IGS Infrastructure
Confronting Challenges

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WS2008 Infrastructure Recommendations

- Consider active/inactive stations in RF realization
- New IGS Stations only ant+radome with absolute calibration
- No more converted Calibrations into ANTEX
- Station Managers to notify station changes
- Study how to define and certify an RF-quality station
- Accumulation of streams for 15 minute 1Hz files
- Coordinate with UNAVCO on teqc

- Increase site pictures (marginally)
- IGS to provide PPP and other support to stations
- C2 availability, 1/4 cycle phase offset
- Protocol on IGS information exchange
- Coordinate with other networks on common stations
- Develop “network of networks” concept
- Experiment with a Supersite

Communicating better with Station Operators

- Established an SO mailing list for the CB and the IC
- Sent message about IGS05 station attrition rate
- Sent AIV message with receiver instructions
- Communications will be few and very targeted

AIV tracking

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AOA BENCHMARK ACT    : 100.0% AIV ( 12 of  12)
AOA SNR-             : 100.0% AIV (  6 of   6)
                                                 35
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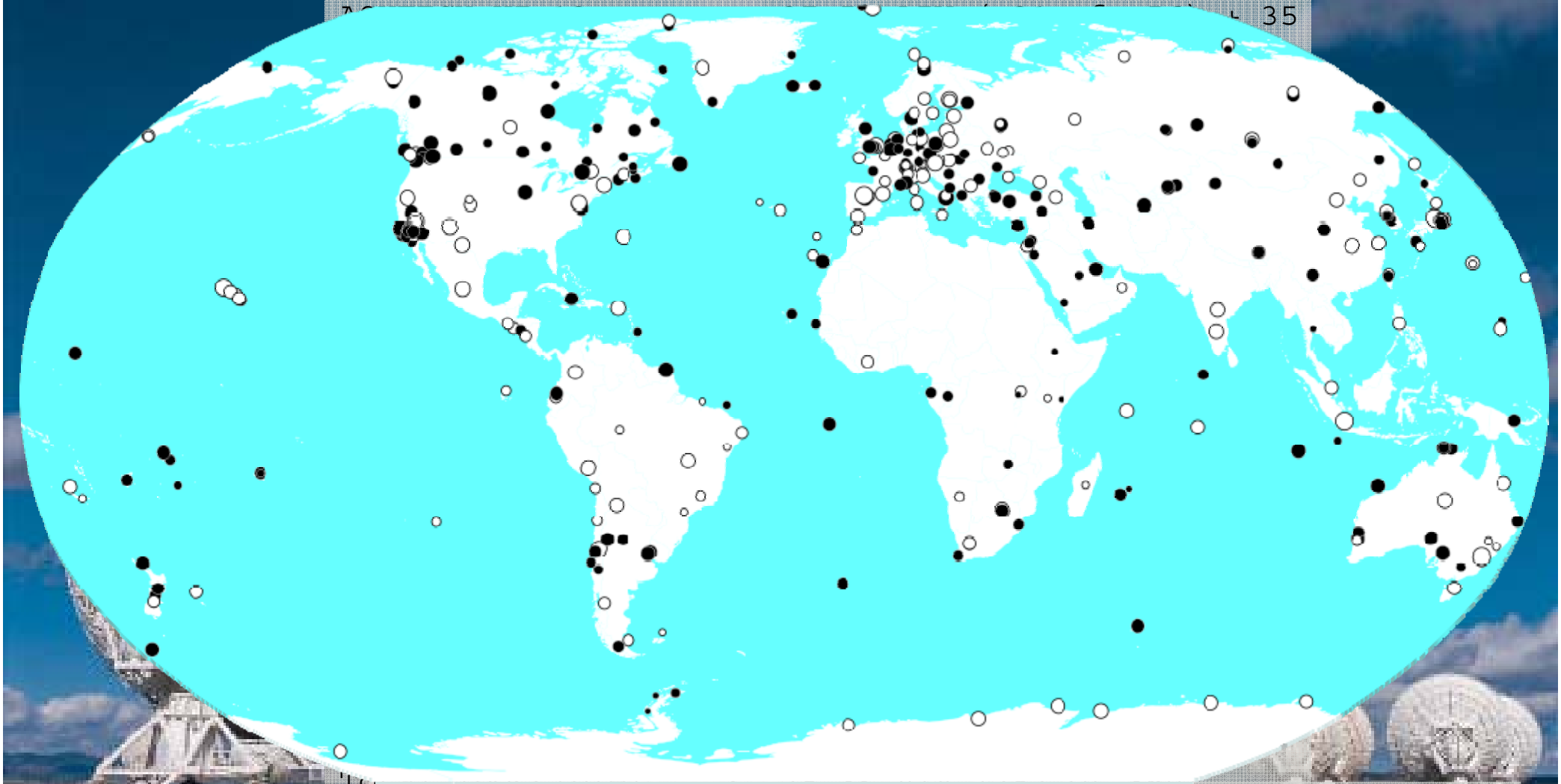
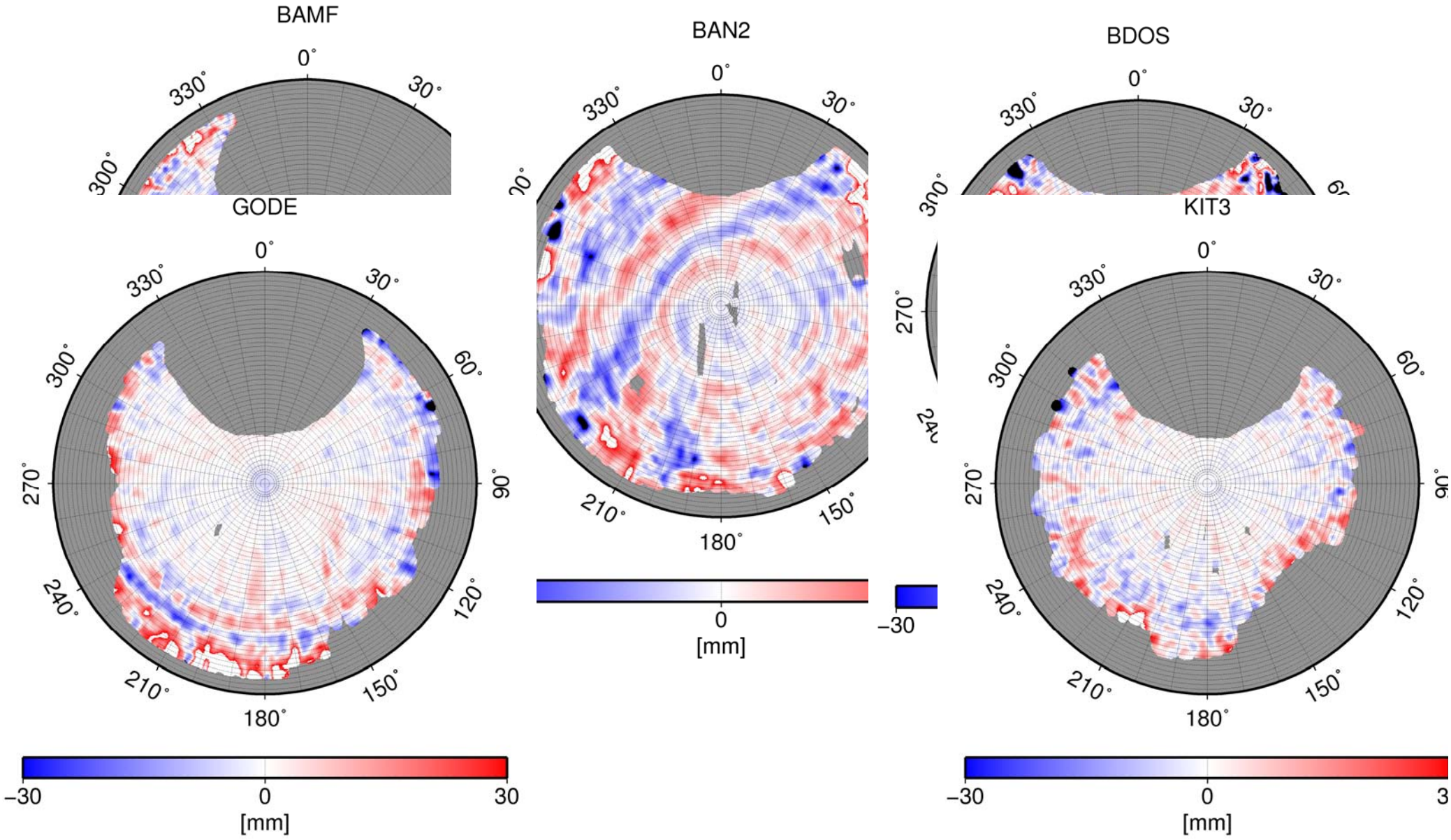


courtesy S. Schaer

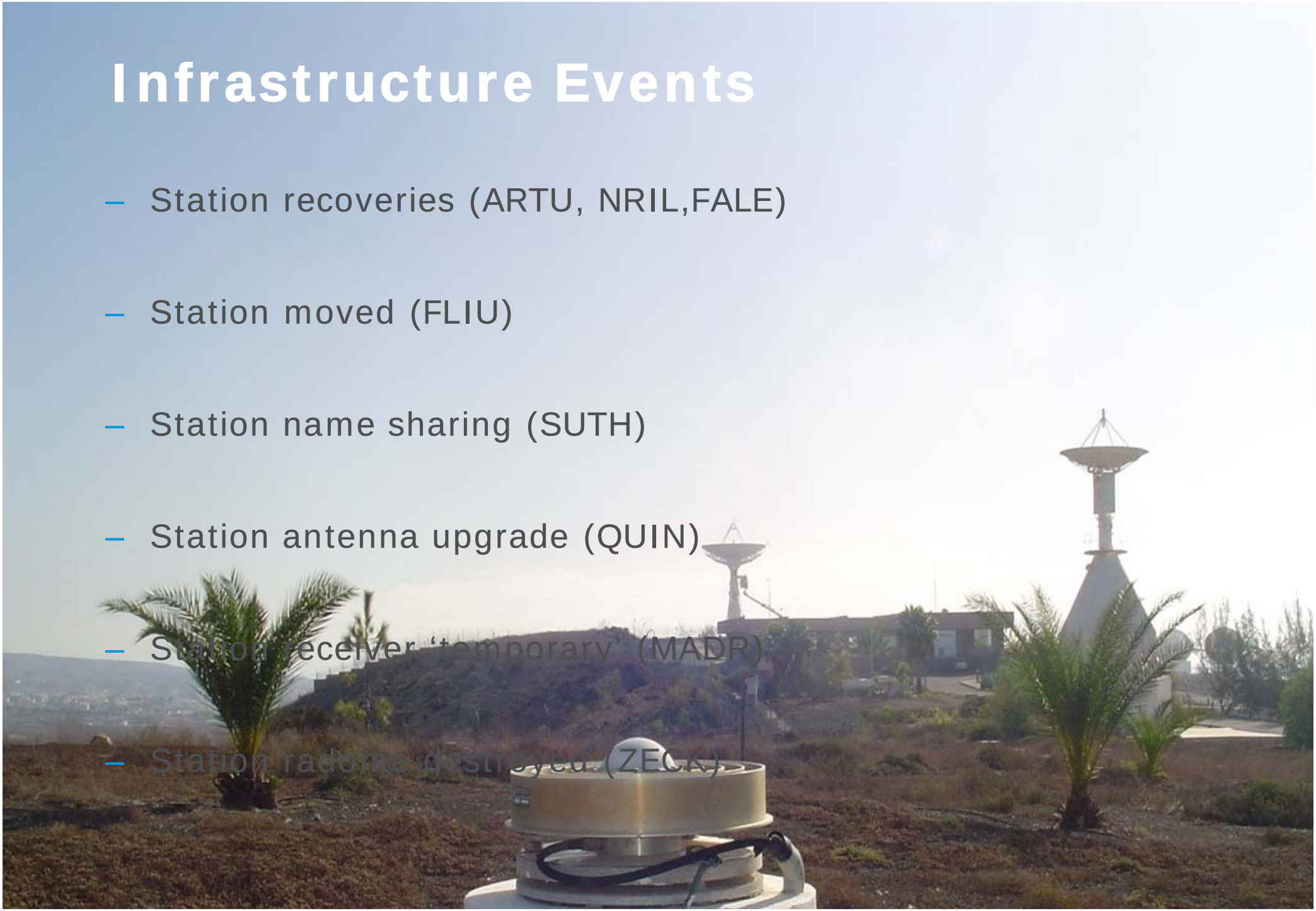
Better Station Understanding

IGS Station "Fingerprints" (Huismann, Marel, Teunissen, 2009)



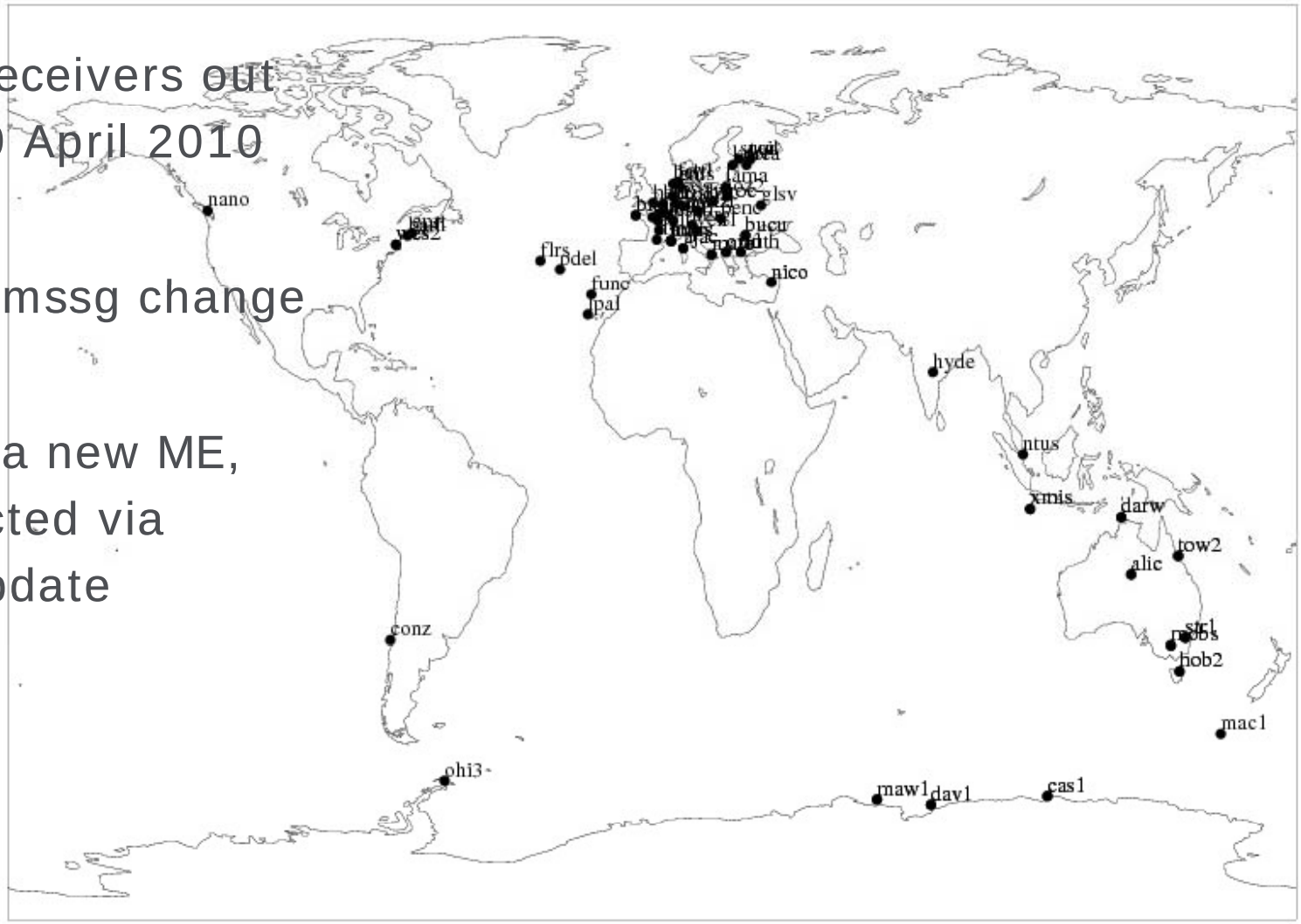
Infrastructure Events

- Station recoveries (ARTU, NRIL,FALE)
- Station moved (FLIU)
- Station name sharing (SUTH)
- Station antenna upgrade (QUIN)
- Station receiver ‘temporary’ (MADR)
- Station radome destroyed (ZECK)

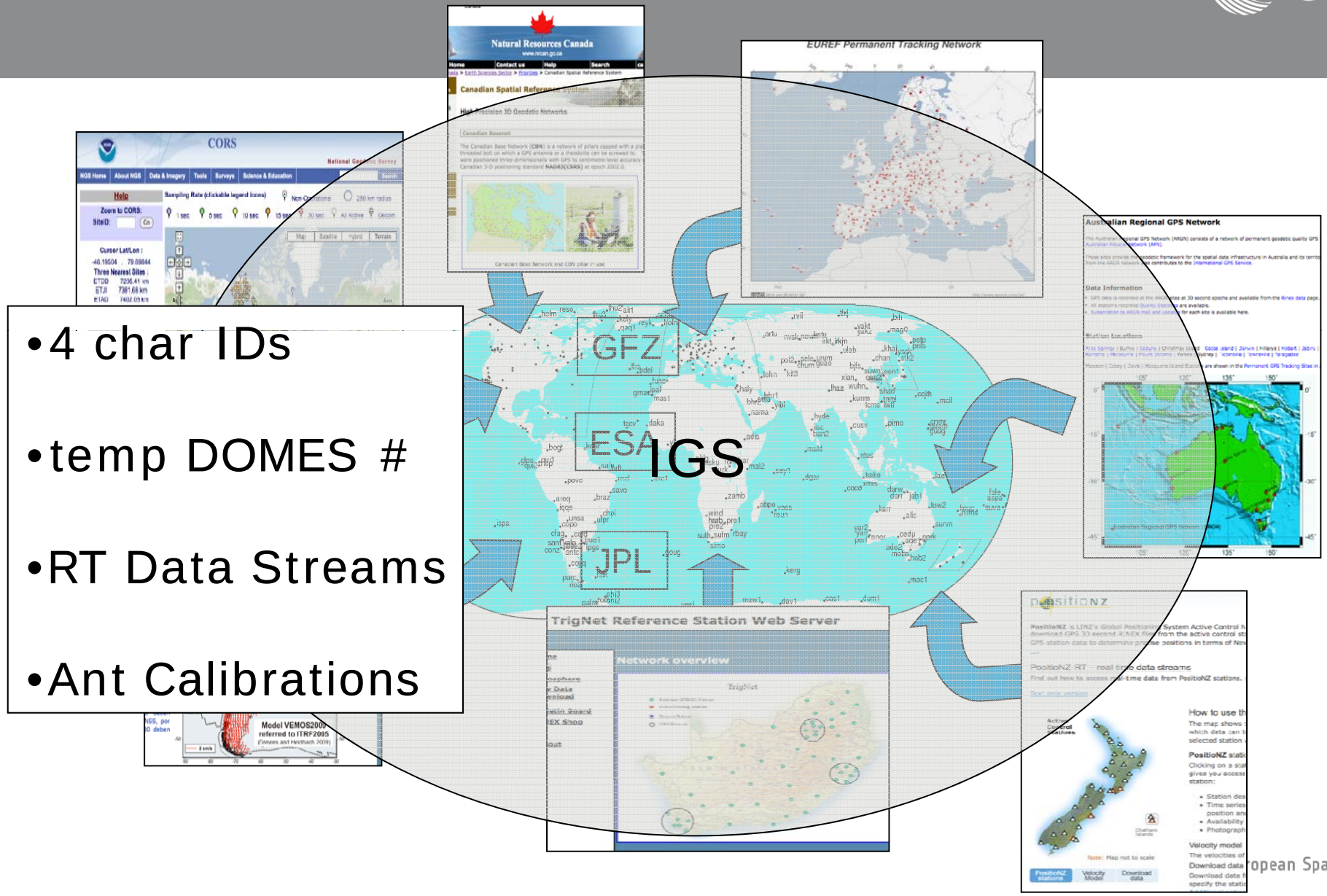


Infrastructure Events

- Leica GGPRO receivers out all at once!! 29 April 2010
- GLONASS nav mssg change
- Leica released a new ME, problem corrected via receiver SW update



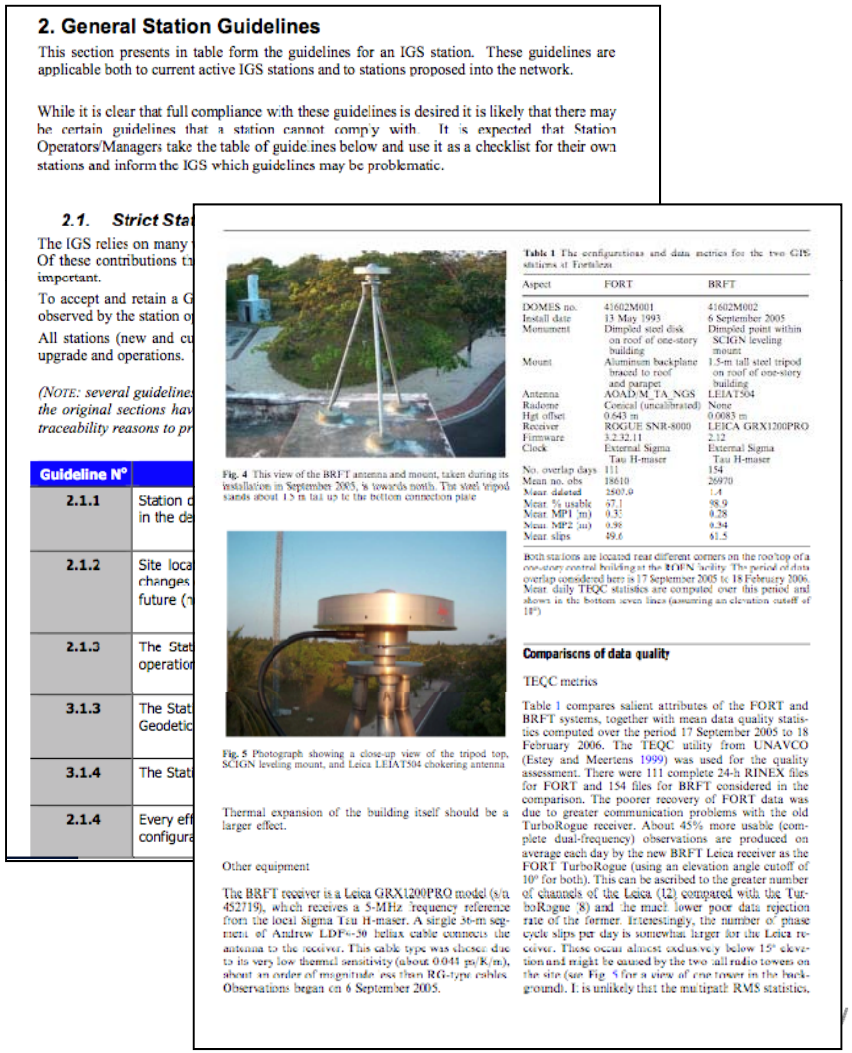
Network of networks



- 4 char IDs
- temp DOMES #
- RT Data Streams
- Ant Calibrations

Station Guidelines

- Organizing, Simplifying
- Important “Station Upgrade Guidelines”:
  - Parallel data on other ‘good’ monument
  - If old monument bad ‘destroy’
  - Uncalibrated ant+radome available to IGS for calibration
  - Local tie surveyed



2. General Station Guidelines

This section presents in table form the guidelines for an IGS station. These guidelines are applicable both to current active IGS stations and to stations proposed into the network.

While it is clear that full compliance with these guidelines is desired it is likely that there may be certain guidelines that a station cannot comply with. It is expected that Station Operators/Managers take the table of guidelines below and use it as a checklist for their own stations and inform the IGS which guidelines may be problematic.

2.1. Strict Sta

The IGS relies on many
Of these contributions t
important.

To accept and retain a G
observed by the station o

All stations (new and cu
upgrade and operations.

*(NOTE: several guidelines
the original sections hav
traceability reasons to pr*

Guideline N°	
2.1.1	Station c in the de
2.1.2	Site loca changes future (r
2.1.3	The Stat operatio
3.1.3	The Stat Geodetic
3.1.4	The Stat
2.1.4	Every eff configura

What can the IGS offer to the SO?

- Rigorous analysis of parallel data
- Help calibrating old antenna
- …

THANK YOU

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IGS Infrastructure: Accomplishments and Challenges
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