

# Network Monitoring Report: K-band N12K4

**Source:** J2025+3343, 3C454.3, and J2254+1341    **Length:** 180 min.    **Observing mode:** Mk IV, mode 512-8-2, RCP & LCP.  
**Reference antenna:** Effelsberg    **Date of observations:** 06/11/12    **Reference date:** 06/11/12; 311d 13h 00m  
**Experiment code:** N12K4    **Date of report:** 14/02/13    **by:** Jun Yang

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

	Jb	Ef	Zc	Bd	Nt	On	Sh	Sv	Ur	Tr	Ys	Hh	Mh	Ku	Kt	Ky
Station has observed	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Station produced fringes (ftp)	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	○	⊗
Station produced fringes (disk)	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Filled in TRACK	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	○	○	○
Logs are available (within 72 hours)	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
GPS data available (within 7 days)	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	○	○	○
Disks are available (within 7 days)	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Feedback on www (within 7 days)	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	○	○	○
GPS clock estimate gives fringes	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Clock offset in $\mu$ sec	0.125	-10.551	214.267	-9.268	74.906	117.454	214.556	2.247	10.425	-2.402	4.544	-1.896	-3.941	-3.857	-7.125	-7.125
Clock rate in psec/sec	-0.127	-0.347	0	-0.929	0.477	0.687	-0.246	0.140	-0.038	-0.172	0.454	0.035	-0.523	-0.410	-0.786	-0.786
Recording okay	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Polarization setup okay	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Strong signal amplitude	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	■	■	■	⊗	⊗	⊗	⊗
Phase cal aligns phases	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Sampler statistics okay	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Please check VC number(s):																
Previous reported problem(s) corrected																
Problem(s) first reported																
See enclosed footnote(s):																

**Enclosure:** Footnotes K-band N12K4

# Footnotes to the Network Monitoring Report: K-band N12K4

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**General:** The number of the participating stations went to 15, a new record at 22 GHz in the EVN history. There were the first fringes to Torun new K-band receiver. The KVN stations Yonsei (Ky), Ulsan (Ku) and Tamna (Kt) also participated the observations and sent disk packs to JIVE for the first time. There were beautiful fringes to all the KVN stations in the production correlation.

- a) **Nt, Noto:** No LCP lightpath. Noto DBBC backend was also used while had polarisation swap in the first ~45 minutes. Fringes in RCP were clearly seen to both backends across all subbands.
- b) **On, Onsala:** Onsala DBBC was also tested. The digital backend Od swapped polarisation at the beginning and later had improper frequency setup.
- c) **Sv, Svetloe:** The correlation amplitude in LCP subbands was clearly lower (~0.7x) than that in RCP subbands. If it is not a feature of the receiver, the sensitivity loss in LCP should be investigated.
- d) **Tr, Torun:** Fringes were seen across all subbands, while not as strong as they should be because the antenna pointing calibration was not done yet.
- e) **Hh, Hartebeesthoek:** There were weak fringes to both MK4 and DBBC backends in the production correlation. The earlier FTP-FT report of no fringes was because the ftp scans were too short (< 8 second) to give enough sensitivity (Hh: SEFD > 1000 Jy at 22 GHz).

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*Questions? yang@jive.nl*

Report ends