ITRF BeamServer status

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Why

- End plethora of currently used coordinate systems / transforms
- Simplify and speed up BeamServer
- Prepare MAC to accept calibration tables
- Give proper meaning to configuration files

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Who

Ruud Overeem Software development

Michiel Brentjens Coordinate system transforms and astrometric validation

Arno Schoenmakers System integration and operational testing

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Old versus new

Þ^{e} Olde BeamServer

- Was mis-pointing by $\approx 4'$ in core
- Needed to compute limited number of directions 10–20 seconds in advance

ITRF BeamServer

- Compute unlimited number of directions (248?)
- Within 1 second
- Stations can switch direction in at most 3 seconds (length I2C command loop)

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Current status

HBA_ZERO Validated 2010-09-20

HBA_DUAL Validated 2010-09-20

HBA_JOINED Validated 2010-09-21

LBA_INNER Validated 2010-09-22

HBA_ONE Validated 2010-09-24

LBA_OUTER Unknown

- LBA_X Unknown
- LBA_Y Unknown

LBA_SPARSE_ZERO Unknown

LBA_SPARSE_ONE Unknown

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Future

- Stabilize LOFAR and the software development/test/release procedures according to proposals by Arno Schoenmakers
- Validate remaining LBA modes
- Roll out LBA_OUTER calibration tables
- Resolve HBA1 data corruption
- Resume station calibration observations
- Roll out remaining station calibration tables when Stefan Wijnholds and Parisa Noorishad deem them sufficiently reliable
- Commence astrometric beam model validation

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HBA1 corruption