

Network Monitoring Report: L-band 18/21cm N22L1

Source: J0237+2848, J0730+4049 and J0727+4052 **Length:** 180 min. **Observing mode:** 1024 Mbps, 8x32 MHz, 2 bits, dual pol.
Reference antenna: Effelsberg **Date of observations:** 24/02/22 **Reference date:** 55d 12h 00m
Experiment code: N22L1 **Date of report:** 06/03/24 **by:** Gabor Orosz

- ⊗ According to expectation, no special remarks ☐ Station did not observe (not scheduled)
 ■ Problem occurred - see enclosed footnote(s) ○ Entry not applicable/investigated

	Jb2	Wb	Ef	Mc	Nt	O8	T6	Ur	Tr	Hh	Sv	Zc	Bd	Ir	Cm	Da	Kn	Pi	De	Fa
Station has observed	⊗	⊗	⊗	⊗	⊗	⊗	⊗	■	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Station produced fringes (ftp)	⊗	⊗	⊗	⊗	⊗	⊗	⊗	☐	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	■	⊗	■
Station produced fringes (disk)	⊗	⊗	⊗	⊗	⊗	⊗	⊗	☐	⊗	⊗	■	■	■	⊗	⊗	⊗	⊗	⊗	⊗	■
Logs are available (within 72 hours)	⊗	⊗	⊗	⊗	⊗	⊗	⊗	☐	⊗	⊗	○	○	○	⊗	○	○	○	○	○	○
Antabs on vlbeer (within 7 days)	⊗	⊗	⊗	⊗	⊗	⊗	⊗	☐	⊗	⊗	○	○	○	⊗	○	○	○	○	○	○
Feedback on www (within 7 days)	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	■	■	■	■	■	■
GPS clock estimate gives fringes	⊗	⊗	⊗	⊗	⊗	⊗	⊗	☐	⊗	⊗	○	○	○	⊗	⊗	⊗	⊗	⊗	⊗	○
Clock rate in psec/sec	0.01	0.07	-0.14	-0.02	0.06	-0.57	0.80	-	0	0.08	-0.64	-0.34	0	-0.04	0.01	0.01	0.01	0.01	0.01	-
Recording okay	⊗	⊗	⊗	⊗	⊗	⊗	⊗	☐	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	○
Polarization setup okay	⊗	⊗	⊗	⊗	⊗	⊗	⊗	☐	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	○
Strong signal amplitude	⊗	⊗	⊗	⊗	⊗	⊗	⊗	☐	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	○
Sampler statistics okay	⊗	⊗	⊗	⊗	⊗	⊗	⊗	☐	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	○
Please check BBC number(s):		all								1/9										
Previous reported problem(s) corrected																				
Problem(s) first reported									■											
See enclosed footnote(s):		a	b				c	d	e	f	g	g	g		h	h	h	h	h	i

Enclosure: Footnotes L-band 18/21cm N22L1

Footnotes to the Network Monitoring Report: **L-band 18/21cm** N22L1

General:

- 1) The NME included two frequency setups, one at 18cm (1594.99-1722.49MHz) to test the normal EVN recording frequencies, and one at 21cm (1306.35-1433.85MHz) to test with FAST. The FAST data was not transferred to JIVE for correlation.
 - 2) The test at 21cm used faint sources as FAST was the priority, and the detections are low on EVN baselines. The 18cm section had no issues.
 - 3) As this is an L-band test, there is a lot of RFI, which I will not list station to station. I also note that the UK had very bad weather during the observation, and as a result Jb2 and the eMERLIN stations had to stow fairly early into the experiment.
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- a) **Wb, Westerbork** Strong polarization leakage across all subbands, resulting in elevated RL/LR values.
 - b) **Ef, Effelsberg:** Had to stow early into the experiment.
 - c) **T6, Tianma:** Recorded linear polarizations that were polconverted to circular for this report.
 - d) **Ur, Urumqi:** Could not participate in the observations due to IVS commitments.
 - e) **Tr, Torun:** Phase instability in time, which persisted over a year. The issue was eventually solved.
 - f) **Hh, Hartebeesthoek:** Strong polarization leakage across the middle subbands (1/9 USB and 2/10 LSB).
 - g) **Sv/Zc/Bd, Quasar stations:** The Russo-Ukrainian War started just days before these observations. The Quasars stations participated in the FTP test without a problem. However, following an EVN Council decision, the full 3-hour dataset was not correlated and the Russian stations were suspended from the EVN. This is an issue to this day and the Council decision has been in affect for all experiments since.
 - h) **Cm/Da/Kn/Pi/De, eMerlin stations:** No www feedback. Also no log information or antab recording (not possible with current setup).
 - i) **Fa, FAST:** Took part in the 21cm part of the test without any data transfer (neither during or after experiment). Their team correlated the EVN+FAST data outside of JIVE.