Network Monitoring Report: **X-band 3.6cm** F24X1

Source: J0854+2006 **Length:** 60 min. **Observing mode:** 4096 Mbps, 32x32 MHz, 2 bits, dual pol.
Reference antenna: Effelsberg **Date of observations:** 04/03/24 **Reference date:** 64d 18h 00m
Experiment code: F24X1 **Date of report:** 25/06/25 **by:** Gabor Orosz

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

	Wb	Ef	Mc	Nt	O6	T6	Ur	Tr	Ys	Hh	Ir	Km
Station has observed	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Station produced fringes (ftp)	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Station produced fringes (disk)	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Logs are available (within 72 h)	⊗	⊗	⊗	⊗	⊗	■	⊗	■	⊗	⊗	⊗	⊗
Antabs on vlbeer (within 7 days)	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	◯
Feedback on www (within 7 days)	⊗	⊗	⊗	⊗	⊗	■	⊗	⊗	⊗	⊗	⊗	■
GPS clock estimate gives fringes	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Clock rate in psec/sec	0.13	0.27	−0.04	−0.003	−0.65	0.77	−0.53	0.06	1.36	0.01	0.19	−0.24
Recording okay	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Polarization setup okay	⊗	⊗	⊗	⊗	⊗	⊗	⊗	■	⊗	⊗	⊗	⊗
Strong signal amplitude	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Sampler statistics okay	⊗	⊗	⊗	⊗	⊗	⊗	⊗	■	⊗	⊗	⊗	⊗
Please check BBC number(s):			01/09			01/09		05				01/05
Previous problem(s) corrected											■	■
Problem(s) first reported												
See enclosed footnote(s):			a			a		b			c	a/d

Enclosure: Footnotes X-band 3.6cm F24X1

Footnotes to the Network Monitoring Report: **X-band 3.6cm** F24X1

General:
1) Kunming achieved first fringes to EVN stations with a 4 Gbps setup using a Mark 6 recorder and DBBC2 backend system.
2) Westerbork and Urumqi recorded at 1 Gbps and 2 Gbps respectively due to system limitations, while other stations operated at the full data rate.
3) Recording at 4 Gbps pushes some stations beyond their optimal local oscillator frequency ranges. This affects the lowest frequency channels (1-4, corresponding to 8.1-8.2 GHz) most severely, with secondary effects on the highest channels (13-16, corresponding to 8.3-8.4 GHz). This is expected behavior for stations operating at maximum data rates.

a) Mc/T6/Km, Medicina/Tianma/Kunming: Lower band edge loses sensitivity due LO range constraints at 4 Gbps recording (expected).
b) Tr, Torun: Swapped polarization inputs at the hardware level. The vex file was modified to account for the swap, but this correction is not perfect that still lead to some amplitude and phase irregularities. See e.g., BBC05 (USB) RCP for reduced amplitudes in the middle.
c) Ir, Irbene 32m: Fixed secondary mirror position issue (see N24X1). Sensitivity levels back to normal.
d) Km, Kunming: Solved problems with the Mark 6 recorder. Strong fringes with a 4 Gbps setup.