



GPS for Weather and Space Weather Forecasting (GWSWF)
A joint GeoScience and Physical Sciences Action Group

GNSS data format for atmospheric studies: the eSWua system

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outline

- **introduction**
- **eSWua system example**
- **use of GNSS structured data**
- **data form**
- **conclusion and discussion**

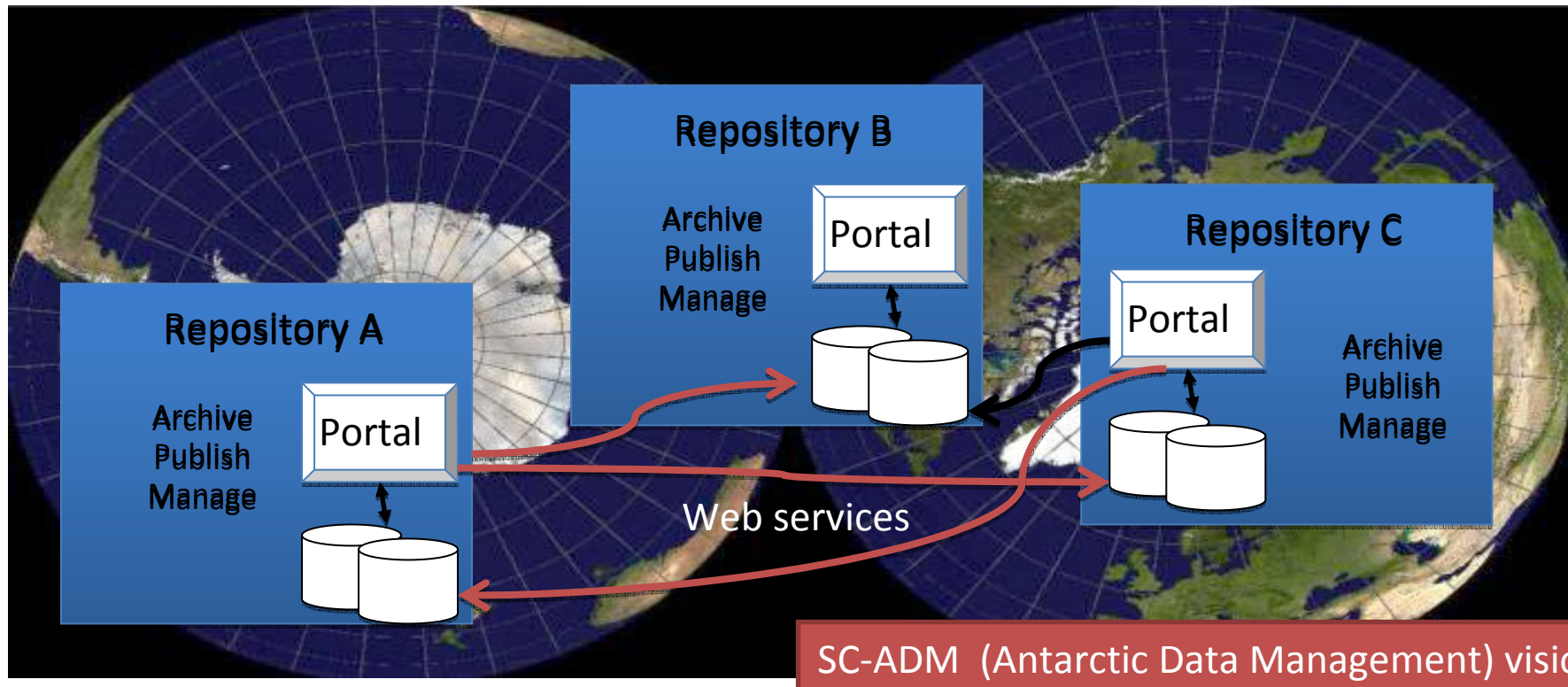


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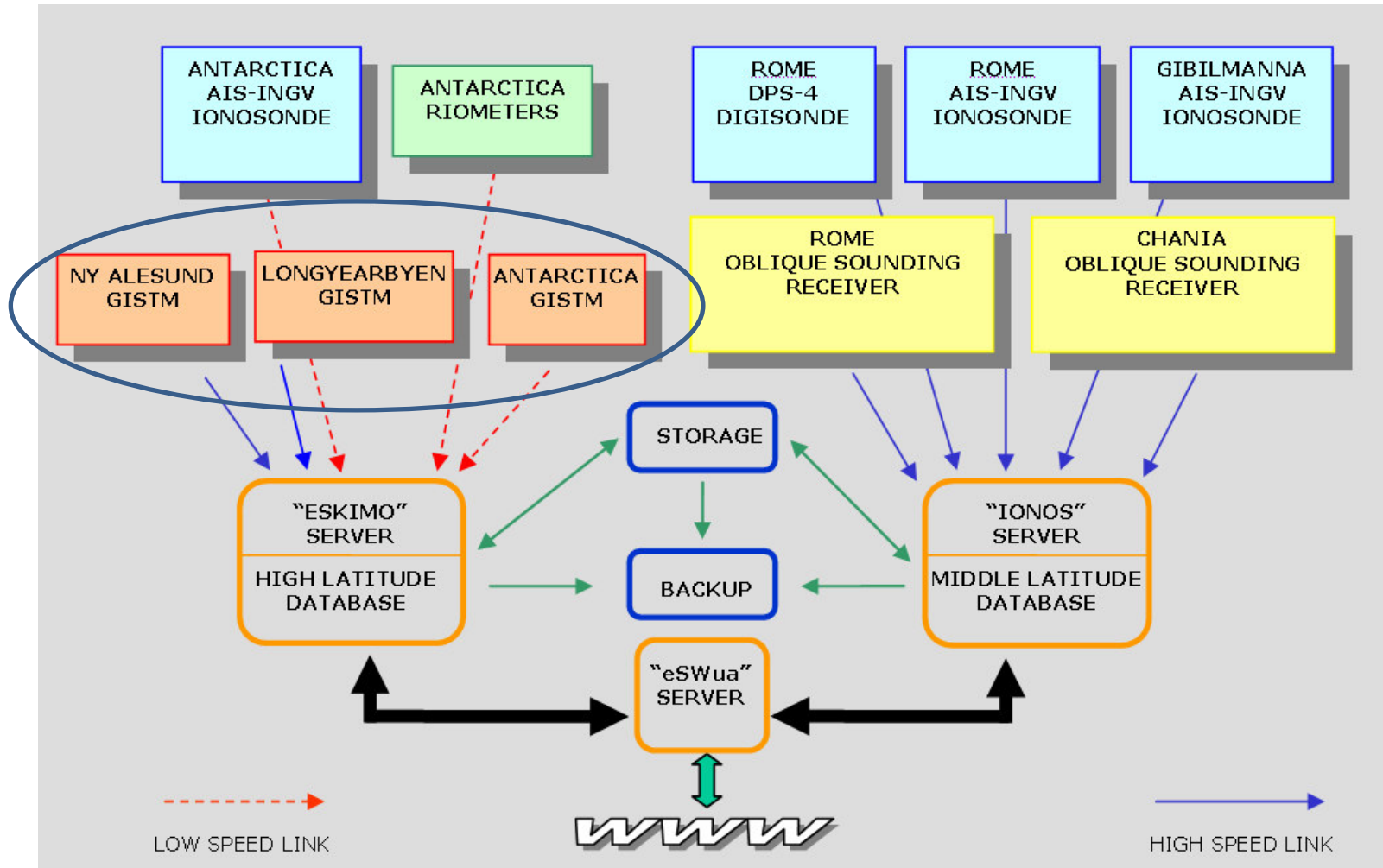
introduction

- Deliverable: GNSS data format definition for atmospheric studies (upper atmosphere and lower atmosphere)
- SCAR Data and Information Management Strategy (DIMS)
- Vision: To build an GWSWF Data Management System capable of supporting Weather and Space Weather science (i.e. an interoperable data infrastructure).





eSWua system architecture





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eSWua system home page



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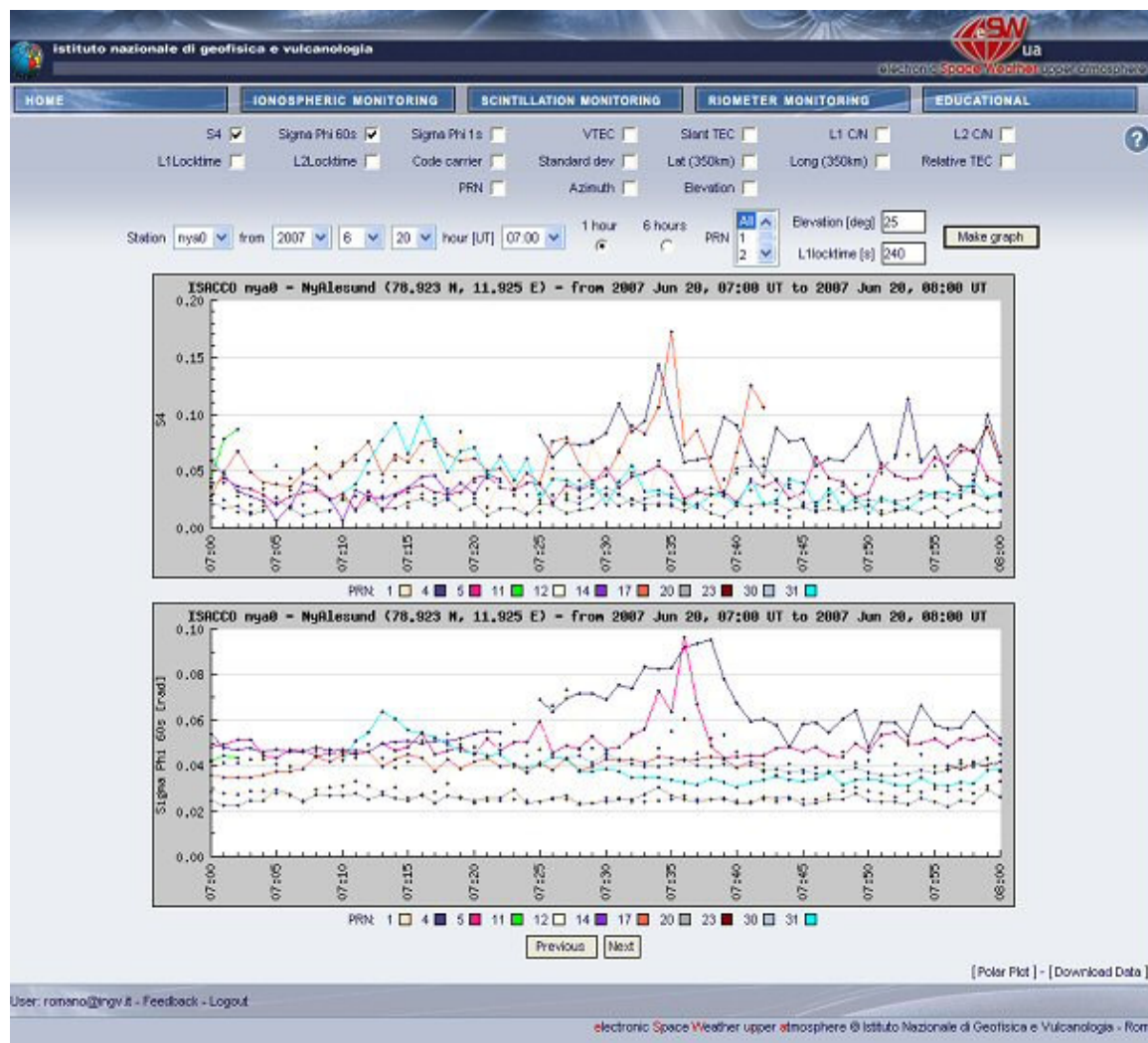
eSWua system tools



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eSWua system tools





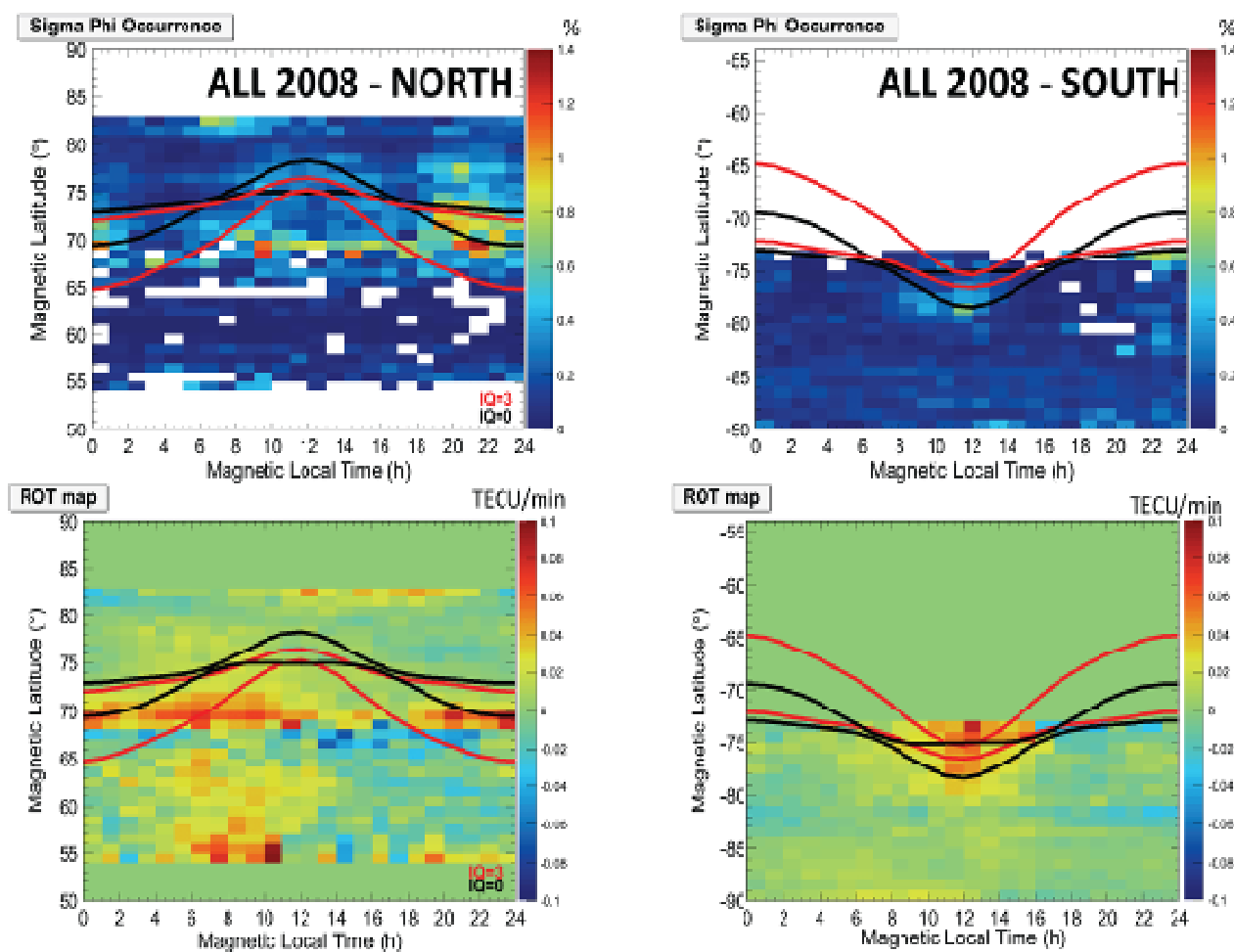
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eSWua system tools



use of GNSS structured data



Alfonsi, L., L. Spogli, G. De Franceschi, V. Romano, M. Aquino, A. Dodson, and C. N. Mitchell (2011), Bipolar climatology of GPS ionospheric scintillation at solar minimum, *Radio Sci.*, doi:10.1029/2010RS004571, in press.



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Data and tools form

http://www.gwswf.scar.org/form/DATA_TOOL_INGV.pdf





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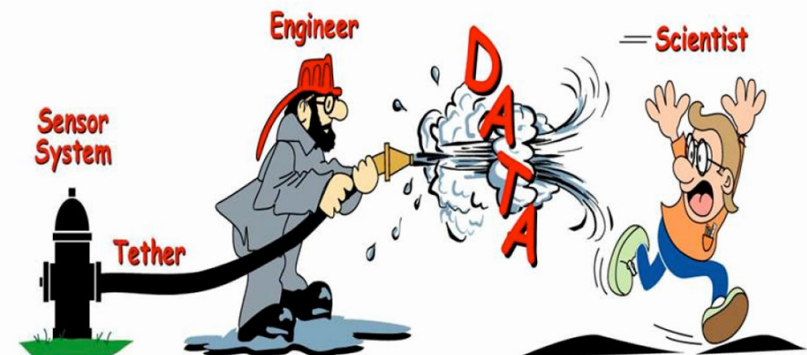
conclusion and discussion

- GWSWF community manages a large quantity of data
- Long experience in weather and space weather data management and analysis
- A proposal: awareness of data and tools
- GNSS data format definition for atmospheric studies (upper and lower atmosphere)
- Goal: improving relevance and utility of data products

- Discussion:

- What GWSWF members need?
- What community needs?
- Which data policy?
- Which data availability?
- Which data and tools sharing?

Drinking from a FIREHOSE



from Kirk Borne, 2008



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Thank you!