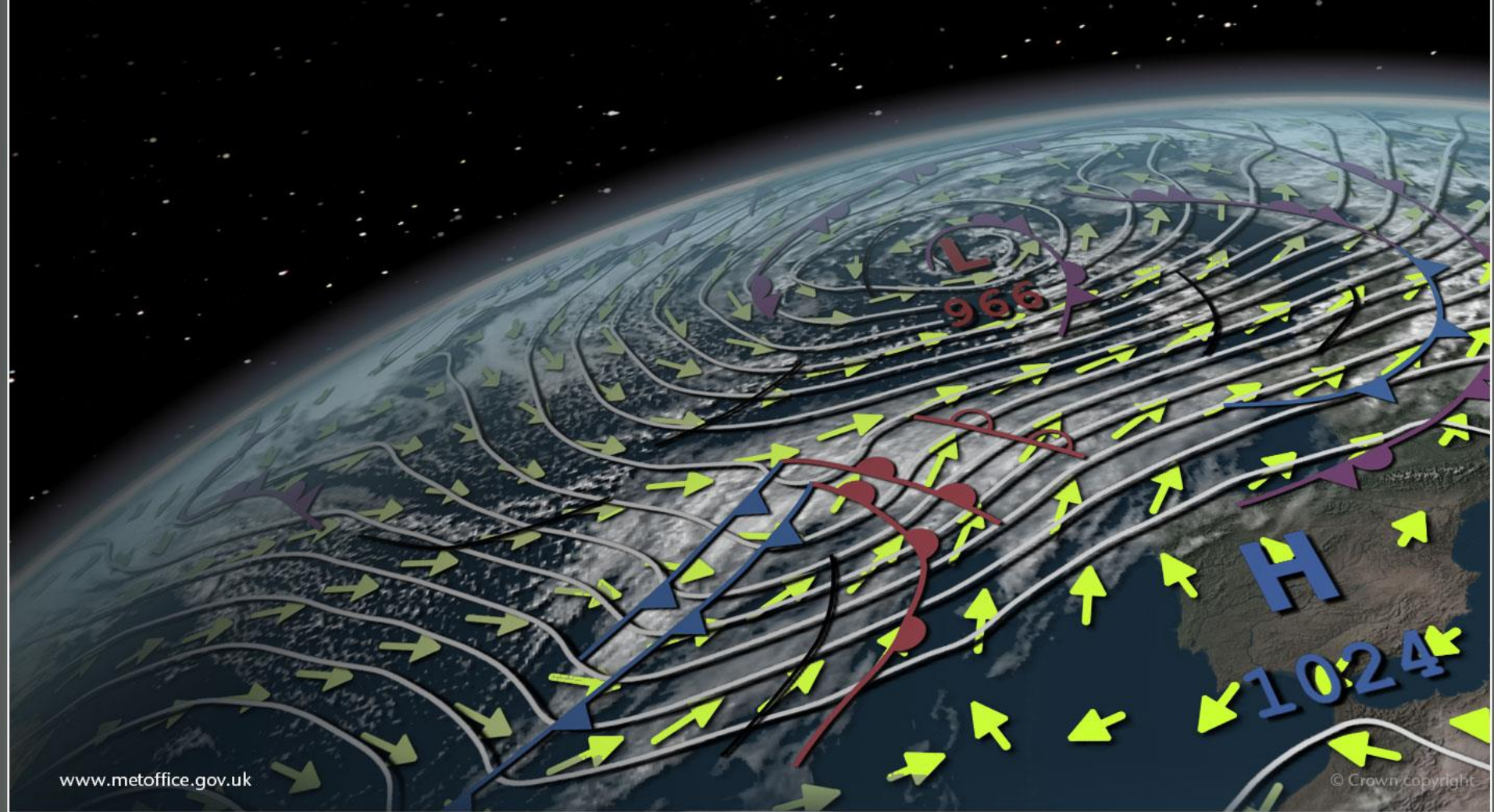


# *Met Office GNSS Processing*

## *E-GVAP Annual Meeting*

DWD, Offenbach, November 2019.



# Raw Data Access

- MoUs in place with OSGB, OSNI and Osi/Met Eireann/OPW for access to hourly RINEX + ntrip data.
- Separate server outside Met Office firewall running BNC v2.12 and writing 15 min RINEX files.
- One BNC instance per caster (OSGB, OSNI, EUREF and IS) for greater stability.
- Dependant on skeleton (metadata) files. Recently got updated OSi skl files, but inconsistent (skl vs log files) so only ~50% of sites processed.
- Iceland. Still working on accessing their ntrip server.
- HIWAY Project: working on accessing streams from Lake Victoria region. <https://corsmap.com/>.

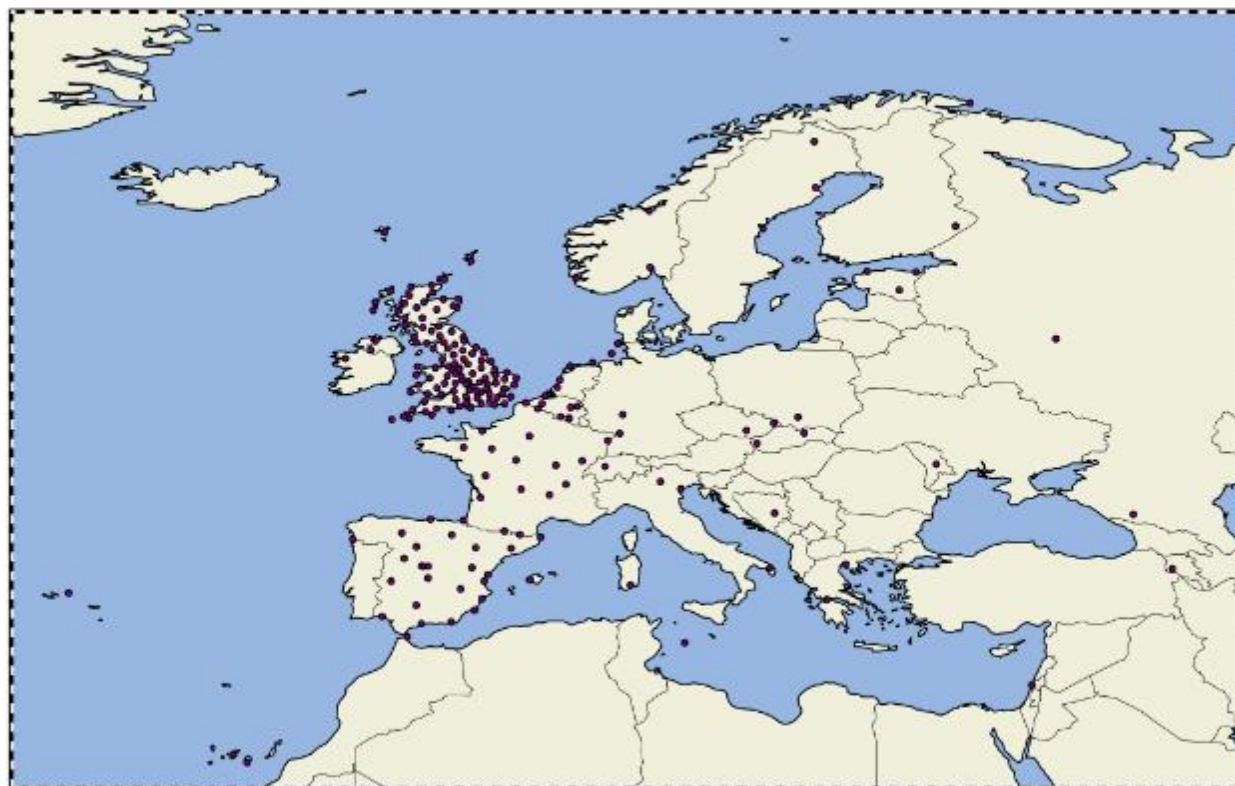
# Bernese v5 to v5.2

- BSW50 systems still operating (to be retired in 2020).
- BSW52 systems now all running 24/7, recently upgraded to IGS14 and updated site list.
- MTRH (Tropospheric Regional Hourly) - replaces METO.
- MTGH (Tropospheric Global Hourly) - replaces METG.
- MTRS (Tropospheric Regional Subhourly) - replaces METR.
- MIGH (Ionospheric Global Hourly) - replaces METI.
- MIRS (Ionospheric Regional Subhourly) - replaces METT.
- Additional server outside firewall running BNC v2.12 to collect (and distribute if required) ntrip streams.
- All systems DD, AAPCV, 4 hours NEQ, a-priori coordinate from 30-day sliding window of daily PPPs from IGS Final Products.

# METO vs MTRH



GNSS stations processed by MTRH (207)



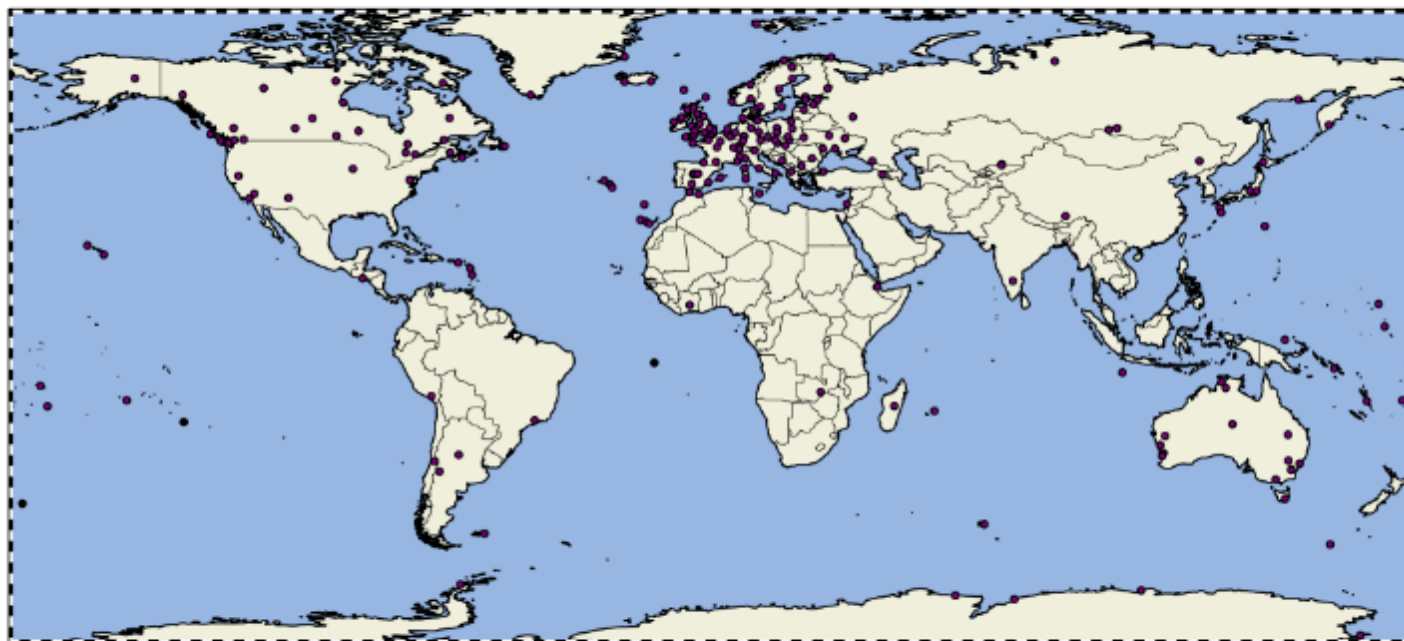
● >1



# METG vs MTGH



GNSS stations processed by MTGH (211)

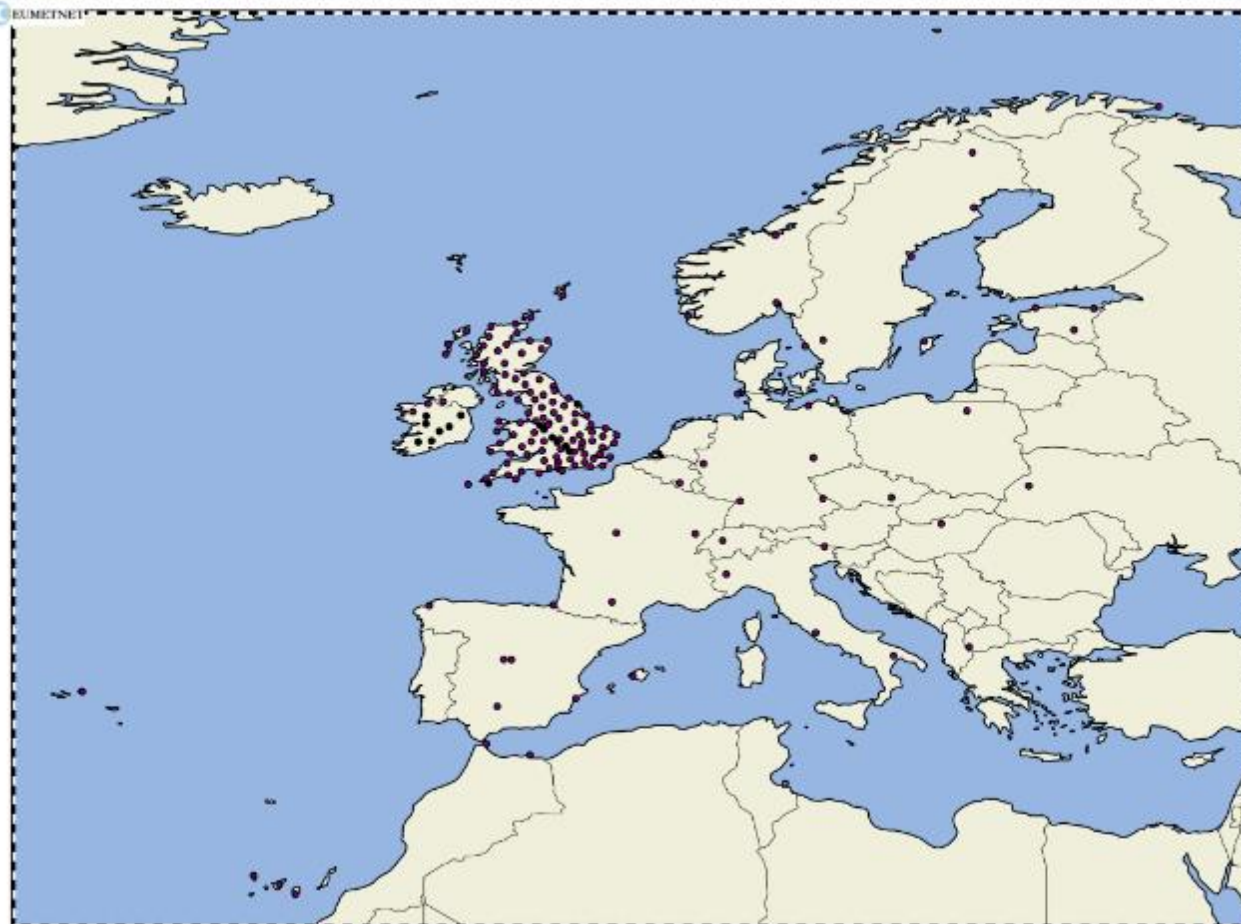


● >1 ● MTGH

# METR/MTRS

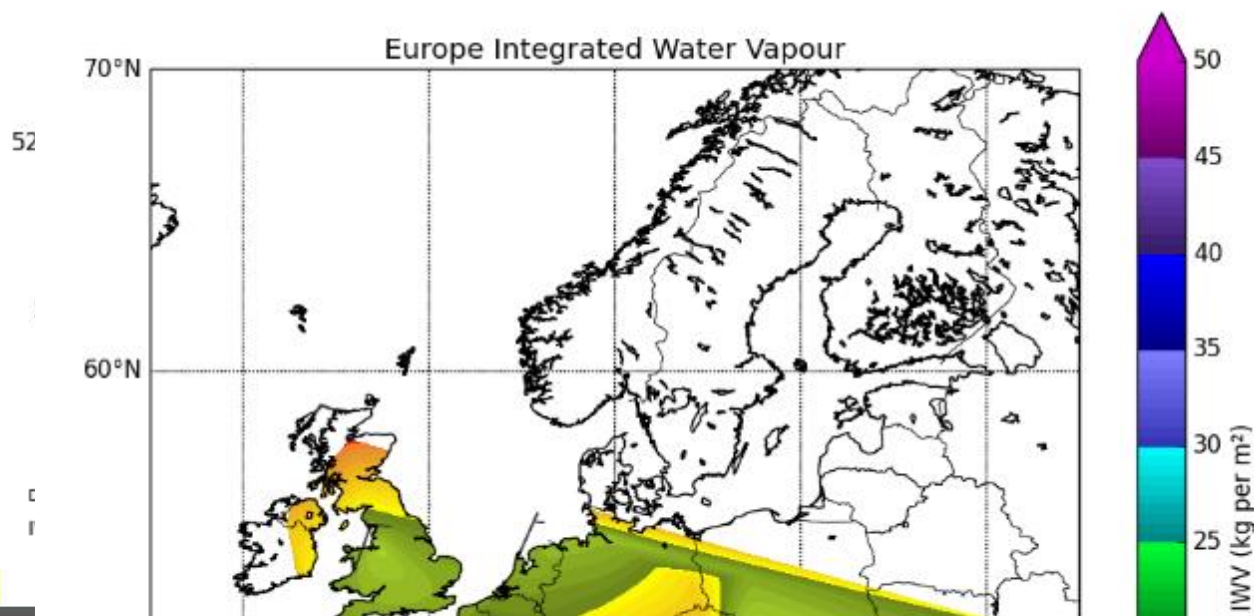
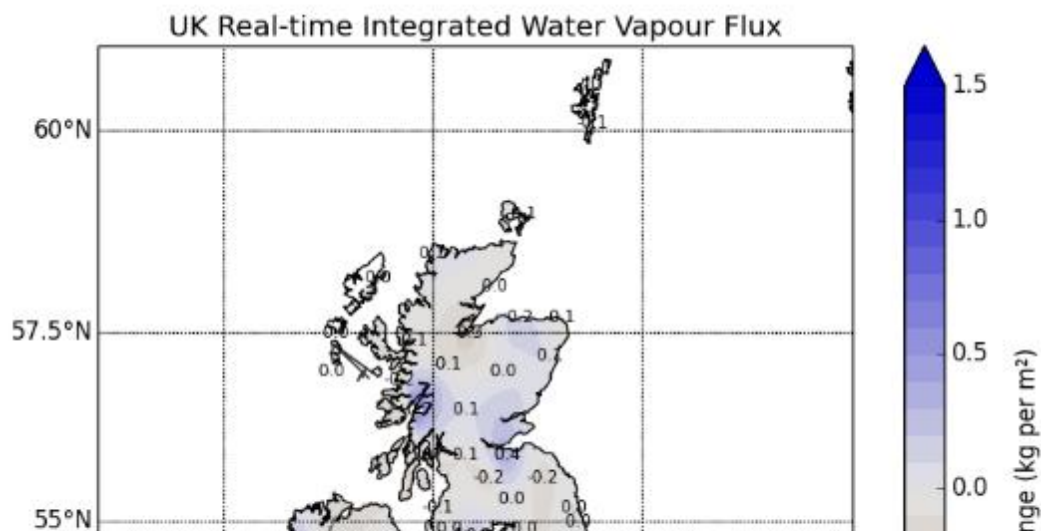


GNSS stations processed by MTRS (164)



● >1 ● MTRS

# IWV Maps



# iGNSS

- 'iGNSS' is a suite of Perl scripts and MySQL DBs developed under contract with the University of Nottingham which run BPE in automated, QC'd fashion.
- Annual support contract not being renewed in 2020.
- Asked to look at all possible future options ranging from stopping all GNSS processing to additional resource in-house to outsource data processing to 3<sup>rd</sup> party.
- Decision made in early Nov '19 to make no long-term decisions until we assess the level of resource necessary to continue in-house development (updating iGNSS for BSW6, IGS20, PPP etc).
- Main Met Office IT support left too, but being replaced.



# 2020 Met Office GNSS Plans

- Purchase BSW6
- Assess resources required to run GNSS processing in-house in the long-term.
- Reduce server count to 3 (VMs).
- Move to RHEL7.
- Next Gen Supercomputer business case – maybe money for Met Office GNSS network over next 10-years (~2021-2031)



Met Office

# Questions

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