108.21 Eur/night.

A clean budget accommodation is hotel Emonec ([www.hotel-emonec.com](http://www.hotel-emonec.com)), a single room is approx. 59 Eur/night.

As said, please drop us an e-mail and we will arrange the booking.

## **Registration/meals**

There is no registration fee. We will have morning and afternoon coffee brakes. There are several choices for a quick lunch nearby. On the evening of Tuesday, October 20 we will have a social dinner in a downtown restaurant. **Please register** for the event by sending an email to the contacts below.

## **Contacts**

The contacts before/after the conference are Tomaz Zwitter ([tomaz.zwitter@fmf.uni-lj.si](mailto:tomaz.zwitter@fmf.uni-lj.si), handy +38651345268) and Andreja Gomboc ([andreja.gomboc@fmf.uni-lj.si](mailto:andreja.gomboc@fmf.uni-lj.si)).

## **Proceedings**

We plan to publish proceedings with approx. 4 printed pages per contribution. Please send us (preferably) a word file by the end of October. The proceedings will be sent to all participants free of charge.

# **Slovenija in vesolje: včeraj, danes, jutri**

## **Delovno srečanje na Fakulteti za matematiko in fiziko Univerze v Ljubljani**

### **Jadranska 19, Ljubljana**

#### **Namen**

Delovno srečanje organizira Fakulteta za matematiko in fiziko Univerze v Ljubljani v sodelovanju z Ministrstvom za visoko šolstvo, znanost in tehnologijo. Ob skorajšnji slovenski pridružitvi Evropski vesoljski agenciji je namen delavnega srečanja krepitev vezi v lokalni znanstveni in tehnološki srenji raziskovalcev, povezanih z vesoljem.

#### **Čas**

Delovno srečanje se bo začelo v torek, 20. oktobra 2009 ob 9. uri in končalo v sredo, 21. oktobra, približno ob 16. uri. Podrobnosti so navedene v programu srečanja.

#### **Kraj**

Delovno srečanje bo potekalo na Fakulteti za matematiko in fiziko Univerze v Ljubljani na Jadranski 19 v Ljubljani. Do Fakultete vozi mestni avtobus številka 1, prijeten sprehod iz mestnega centra traja približno 20 minut. Prilagamo podrobno karto.

Ljubljansko letališče je oddaljeno približno 25 km od mestnega središča. Lokalni letalski prevoznik Adria Airways ima direktne lete v večino evropskih prestolnic. Na letališče letijo tudi večje evropske letalske družbe.

#### **Nastanitev**

Ljubljana ima veliko hotelov za vsak okus. Kot vodilo priporočamo tri možnosti, vse v pešaški coni v središču mesta. Prosimo, da nam po e-pošti ([tomaz.zwitter@fmf.uni-lj.si](mailto:tomaz.zwitter@fmf.uni-lj.si)) sporočite čas vašega prihoda in odhoda in ime hotela, da vam rezerviramo nastanitev z običajnim univerzitetnim popustom. Če ni domenjeno drugače, račun poravnate direktno v hotelu.

Prva izbira je Grand hotel Union ([www.gh-union.si](http://www.gh-union.si)). Enoposteljna soba vas bo stala 127,10 evrov/noč v delu eksekutive, in 116,70 evrov/noč v poslovnem delu. Alternativa je hotel Slon ([www.hotelslon.com](http://www.hotelslon.com)). Enoposteljna soba vas bo stala 108,21 evrov/noč. Snažna ekonomska izbira je hotel Emonec ([www.hotel-emonec.com](http://www.hotel-emonec.com)). Enoposteljna soba vas bo stala pribl. 59 evrov/noč. Kot rečeno, oglasite se po e-pošti in vam bomo uredili rezervacijo.

#### **Registracija/prehrana**

Konferenca je odprta za publiko. Registracija je brezplačna. Dopoldne in popoldne bomo imeli odmore za kavo. V bližini je več izbir za čas kosila. Zvečer v torek, 20. oktobra bomo organizirali skupno večerjo v restavraciji v centru mesta. Prosimo **prijavite se** po e-pošti na spodaj navedeni naslov.

#### **Kontakta**

Kontakta pred in po konferenci sta Tomaž Zwitter ([tomaz.zwitter@fmf.uni-lj.si](mailto:tomaz.zwitter@fmf.uni-lj.si), mobilni telefon +38651345268) in Andreja Gomboc ([andreja.gomboc@fmf.uni-lj.si](mailto:andreja.gomboc@fmf.uni-lj.si)).

#### **Zbornik**

Planiramo izdajo zbornika s približno 4-stranskim člankom za vsak prispevek. Do konca oktobra (torej 10 dni po konferenci) nam prosim pošljite datoteko v (preferenčno) wordovem formatu. Udeleženci bodo prejeli brezplačni izvod do konca leta.



**gostilna Šestica**

**hotel Slon**

**hotel Union**

**hotel Emonec**

**Workshop Venue**  
**Kraj konference**

Ljubljana, Slovenia

© 2009 Google

Eye alt: 2.98 km

Image © 2009 DigitalGlobe

© 2009 Tele Atlas

46°02'52.63" N 14°30'18.49" E elev: 286 m

Imagery Date: Apr 13, 2003

Draft Programme of the Workshop/Program delovnega srečanja

**Slovenia and space: yesterday, today and tomorrow**  
**Slovenija in vesolje: včeraj, danes in jutri**  
to be held at the University of Ljubljana, Faculty of Mathematics and Physics  
Jadranska 19, Ljubljana  
na Fakulteti za matematiko in fiziko Univerze v Ljubljani

**The thread moves from outer space, towards the Earth, technology, past achievements, society outreach, and overview of the local facilities.**  
**Rdeča nit gre iz daljnega vesolja proti Zemlji, tehnologiji, preteklim dosežkom, informiranju javnosti in konča s pregledom domačih zmogljivosti**

*Ker vsi prisotni znajo slovensko, ni potrebe po predpisovanju angleščine.*

**Day 1, Tuesday 20<sup>th</sup> October 2009 / torek, 20. oktobra**

|             |                 |   |
|-------------|-----------------|---|
| 09.00-09.10 | Andrej Likar    | Welcome by the Dean of the Faculty of Mathematics and Physics   |
| 09.10-09.30 | Aleš Mihelič    | Introduction by the Director of the Directorate for Technology of the Ministry for Higher Education, Science and Technology |
| 09.30-10.00 | Marcos Bavdaž   | Cosmic Visions 2015-2025 and its technology preparation   |
| 10.00-10.20 | Radovan Pajntar | Summary of the hearings conducted by ESA in May 2009  |

coffee break

**Astrophysics and Physics of the Atmosphere / Astrofizika in fizika atmosfere**

|             |                              |  |
|-------------|------------------------------|--|
| 10.50-11.10 | Andreja Gomboc               | Swift, Fermi and the Gamma Ray bursts  |
| 11.10-11.30 | Tomaž Zwitter                | Gaia, ELSA and the RAVE survey   |
| 11.30-11.50 | Andrej Prša                  | Towards Accurate Eclipsing Binary Models in the Kepler High-Precision Photometry Era |
| 11.50-12.10 | Andrej Čadež and Uroš Kostić | Quantum astronomy and time   |
| 12.10-12.30 | Vida Žigman                  | Modelling the impact of Solar X-ray flares on the Earth lower ionosphere             |
| 12.30-13.00 | Nedjeljka Žagar              | On a bit of universe trapped to the Earth: our living atmosphere                     |

lunch

**Space technologies and its implications / Vesoljske tehnologije in aplikacije**

|             |               |   |
|-------------|---------------|---|
| 14.00-14.20 | Marcos Bavdaž | X-ray optics and high energy astrophysics |
|-------------|---------------|---|

|              |   |  |
|--------------|---|--|
| 14.20-14.40  | Anton Mavretič  | Possible Small Satellite Development in Slovenia   |
| 14.40-15.00  | Matevž Dular  | Fluid Dynamics and Space   |
| 15.00-15.20  | Sašo Blažič,<br>Gregor Klančar,<br>Gašper Mušič,<br>Drago Matko | SIFT features based attitude control of a satellite  |
| 15.20-15.35  | Matjaž Vidmar   | Overview of Previous Space Projects in the Radiation and Optics Laboratory                     |
| 15.35-15.50  | Luka Naglič   | Radar for ESMO mission   |
| 15.50-16.10  | Iztok Kramberger  | A Survey of On-board Data Handling for the ESMO mission  |
| 16.10-16.30  | Tomaž Šuštar,<br>A. Grm,<br>Tomaž Rodič                         | M5 computations in space sciences and technologies   |
| coffee break |   |  |
| 16.50-17.10  | Igor B. Mekjavič  | Development of Space Medicine in Slovenia  |
| 17.10-17.30  | Boštjan Šimunič<br>and Rado Pišot                               | Effects of Simulated Weightlessness on Human Organism:<br>Valdoltra Bed Rest Studies 2006-2008 |
| 17.30-17.50  | Krištof Oštir   | Satellite Remote Sensing in Slovenia   |
| 17.50-18.10  | Grega Milčinski   | Interaction with Satellite Data in Business Applications and Public Use                        |

19.00 - social dinner in restaurant Šestica/ skupna večerja v restavraciji Šestica

## **Day 2, Wednesday 21<sup>st</sup> October 2009 / sreda, 21. oktobra**

### **Past achievements / Pretekli dosežki**

|             |                |  |
|-------------|----------------|--|
| 09.00-09.30 | Dušan Petrač   | Infrared Astronomical Satellite – IRAS<br>New Window into the Universe   |
| 09.30-10.00 | Anton Mavretič | Voyager I and II, IMP H and J, Wind, and DSX Missions<br>Mission to the outer planets and near Earth environment |
| 10.00-10.20 | Sandi Sitar    | Slovenci segajo po zvezdah   |

coffee break

## **Space Sciences outreach / Znanost in javnost**

|             |                                   |   |
|-------------|-----------------------------------|---|
| 10.40-11.00 | Uroš Kostić and<br>Andreja Gomboc | International Year of Astronomy in Slovenia   |
| 11.00-11.20 | Zorko Vičar                       | The School and the Astronomy in Slovenia  |
| 11.20-11.40 | Boris Kham                        | Starry sky through exhibitions and on radio waves   |
| 11.40-12.00 | Helena Drnovšek-<br>Zorko         | Third culture and the role of the Ministry of Foreign Affairs   |
| 12.00-13.00 |                                   | Round table discussion: Space sciences and media. Led by leading Slovenian journalists reporting frequently on the topic. |

lunch

## **Amateur astronomy and astronomical education in Slovenia / Ljubiteljska astronomija in astronomsko izobraževanje v Sloveniji**

|             |                                    |  |
|-------------|------------------------------------|--|
| 14.00-14.20 | Andrej Mohar and<br>Erika Pogačnik | Protecting against light pollution in Slovenia   |
| 14.20-14.40 | Anton Špenko                       | Slovenian amateur astronomy  |
| 14.40-15.00 | Herman Mikuž                       | Črni Vrh Observatory   |
| 15.00-15.20 | Bojan Kambič<br>and Andrej Guštin  | Spika astronomical journal   |
| 15.20-15.40 | Tomaž Zwitter<br>and Andrej Čadež  | Studying astronomy in Slovenia   |
| 15.40-16.00 | Aleš Mihelič                       | Summary of the Workshop  |
| 16.00-      |                                    | Closing of the Workshop by the Slovenian Minister for Higher Education, Science and Technology, Mr. Gregor Golobič |

Contacts: [tomaz.zwitter@fmf.uni-lj.si](mailto:tomaz.zwitter@fmf.uni-lj.si), [andreja.gomboc@fmf.uni-lj.si](mailto:andreja.gomboc@fmf.uni-lj.si)

## **Participants – udeleženci**

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