

# **Expanding the GNSS Network**

within the framework of IISGEO

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# Overview

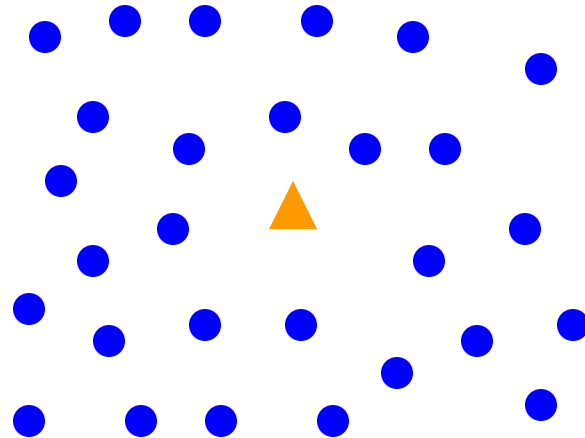
- GNSS within IISGEO
- The GNSS Project
- Current status
- Challenges
- The way forward



# GNSS within IISGEO (and AFREF)

GNSS is the geodetic technique of choice to densify ITRF in Africa, because

- of its being the most affordable geodetic technique; and
- it is readily available to the end-users.



# HartRAO's GNSS Project

Mandate includes:

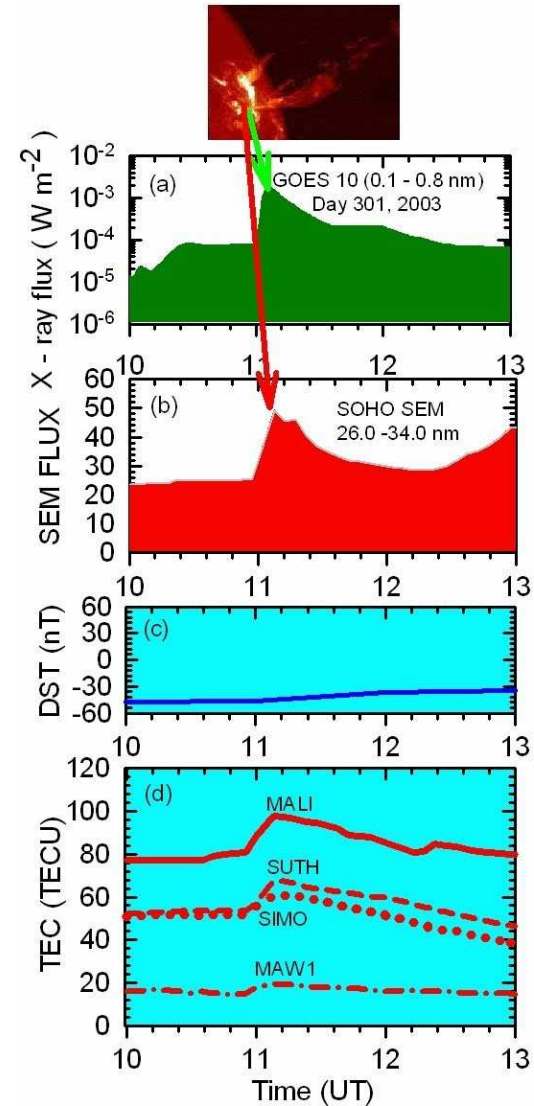
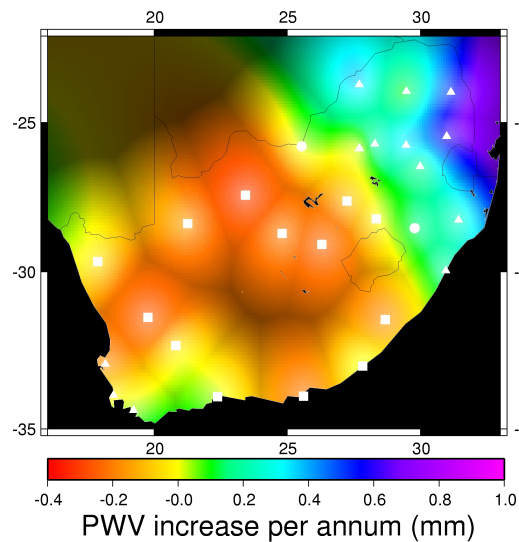
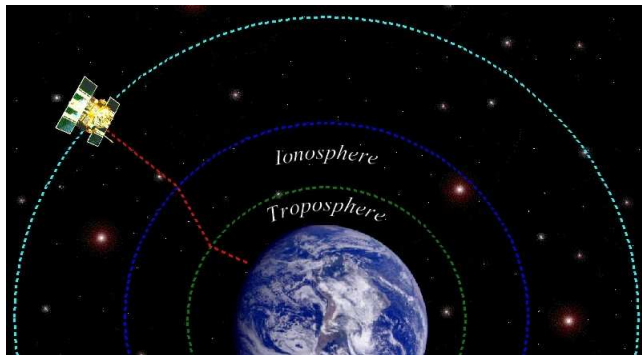
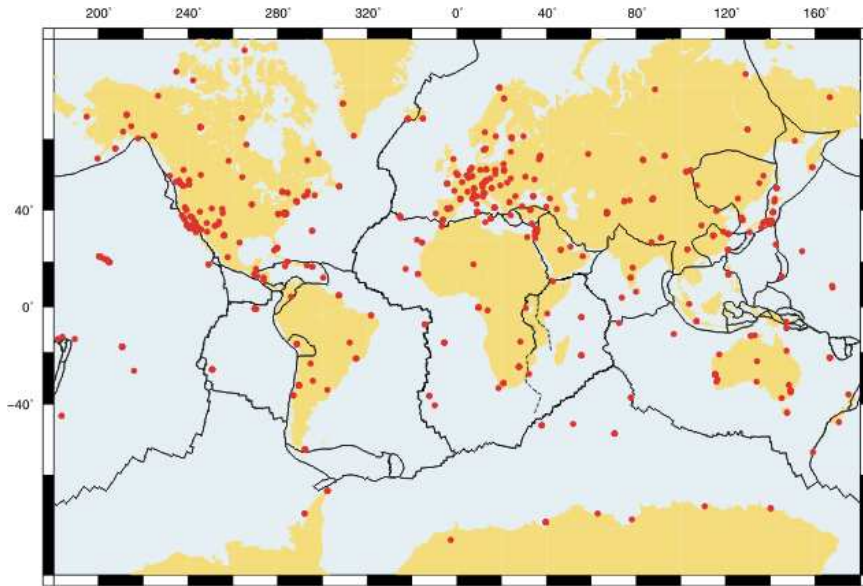
- Expansion and maintenance of regional GNSS network; and
- Analysis of data, producing scientific products.

infrastructure ***AND*** research

# GNSS Project - Infrastructure



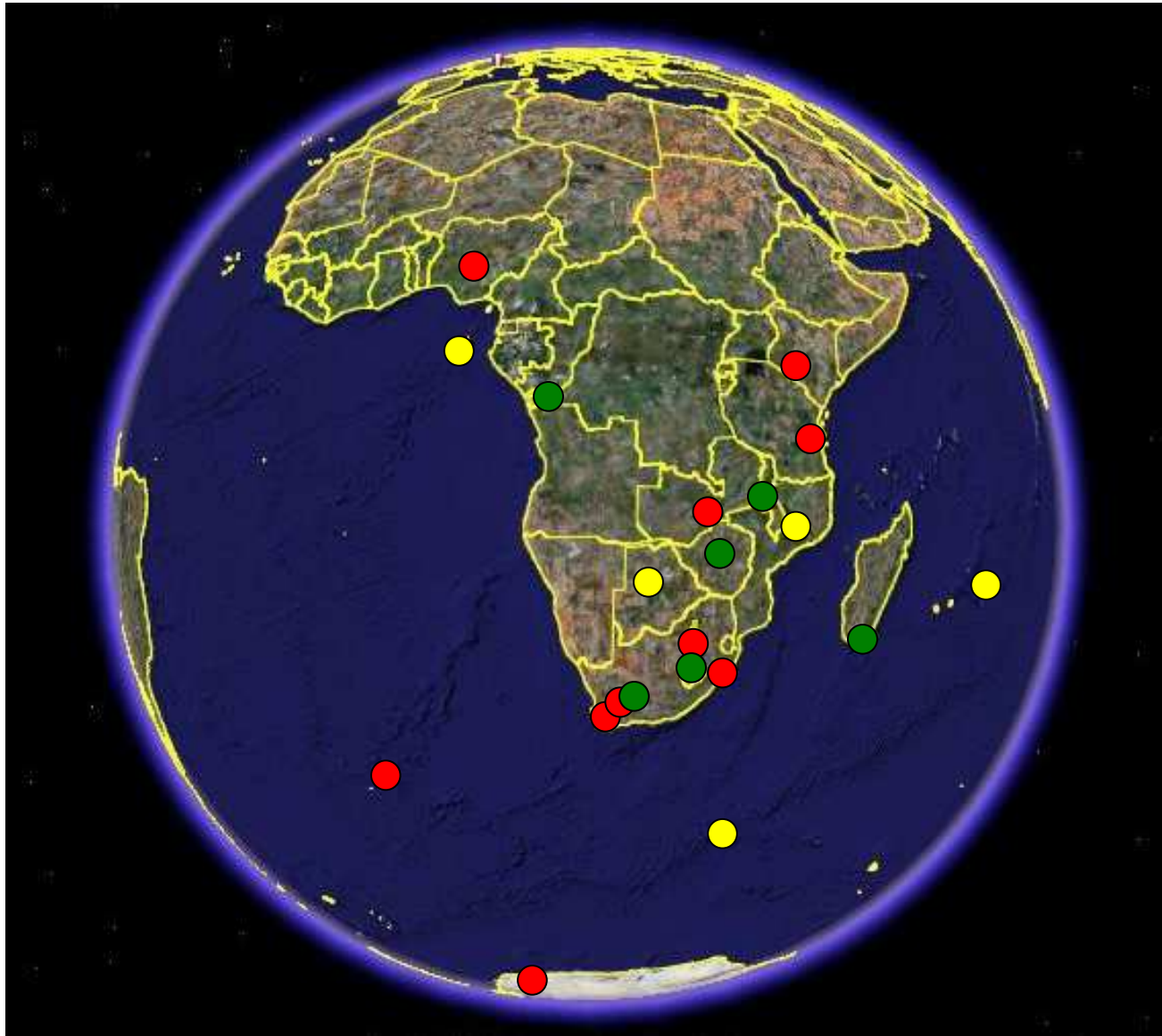
# GNSS Project - Research



# Current status – Research

- 2 Researchers (1 PhD student) conducting GNSS-related research
- Intending to advance from being an AFREF data centre to becoming an AFREF analysis and combination centre

# Current status – Infrastructure





# An ideal world

- Abundant project funding
- Purchase state-of-the-art equipment
- Install infrastructure with a perfect geometry around fundamental station
- Stations work perfectly ad infinitum
- Start doing science, publish many papers, win the Nobel Prize :-)

# A less-than-ideal world

- Ongoing funding applications, with uncertain outcomes
- Using any available equipment, often old
- Ocean to 3 sides, difficult to find locations satisfying all requirements
- Stations require continuous maintenance
- Conduct science in parallel with installations and maintenance

# The way forward

- Capable to conduct remote installations, move towards higher reliability.
- Continue pursuing Antarctic and island installations.

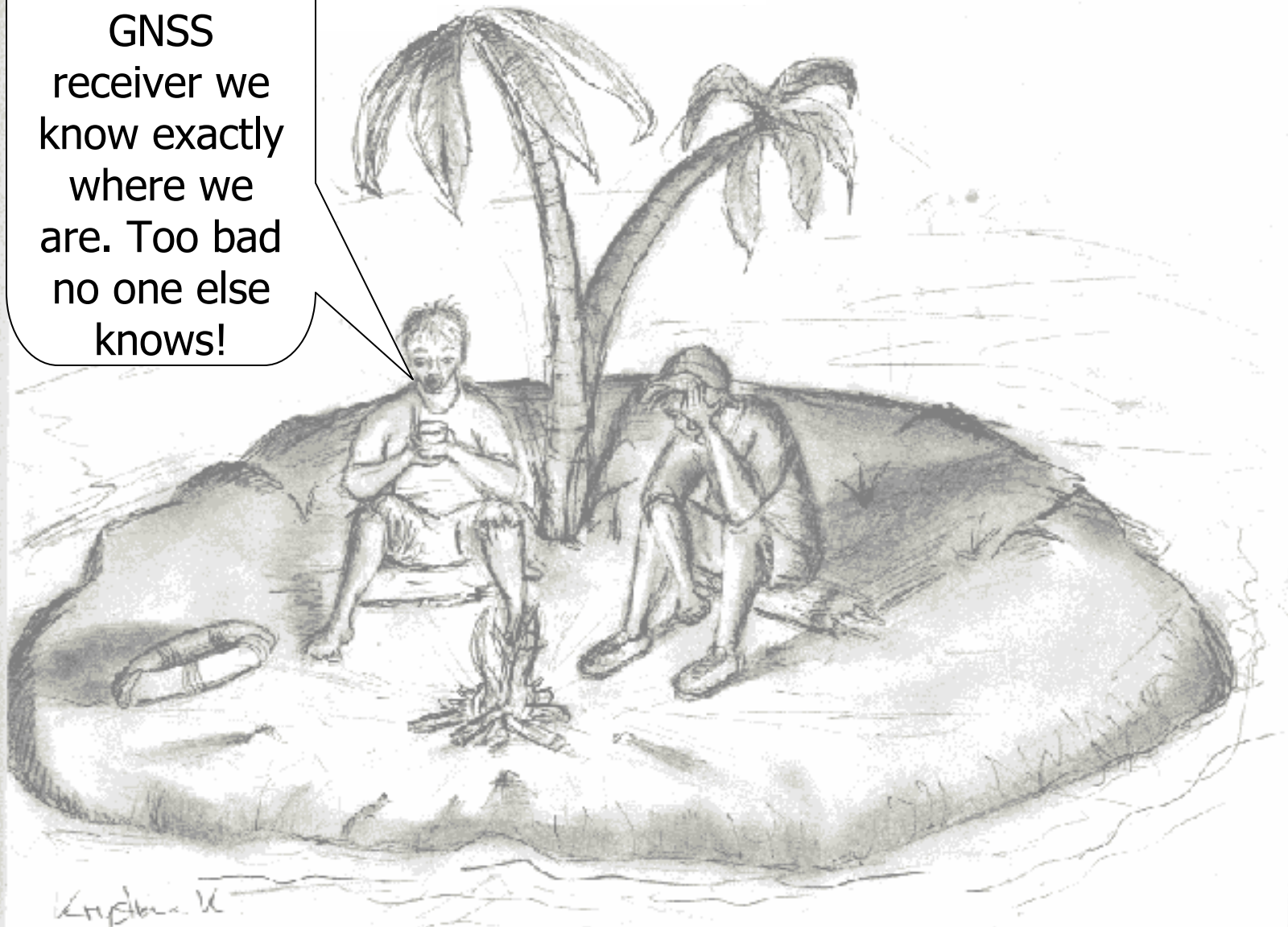


# The way forward

- Increasing sense of ownership through partnerships and training.
- Build capacity in order to become a high-quality analysis centre.



With this  
GNSS  
receiver we  
know exactly  
where we  
are. Too bad  
no one else  
knows!



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