

F181A Correlation Report

General information

- Session info: <http://www3.mpifr-bonn.mpg.de/div/vlbi/globalmm/>
- Station feedback: http://www3.mpifr-bonn.mpg.de/div/vlbi/globalmm/sessions/apr18/feedback_apr18.asc
- ftp fringe test for European stations before the GMVA spring session 2018 (c181)
- day 102. UT 12:00-14:00
- sources: 3C454.3, IKTAU (SiO line at 86225.06105 MHz), 3C120

Fringes

Complete scan 1, fringe plots of all stations, including auto correlations: [No0001_all.pdf](#)

Vex file, used in correlations: [f181a.vex](#)

Station	Code	Fringes	Plots	Comments
Ef	B	yes	<p>EfMh, all pols, scan 1: f181a No0001 3C454.3 BZ LL.pdf, f181a No0001 3C454.3 BZ LR.pdf, f181a No0001 3C454.3 BZ RL.pdf, f181a No0001 3C454.3 BZ RR.pdf</p> <p>EfMh. all pols, scan 2: f181a No0002 3C454.3 BZ LL.pdf, f181a No0002 3C454.3 BZ LR.pdf, f181a No0002 3C454.3 BZ RL.pdf, f181a No0002 3C454.3 BZ RR.pdf</p> <p>EfOn, all pols, scan 1: f181a No0001 3C454.3 BX LL.pdf, f181a No0001 3C454.3 BX LR.pdf, f181a No0001 3C454.3 BX RL.pdf, f181a No0001 3C454.3 BX RR.pdf</p> <p>EfPv, all pols, scan 1: f181a No0001 3C454.3 BP LL.pdf, f181a No0001 3C454.3 BP LR.pdf, f181a No0001 3C454.3 BP RL.pdf, f181a No0001 3C454.3 BP RR.pdf</p> <p>EfYs, LL only, scan 1: f181a No0001 3C454.3 BY LL.pdf</p> <p>EfYs, LL and LR, scan 2: f181a No0002 3C454.3 BY LL.pdf, f181a No0002 3C454.3 BY LR.pdf</p>	<p>Good weather. See additional notes below.</p>
On	X	yes	<p>EfOn, all pols, scan 1: f181a No0001 3C454.3 BX LL.pdf, f181a No0001 3C454.3 BX LR.pdf, f181a No0001 3C454.3 BX RL.pdf, f181a No0001 3C454.3 BX RR.pdf</p>	<p>Good weather, Tsys* ~180</p>

Station	Code	Fringes	Plots	Comments
			<p>OnPv, all pols, scan 1: f181a No0001 3C454.3 XP LL.pdf, f181a No0001 3C454.3 XP LR.pdf, f181a No0001 3C454.3 XP RL.pdf, f181a No0001 3C454.3 XP RR.pdf</p> <p>MhOn, all pols, scan 1: f181a No0001 3C454.3 ZX LL.pdf, f181a No0001 3C454.3 ZX LR.pdf, f181a No0001 3C454.3 ZX RL.pdf, f181a No0001 3C454.3 ZX RR.pdf</p>	<p>K at El 33 deg. See additional notes below.</p>
Ys	Y	yes	<p>EfYs, LL only, scan 1: f181a No0001 3C454.3 BY LL.pdf</p> <p>EfYs, LL and LR, scan 2: f181a No0002 3C454.3 BY LL.pdf, f181a No0002 3C454.3 BY LR.pdf</p> <p>PvYs, LL and LR, scan 1: f181a No0001 3C454.3 PY LL.pdf, f181a No0001 3C454.3 PY LR.pdf</p>	<p>Overcast, light wind. As usual, Ys observed LCP only, but it was also recorded as fake RCP, that's why LR fringes are also common.</p>
Mh	Z	yes	<p>EfMh, all pols, scan 1: f181a No0001 3C454.3 BZ LL.pdf, f181a No0001 3C454.3 BZ LR.pdf, f181a No0001 3C454.3 BZ RL.pdf, f181a No0001 3C454.3 BZ RR.pdf</p> <p>EfMh. all pols, scan 2: f181a No0002 3C454.3 BZ LL.pdf, f181a No0002 3C454.3 BZ LR.pdf, f181a No0002 3C454.3 BZ RL.pdf, f181a No0002 3C454.3 BZ RR.pdf</p> <p>MhPv, all pols, scan 1: f181a No0001 3C454.3 ZP LL.pdf, f181a No0001 3C454.3 ZP LR.pdf, f181a No0001 3C454.3 ZP RL.pdf, f181a No0001 3C454.3 ZP RR.pdf</p> <p>MhOn, all pols, scan 1: f181a No0001 3C454.3 ZX LL.pdf, f181a No0001 3C454.3 ZX LR.pdf, f181a No0001 3C454.3 ZX RL.pdf, f181a No0001 3C454.3 ZX RR.pdf</p>	<p>Clear sky.</p>

Station	Code	Fringes	Plots	Comments
Pv	P	yes	<p>EfPv, all pols, scan 1: f181a No0001 3C454.3 BP LL.pdf, f181a No0001 3C454.3 BP LR.pdf, f181a No0001 3C454.3 BP RL.pdf, f181a No0001 3C454.3 BP RR.pdf</p> <p>OnPv, all pols, scan 1: f181a No0001 3C454.3 XP LL.pdf, f181a No0001 3C454.3 XP LR.pdf, f181a No0001 3C454.3 XP RL.pdf, f181a No0001 3C454.3 XP RR.pdf</p> <p>MhPv, all pols, scan 1: f181a No0001 3C454.3 ZP LL.pdf, f181a No0001 3C454.3 ZP LR.pdf, f181a No0001 3C454.3 ZP RL.pdf, f181a No0001 3C454.3 ZP RR.pdf</p> <p>PvYs, LL and LR, scan 1: f181a No0001 3C454.3 PY LL.pdf, f181a No0001 3C454.3 PY LR.pdf</p>	<p>Light snowfall, therefore late start. Weather degraded later, stopped at ~UT 13:25.</p>

Notes

- **Ef:** It was found that Ef channels were not a05,a06,a07,a08,a09,a10,a11,a12,b05,b06,b07,b08,b09,b10,b11,b12 (first all frequencies of one polarization, then all frequencies of the other polarization) as expected, but rather a05,b05,a06,b06,a07,b07,a08,b08,a09,b09,a10,b10,a11,b11,a12,b12 (swapping polarizations back and forth for each frequency). This was fixed by editing the vex file's \$FREQ and \$BBC sections specifically for Ef, see the vex file above.
- **On:** Jun Yang: "Onsala scan 1 should be OK. While, our scans 2 and 3 might have some problems after restarting the FS and the schedule to fix a problem related to caltsys. I saw only half bandwidth, 16 MHz , in the first subband in my auto-correlation plot. So, I skipped scan 4 and reloaded PFB firmware before scan 5. Currently, I have not seen the problem any more."
- Clock searching was not performed during the test for the sake of speed, clocks were used from the previous session, correlation was run with 2048 channels.

Post-Correlation checks

Residuals

FITS completeness (pclist)