

The background of the slide is a photograph of a night sky. A vibrant green aurora borealis is visible on the left side, with a bright, vertical streak of light. The rest of the sky is dark blue with many small, white stars. In the foreground, the dark silhouettes of a forest of evergreen trees are visible against the horizon.

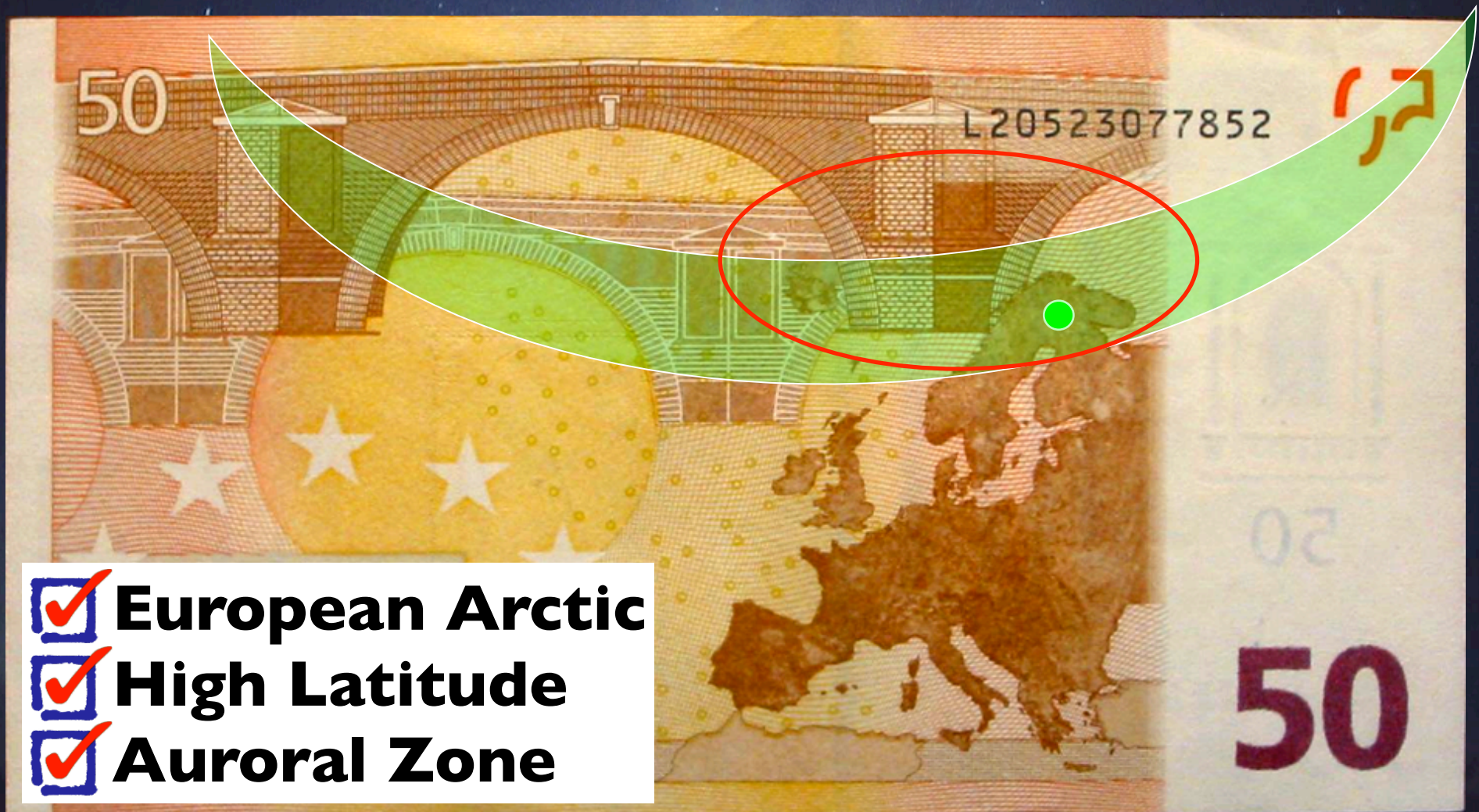
International EISCAT Radar School

Sodankylä Geophysical Observatory
Sodankylä, Finland
27th August - 1st September 2012

A photograph of the Aurora Borealis (Northern Lights) over a dark forest at night. The sky is dark blue with many stars. A bright green aurora is visible on the left side, and a fainter, more diffuse green aurora is visible in the center. The forest is silhouetted against the dark sky. The word "WELCOME!" is written in large, white, bold, sans-serif capital letters across the middle of the image.

WELCOME!

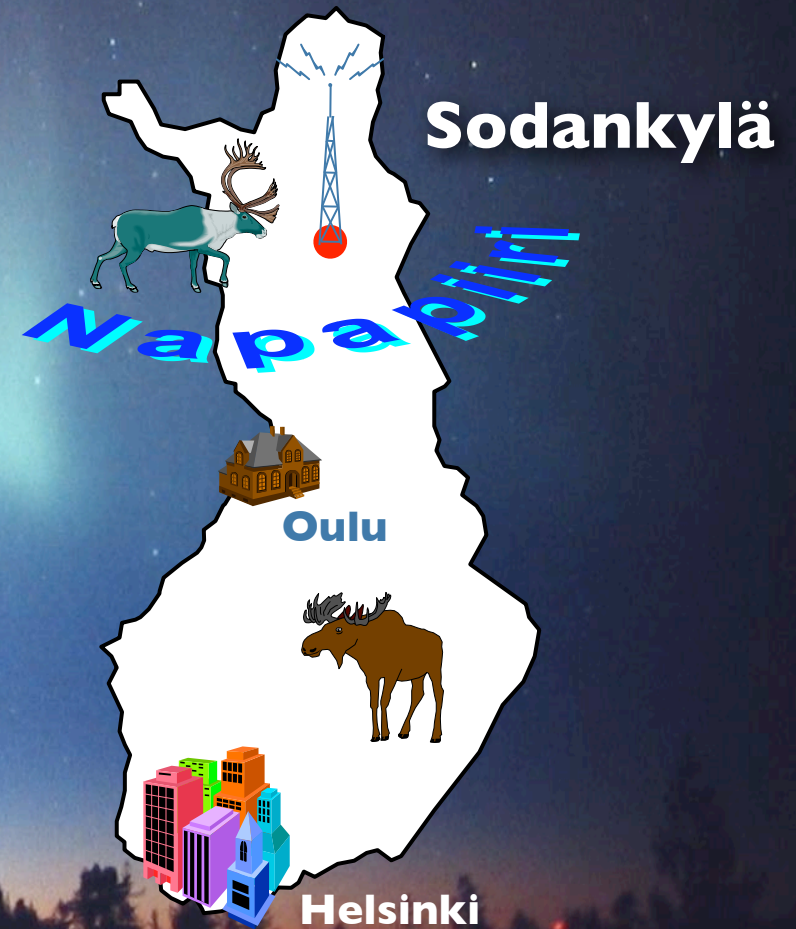
Where we are...



- ☒ **European Arctic**
- ☒ **High Latitude**
- ☒ **Auroral Zone**

Sodankylä Geophysical Observatory

- ➔ First observations during the International Polar Year 1882/83.
- ➔ SGO established 1913.
- ➔ Finland independent from Russia in 1917.
- ➔ SGO part of University of Oulu since 1997.
- ➔ Oldest scientific research institute in Northern Finland.



Library

SGO has a very comprehensive library with material dating back to the IPY 1882/83.

If you need any material,
please ask us for access.

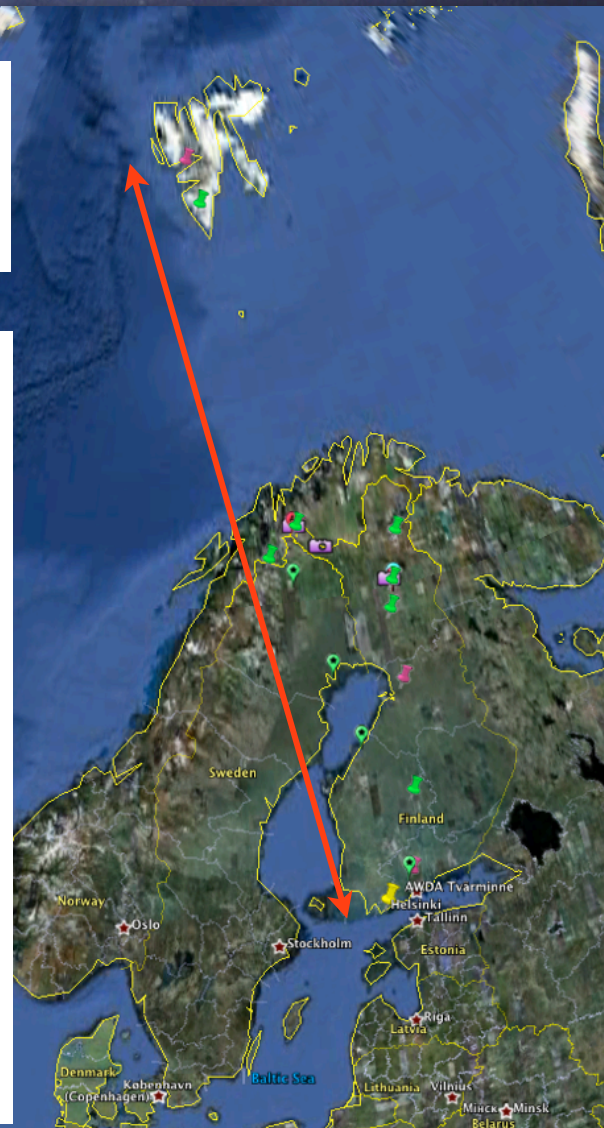


Who we are...

Operations extent
over 2070 km

We operate:

- Magnetometers
- Pulsation Magnetometers
- Ionosonde
- Riometer Chain
- All-Sky Cameras
- Ionospheric Tomography Chain
- Neutron Monitor
- Various VLF receivers
- Network of Seismic Stations
- Imaging Riometer (U Lancaster)
- Meteor Radar (U Leicester)
- Fabry-Perot Interferometer (UCL)
- etc



Why we are...



**Important: Bus will
leave observatory
at 1900 hrs!**

Bus Station

Type to enter text

Bear Inn

Old Church

Nice Walk

DINNER

Practicalities

- **WLAN** access:
SGOAirport, password: sg00y
- **Daily Shuttle** to Observatory:
from Three Brothers: **0800** hrs sharp!
from Hotel Sodankylä: **0805** hrs sharp!
- Excursion on Thursday:
from SGO: **1015** hrs, back at SGO: <1500 hrs.
- **Shuttle to Dinner** on Thursday:
from SGO at **1900** hrs.

Timetable

- Lectures start 0830 h.
- Morning break: 1000 h – 1030 h.
- Lunch: 1200 h – 1300 h.
- Afternoon break: 1430 h – 1500 h.

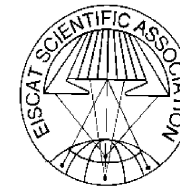
TÄHTELÄ



OULUN YLIOPISTO
UNIVERSITY OF OULU



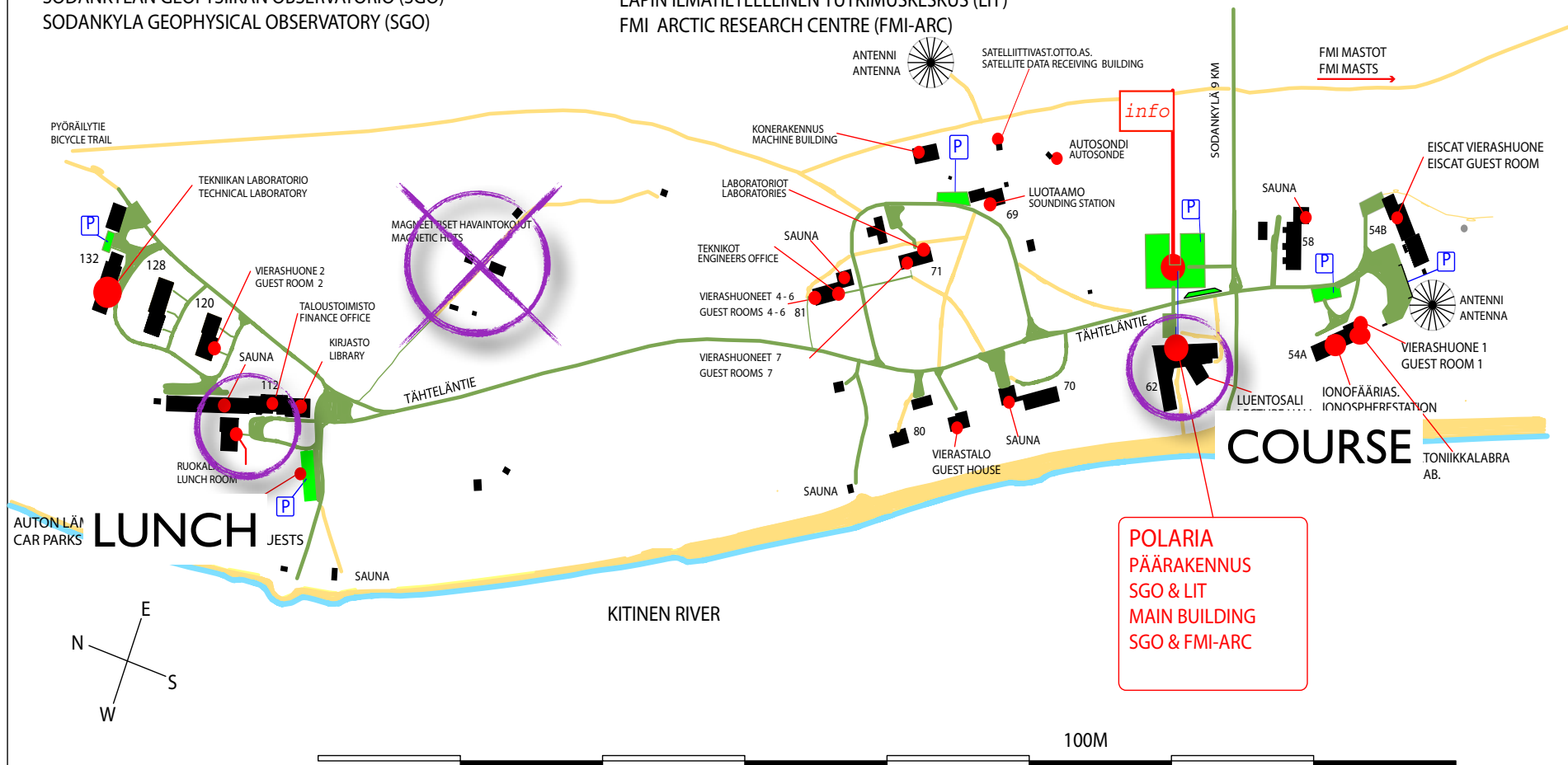
FINISH METEOROLOGICAL INSTITUTE



EISCAT STATION

SODANKYLÄN GEOFYSIKAN OBSERVATORIO (SGO)
SODANKYLÄ GEOPHYSICAL OBSERVATORY (SGO)

LAPIN ILMATIETEELLINEN TUTKIMUSKESKUS (LIT)
FMI ARCTIC RESEARCH CENTRE (FMI-ARC)



Tuesday

- Submit proposal by 1600 hrs.
- Get feedback by 1630 hrs.
- Radar Experiments 1730 h – 2330 h.
- Three groups / 2 hrs each.
- Radar experiments in lecture room.

Radar Walk

- Parallel to radar experiments
- Visit to SGO radar installations.
- Bring walking shoes (dry forest, sand).

Radar Walk

Thomas Ulich, SGO, Finland

Ionosonde Receiver Array

Ionosonde
Receiver
Computer

Tähtelä

SLICE Meteor
Radar

Ionosonde
Transmitter
Masts

SGO Main
Building

EISCAT
UHF Rx
Antenna



Fun Exercise:

At location $67^{\circ} 21.781'N$, $26^{\circ} 38.074'E$ you can see the shadows of the masts of the SGO ionosonde transmitter in Google Earth.

The satellite image is dated 30th May 2007.

Task: calculate the height of the centre mast. —————→



Groups

Group 1

Stuart
Hugo
Dmytro
Christer

Group 2

Jonas
Lais
Mikhail
Anne

Group 3

Max
Lei
Andrii
Irina

A photograph of the Aurora Borealis (Northern Lights) over a dark forest at night. The sky is dark blue with many stars. A bright green aurora is visible on the left side, and a fainter, more diffuse green aurora is visible in the center. The forest is silhouetted against the horizon, and a small red light is visible on the right side of the horizon.

Questions?

A photograph of the Aurora Borealis (Northern Lights) over a dark forest at night. The sky is a deep blue, filled with numerous stars. A bright, greenish-yellow aurora arc is visible on the left side, extending towards the center. The foreground shows the dark silhouettes of trees and a faint orange glow on the horizon.

Enjoy!