

# C202C / MK018 Correlation Report

## General information

- Consists of only one science project: **MK018**
- Special frequency: 88GHz
- PI: KIM
- Targets: NGC1052 (0238-084)
- Session info: <http://www3.mpifr-bonn.mpg.de/div/vlbi/globalmm/>
- Station feedback: [http://www3.mpifr-bonn.mpg.de/div/vlbi/globalmm/sessions/oct20/feedback\\_oct20.asc](http://www3.mpifr-bonn.mpg.de/div/vlbi/globalmm/sessions/oct20/feedback_oct20.asc)
- Text files with detailed antenna statistics, scroll down to get to the cumulative statistics for the whole experiment:

[c202c ALL.antrep](#)

## Current Status

Preliminary correlation finished, preliminary release to PI on 28.04.2021.

Production correlation in custom modes (see Notes below) finished, release to PI on 31.05.2021.

## Fringes

Station	Code	Fringes	Plots	Comments
Ef	B	yes	<p>Fringe overview of all baselines including this antenna in LL(left for each baseline) and RR (right for each baseline).</p> <p>Legend: white box - scheduled, but no data (or sometimes fourfit had trouble with the particular baseline/pol, so no data in alist), blue - no fringe, shades of green and brown -- fringes of varying quality.</p> <p><a href="#">c202c FRINGE RfAnt Ef LLRR AllSrc.pdf</a></p> <p>Examples of fourfit fringe plots can be found in (all fringe plots with baselines including the given antenna):</p> <p><a href="#">No0038_B.pdf</a></p> <p>Antenna statistics:</p> <p><a href="#">c202c Ef.antrep</a></p> <p><b>Same for all antennas below unless otherwise noted.</b></p>	<p>Participated in 100% scans, fringes in 47% baselines*  pols, mean SNR 105.</p>
On	X	yes	<p><a href="#">c202c FRINGE RfAnt On LLRR AllSrc.pdf</a></p> <p><a href="#">No0057_X.pdf</a></p> <p><a href="#">c202c On.antrep</a></p>	<p>Participated in 100% scans, fringes in 21% baselines*  pols, mean SNR 70.</p> <p><b>receiver problems for half of this experiment, scans useless although present in the data. See log for details and fringe map for good and bad scans.</b></p>

Ys	Y	yes	<a href="#">c202c FRINGE RfAnt Ys LLRR AllSrc.pdf</a> <a href="#">No0038 Y.pdf</a> <a href="#">c202c Ys.antrep</a>	Participated in 93% scans, fringes in 54% baselines*  pols, mean SNR 200.
Mh	Z	yes	<a href="#">c202c FRINGE RfAnt Mh LLRR AllSrc.pdf</a> <a href="#">No0057 Z.pdf</a> <a href="#">c202c Mh.antrep</a>	Participated in 74% scans, fringes in 30% baselines*  pols, mean SNR 25.
Pv	P	yes	<a href="#">c202c FRINGE RfAnt Pv LLRR AllSrc.pdf</a> <a href="#">No0038 P.pdf</a> <a href="#">c202c Pv.antrep</a>	Participated in 100% scans, fringes in 57% baselines*  pols, mean SNR 257.
VLBA: Br	b	yes	<a href="#">c202c FRINGE RfAnt Br LLRR AllSrc.pdf</a> <a href="#">No0079 b.pdf</a> <a href="#">c202c Br.antrep</a>	Participated in 100% scans, fringes in 25% baselines*  pols, mean SNR 24.
VLBA: Fd	f	yes	<a href="#">c202c FRINGE RfAnt Fd LLRR AllSrc.pdf</a> <a href="#">No0038 f.pdf</a> <a href="#">No0075 f.pdf</a> <a href="#">c202c Fd.antrep</a>	Participated in 100% scans, fringes in 37% baselines*  pols, mean SNR 30.
VLBA: Kp	k	yes	<a href="#">c202c FRINGE RfAnt Kp LLRR AllSrc.pdf</a> <a href="#">No0042 k.pdf</a> <a href="#">c202c Kp.antrep</a>	Participated in 99% scans, fringes in 37% baselines*  pols, mean SNR 25.
VLBA: La	l	yes	<a href="#">c202c FRINGE RfAnt La LLRR AllSrc.pdf</a> <a href="#">No0038 l.pdf</a> <a href="#">No0075 l.pdf</a> <a href="#">c202c La.antrep</a>	Participated in 98% scans, fringes in 38% baselines*  pols, mean SNR 31.  Data corrupted in scan 39, it was excluded from the correlations.
VLBA: Mk	m	yes	<a href="#">c202c FRINGE RfAnt Mk LLRR AllSrc.pdf</a>	Participated in 100% scans, fringes in 19% baselines*  pols, mean SNR 19.

			<a href="#">No0089_m.pdf</a> <a href="#">c202c_Mk.antrep</a>	
VLBA: Nl	n	yes	<a href="#">c202c_FRINGE_RfAnt_Nl_LLRR_AllSrc.pdf</a> <a href="#">No0075_n.pdf</a> <a href="#">c202c_Nl.antrep</a>	Participated in 100% scans, fringes in 7% baselines*  pols, mean SNR 11.  <b>rain</b>
VLBA: Ov	o	yes	<a href="#">c202c_FRINGE_RfAnt_Ov_LLRR_AllSrc.pdf</a> <a href="#">No0079_o.pdf</a> <a href="#">c202c_Ov.antrep</a>	.Participated in 100% scans, fringes in 24% baselines*  pols, mean SNR 28.
VLBA: Pt	p	yes	<a href="#">c202c_FRINGE_RfAnt_Pt_LLRR_AllSrc.pdf</a> <a href="#">No0089_p.pdf</a> <a href="#">c202c_Pt.antrep</a>  -----	Participated in 100% scans, fringes in 20% baselines*  pols, mean SNR 19.  <b>lots of technical problems, see logs</b>

## Notes

Preliminary correlation has been done in the standard configuration tint = 0.5 sec, 8x64MHz IFs per polarization, 64 channels, and is intended only as a data and antenna performance check.

The main production correlation uses the following setup:

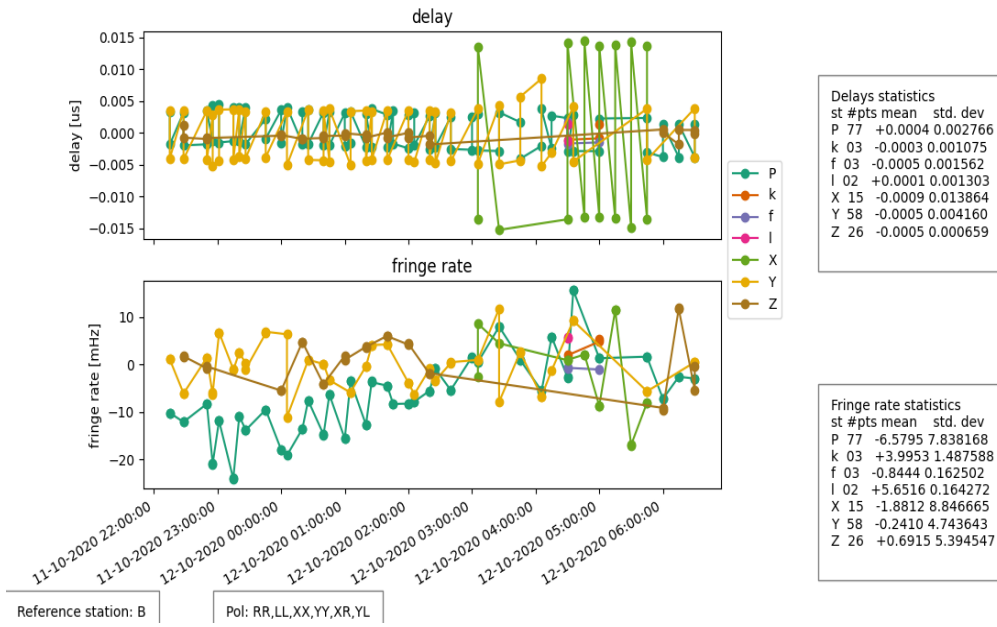
tint = 0.5 sec, 4 x 128 MHz IFs, 128 channels (continuum)

tint = 1 sec, 4 x 128 MHz IFs, 512 channels (line).

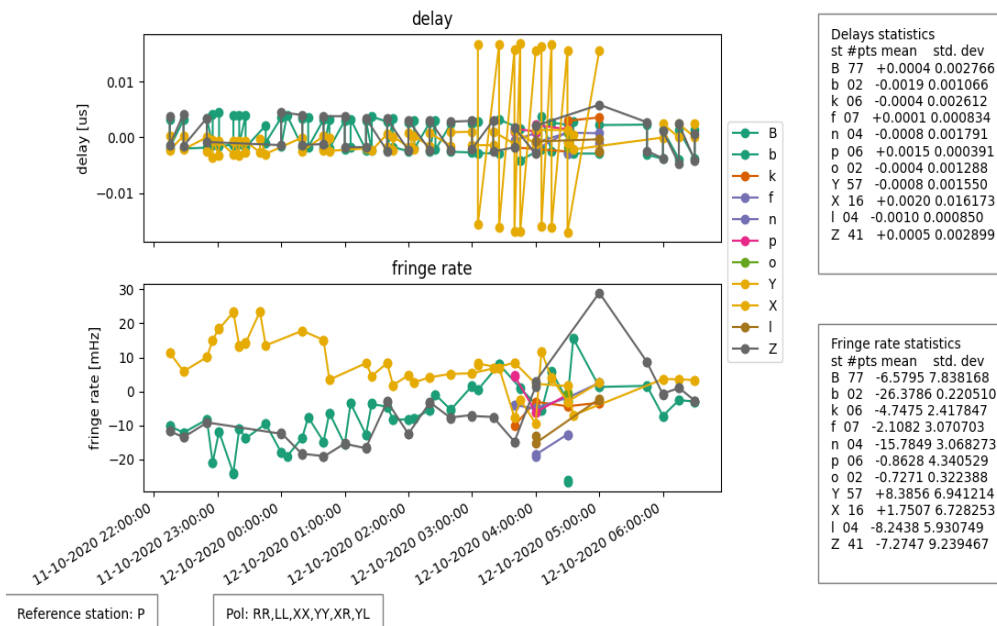
## Post-Correlation checks

### Residuals

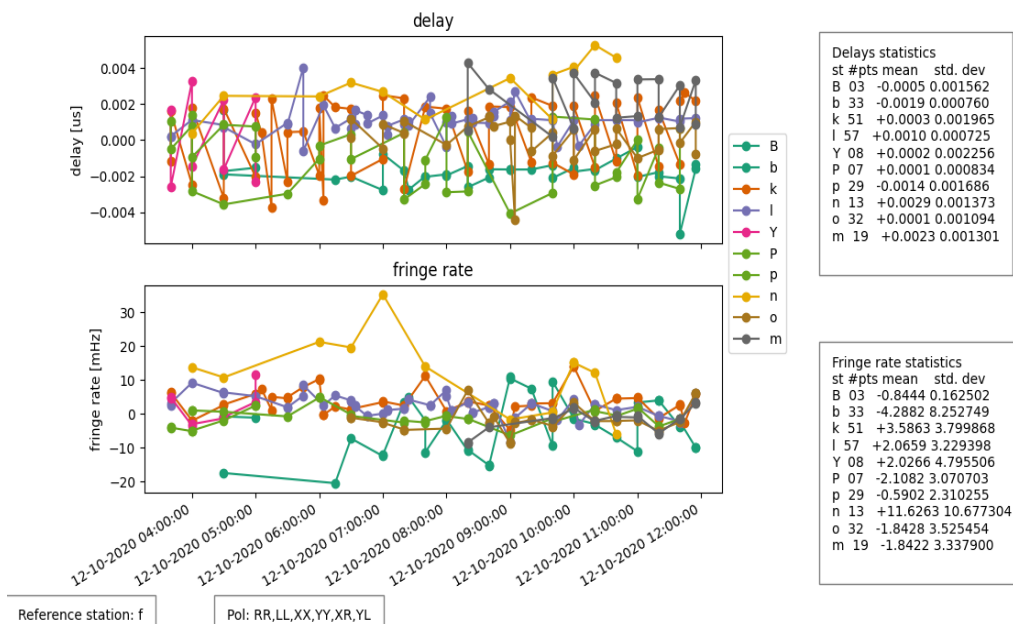
Ef as reference:



Pv as reference:



Fd as reference:



### FITS completeness (plist)

**legend:**

- o -- station scheduled and fully accounted for in the fits file
- 42 (or another number) -- station scheduled, but data found only for 42% of the scheduled interval
- x -- station scheduled, but corresponding entry not found in the fits file
- . -- station not scheduled

**c201c.fits:**

					EF	ON	YS	PV	MH	FD	NL	OV	PT	BR	KP	LA	MK
c202c_01	No0001	3C84	88ghz_ddc	o	o	o	o	o	.	.	.	.	.	.	.	.	.
c202c_02	No0002	3C84	88ghz_ddc	o	o	o	o	o	.	.	.	.	.	.	.	.	.
c202c_03	No0003	0235+164	88ghz_ddc	o	o	o	o	o	.	.	.	.	.	.	.	.	.
c202c_04	No0004	NGC1052	88ghz_ddc	o	o	o	o	o	.	.	.	.	.	.	.	.	.
c202c_05	No0005	NGC1052	88ghz_ddc	o	o	o	o	o	.	.	.	.	.	.	.	.	.
c202c_06	No0006	3C120	88ghz_ddc	o	o	o	o	o	.	.	.	.	.	.	.	.	.
c202c_07	No0007	NGC1052	88ghz_ddc	o	o	o	o	o	.	.	.	.	.	.	.	.	.
c202c_08	No0008	NGC1052	88ghz_ddc	o	o	o	o	o	.	.	.	.	.	.	.	.	.
c202c_09	No0009	3C120	88ghz_ddc	o	o	o	o	o	.	.	.	.	.	.	.	.	.
c202c_10	No0010	NGC1052	88ghz_ddc	o	o	o	o	o	.	.	.	.	.	.	.	.	.
c202c_11	No0011	0420-014	88ghz_ddc	o	o	o	o	o	.	.	.	.	.	.	.	.	.
c202c_12	No0012	NGC1052	88ghz_ddc	o	o	o	o	o	.	.	.	.	.	.	.	.	.
c202c_13	No0013	0420-014	88ghz_ddc	o	o	o	o	o	.	.	.	.	.	.	.	.	.
c202c_14	No0014	NGC1052	88ghz_ddc	o	o	o	o	o	.	.	.	.	.	.	.	.	.
c202c_15	No0015	0420-014	88ghz_ddc	o	o	o	o	o	.	.	.	.	.	.	.	.	.
c202c_16	No0016	NGC1052	88ghz_ddc	o	o	o	o	o	.	.	.	.	.	.	.	.	.
c202c_17	No0017	0420-014	88ghz_ddc	o	o	o	o	o	.	.	.	.	.	.	.	.	.



c202c_68	No0068	NGC1052	88ghz_ddc	.	.	.	.	.	o	o	o	o	o	o	o	o	o
c202c_69	No0069	0420-014	88ghz_ddc	.	.	.	.	.	o	o	o	o	o	o	o	o	o
c202c_70	No0070	NGC1052	88ghz_ddc	.	.	.	.	.	o	o	o	o	o	o	o	o	o
c202c_71	No0071	0420-014	88ghz_ddc	.	.	.	.	.	o	o	o	o	o	o	o	o	o
c202c_72	No0072	NGC1052	88ghz_ddc	.	.	.	.	.	o	o	o	o	o	o	o	o	o
c202c_73	No0073	0420-014	88ghz_ddc	.	.	.	.	.	o	o	o	o	o	o	o	o	o
c202c_74	No0074	NGC1052	88ghz_ddc	.	.	.	.	.	o	o	o	o	o	o	o	o	o
c202c_75	No0075	0420-014	88ghz_ddc	.	.	.	.	.	o	o	o	o	o	o	o	o	o
c202c_76	No0076	NGC1052	88ghz_ddc	.	.	.	.	.	o	o	o	o	o	o	o	o	o
c202c_77	No0077	0420-014	88ghz_ddc	.	.	.	.	.	o	o	o	o	o	o	o	o	o
c202c_78	No0078	NGC1052	88ghz_ddc	.	.	.	.	.	o	o	o	o	o	o	o	o	o
c202c_79	No0079	0420-014	88ghz_ddc	.	.	.	.	.	o	o	o	o	o	o	o	o	o
c202c_80	No0080	NGC1052	88ghz_ddc	.	.	.	.	.	o	o	o	o	o	o	o	o	o
c202c_81	No0081	0420-014	88ghz_ddc	.	.	.	.	.	o	o	o	o	o	o	o	o	o
c202c_82	No0082	NGC1052	88ghz_ddc	.	.	.	.	.	o	o	o	o	o	o	o	o	o
c202c_83	No0083	0420-014	88ghz_ddc	.	.	.	.	.	o	o	o	o	o	o	o	o	o
c202c_84	No0084	NGC1052	88ghz_ddc	.	.	.	.	.	o	o	o	o	o	o	o	o	o
c202c_85	No0085	0420-014	88ghz_ddc	.	.	.	.	.	o	o	o	o	o	o	o	o	o
c202c_86	No0086	NGC1052	88ghz_ddc	.	.	.	.	.	o	o	o	o	o	o	o	o	o
c202c_87	No0087	0420-014	88ghz_ddc	.	.	.	.	.	o	o	o	o	o	o	o	o	o
c202c_88	No0088	NGC1052	88ghz_ddc	.	.	.	.	.	o	o	o	o	o	o	o	o	o
c202c_89	No0089	3C84	88ghz_ddc	.	.	.	.	.	o	o	o	o	o	o	o	o	o