

The 2nd Circular of

The Third Summer School in Spectrum Management for Radio Astronomy

National Astronomical Observatory of Japan, Mitaka, Tokyo, Japan
31 May - 4 June, 2010

Sponsored by IUCAF, CRAF and RAFCAP
Supported by NAOJ

The purpose of the 3rd IUCAF Summer School is to offer a comprehensive view of both technical and regulatory issues related to radio astronomers' use of the spectrum. Spectrum management is a task of rapidly growing importance, for radio astronomy as well as for other radio services; however, it is normally not part of the academic curriculum. At least for radio astronomy you have to learn it by doing it. The IUCAF Summer School will be an opportunity to profit from the experience of colleagues, who have been doing it for some years.

The participants to the school are members of the radio astronomy and related radio engineering community, who are becoming active in this area at the local, national or international level, and regulators whose task is to protect passive services and science services.

Scientific Organizing Committee:

M. Ohishi (Japan), A. Tzioumis (Australia) , H.Y. Zhang (China), S.H. Chung (Korea), T. Gergely (USA), H. S. Liszt (USA), A. Clegg (USA) , W. van Driel (France), K. Ruf (Germany), and W. Baan (The Netherlands)

Local Organizing Committee:

M. Ohishi, K. Tatsuzawa , N. Kawaguchi & O. Kameya (NAOJ)

Registered Participants:

We are glad to announce that the number of registered participants is about 35: 10 people in Japan and 25 people from abroad. We will also expect a few more people show up, including lecturers from the MIC (the administration of Japan, Ministry of Internal affairs and Communications) and the observatory.

Hotel Mets Musashi-Sakai:

Most of the Summer School participants stay in Hotel Mets Musashi-Sakai

<http://www.jrhotelgroup.com/eng/code/codeeng124.htm> .

Address: 2-1-8, Kyonan-cho, Musashino, Tokyo 180-0023, Japan

Phone: +81-422-32-5111

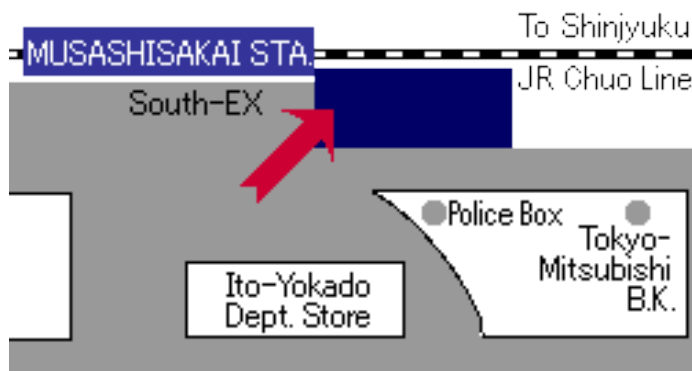
Fax: +81-422-32-5100

The access to the JR Musashi-Sakai station can be found at

<http://www.nao.ac.jp/E/MTK/travel.html#NaritaMTK> ,

and the hotel is just next to the JR Musashi-Sakai station, south exit.

The hotel offers: high-speed internet connection free of charge, complimentary breakfast, a HDTV, a refrigerator, laundry service, and others.

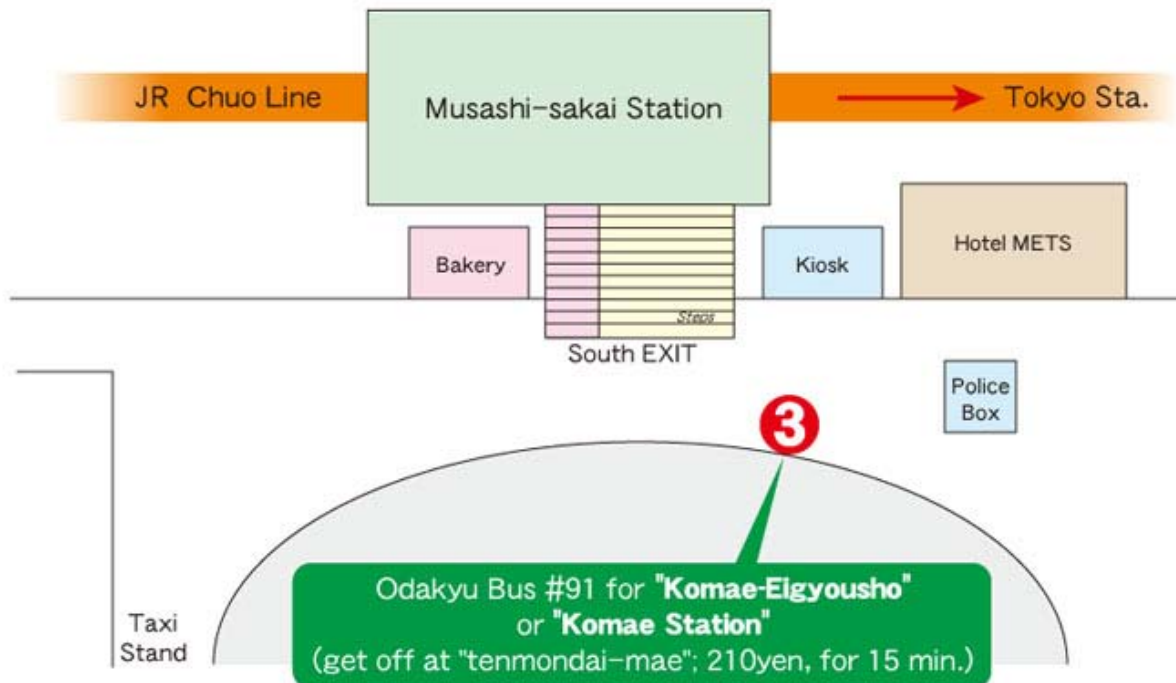


The room charge is JPY 8,100/night – special discount rate for the observatory guests, and those who stay at this hotel are kindly asked to pay by themselves. The hotel accepts the following cards: Visa, Amex, Diners, UC and others. There is a bank (Tokyo-Mitsubishi bank) in ONE minute from the hotel.

Access to the NAOJ, Mitaka:

The access to the Mitaka campus of the NAOJ can be found at:

<http://www.nao.ac.jp/E/MTK/travel.html>

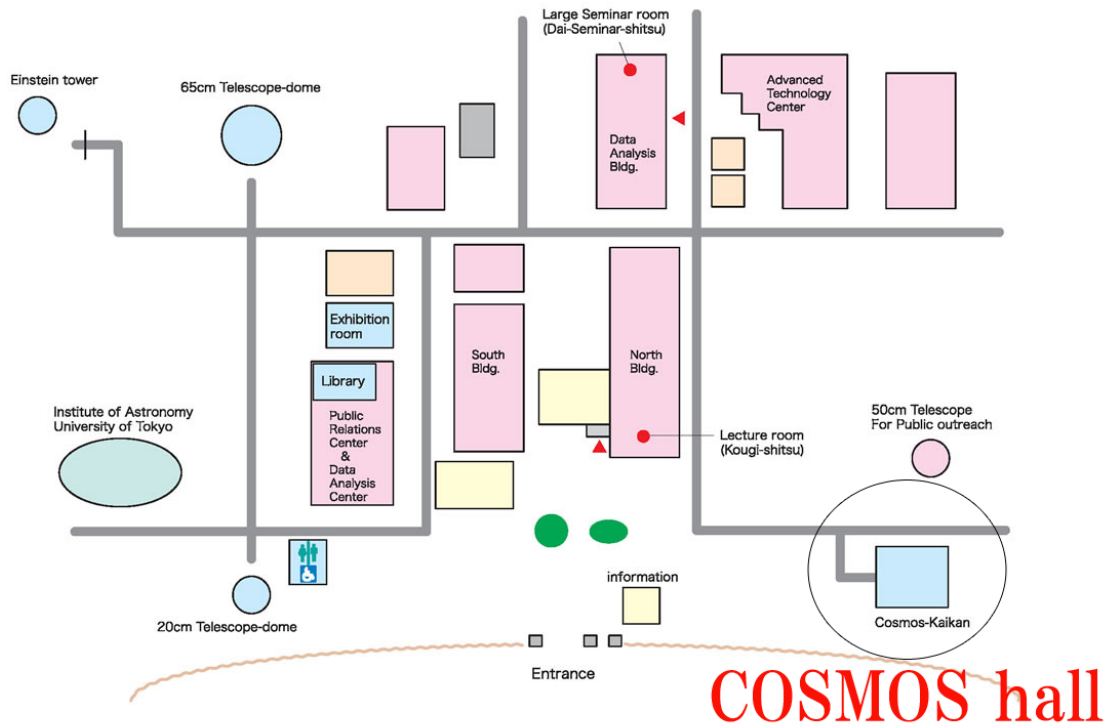


Those who stay in Hotel Mets Musashi-Sakai may take the public bus transportation between the JR Musashi-Sakai station and the NAOJ. Odakyu buses (#91) leave from the No.3 bus stop on the south side of Musashi-sakai station. Please get off at "Tenmondai-mae". (15min / 210 yen).

Please note that there are two bus stops near the observatory. You should get off the bus at "TENMONDAI MAE", which is just in front of the main entrance to the observatory. Even in a case you get off at "TENMONDAI URA", do not panic. You can enter the campus through a back gate of the observatory near the bus stop "Tenmondai- Ura". Walk a few minutes along the main road, you will get to the venue.

Venue:

Meeting room in COSMOS kaikan (COSMOS hall), NAOJ. The campus map of NAOJ, Mitaka, is shown below.



Essential Info:

You will find various useful information, such as climate, time difference, electricity, phone system, and others, at <http://www.jnto.go.jp/eng/arrange/essential/index.html>.

At the beginning of June, it is usually warm (temperature ~ 20 deg C), but it may rain.

Useful Links:

Japan National Tourism Organization -- <http://www.jnto.go.jp/eng/>

JR East (railway company) -- <http://www.jreast.co.jp/e/index.html>

Japan Rail Pass -- <http://www.japanrailpass.net/>

Tokyo Metro -- <http://www.tokyometro.jp/global/en/index.html>

Akihabara -- <http://www.e-akihabara.jp/en/index.htm>

- Final Programme -

Monday, 31 May 2010

08:30 – 09:00 Registration

09:00 Introduction

Welcome: NAOJ	Kobayashi (NAOJ)	10
IUCAF	Ohishi (NAOJ)	10
RAFCAP	Tzioumis (CSIRO)	10
Spectrum management:		
A view from the administration of Japan.....	Higashi (MIC)	30

10:00-10:30 Break

10:30 Summer School and Radio Astronomy

The Primary Purpose of the Summer School	Ohishi (NAOJ)	30
Radio astronomy and radio telescopes	Tzioumis (CSIRO)	60

12:30-14:00 Lunch

14:00 Earth Sensing & Space RA Observations

EESS– passive and active.....	Reising (Colorado SU)	60
Space RA observations.....	Hagiwara (NAOJ)	30

15:30-16:00 Break

16:00 Spectrum: Allocation, Bands and Uses

ITU-R: its structure, frequency allocations and use in general.....		
.....	Chung (KASI)	60
The RAS protected bands and use by RA.....	Tzioumis (CSIRO)	30

Tuesday, 1 June 2010

09:30 Recommendations, Reports and Notification

ITU-R RA Recommendations and Reports	Ohishi (NAOJ)	40
ITU Notification mechanism in practice	Gergely (NSF)	20

10:30-11:00 Break

11:00 Radio Science & Technology— I

Radio science basics including antennas	Ponsonby (Manchester)	60
Units, dB & stuff: understanding each others' lingo	Clegg (NSF)	30

12:30-14:00 Lunch

14:00 Radio Science & Technology— II

Propagation: fundamentals and models	Wilson (CSIRO)	30
Receivers	Noguchi (NAOJ)	30
Backends	Okumura (NAOJ)	30

15:30-16:00 Break

16:00 Interference to Radio Astronomy

Interference to RA and RFI mitigation techniques	Baan (ASTRON)	90
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Wednesday, 2 June 2010

09:00 International, National and Regional Regulatory Structure— I

Preparatory process toward World Radio Conferences.....	Gergely (NSF)	40
Asia-Pacific Region, APT, RAFCAP	Chung (KASI)	30
USA, FCC, NTIA, CORF	Clegg (NSF)	30

10:40-11:00 Break

11:00 International, National and Regional Regulatory Structure— II

Europe, CEPT	Le Devendec (ECO)	30
CRAF.....	Thomasson (Jodrell)	30

12:00-13:00 Lunch

13:10 Excursion

Transportation by bus to the Nobeyama Radio Observatory,
with a technical presentation.

Return by bus to Tokyo

Thursday, 3 June 2010

09:00 International, National and Regional Regulatory Structure— III	
Radio Astronomy Frequency Committee in Japan.....	Chikada (NAOJ) 45
IUCAF's role	Ohishi (NAOJ) 45

10:30-11:00 Break

10:30 Coordination with Other Services	
Coordination in the APT	Chung (KASI) 45
Coordination with Satellites (CLOUDSAT, LEOs, etc.)	Ruf (DLR) 45

12:30-14:00 Lunch

14:00 RFI from New Technologies and Unlicensed Devices – I	
PLT	Ohishi (NAOJ) 30
Digital TV	Clegg (NSF) 30
RFID	Thomasson (Jodrell) 30

15:30-16:00 Break

16:00 RFI from New Technologies and Unlicensed Devices – II	
Ultrawideband.....	Baan (ASTRON) 30
Software-defined Radio & Cognitive Radio	Clegg (NSF) 30
Solar Power Satellites	Ohishi (NAOJ) 30

Friday, 4 June 2010

09:00 New Frontiers in Spectrum Management	
The submm/Terahertz regime	Ohishi (NAOJ) 30
Radio Quiet Zones and SKA	Millenaar (SKA) & Wilson (CSIRO) 60

10:30-11:00 Break

11:00 Concluding Remarks	
The future of regulation of radio astronomy	Gergely (NSF) 30
Open discussion: How to ensure the protection of the RA.....	All 60

12:30-13:30 Lunch

(informal meeting on Rep. F.2107 ?)

Saturday, 5 June 2010

09:30 – 12:30 7th RAFCAP meeting

Report from Australia	Tzioumis (CSIRO)	20
Report from Japan.....	Ohishi (NAOJ)	20
Report from Korea	Chung (KASI)	20
Report from China	??	20
Report on Experience at CORF.....	Reising (Colorado SU)	20
Other reports (Observatories; CRAF; IUCAF;....)	??	20

short break

Open discussion		45
* WRC12		
* Regional interactions (APT)		
* Future of RAFCAP		
* AOB		