

MK011 Correlation Report

General information

- A part of [C191E](#)
- PI: Koyama
- Targets: 3C345, MRK501, 1633+38, 3C454.3
- Session info: <http://www3.mpifr-bonn.mpg.de/div/vlbi/globalmm/>
- Station feedback: http://www3.mpifr-bonn.mpg.de/div/vlbi/globalmm/sessions/apr19/feedback_apr19.asc
- Text file with detailed antenna statistics, scroll down to get to the cumulative statistics for the whole experiment:
[c191e.antrep](#)

Current Status

correlation finished, data **released** on 19/09/2019.

the **second release** was made on 18/01/2020 to fix the double autocorrelation issue.

Fringes

Fourfit fringe plots with fringes to multiple antennas:

Scan No0110, source 3C345, fringes to Ef, On, Ys, Mh, Pv, Gl, Br, Fd, Kp, La, Mk, Nl, Pt: [No0110_all.pdf](#)

Scan No0159, source 3C345, fringes to Gl, Br, Fd, Kp, La, Nl, Ov, Pt: [No0159_all.pdf](#)

Station	Code	Fringes	Plots	Comments
Ef	B	yes	<p>Fringe overview of all baselines (all of C191E) including this antenna in LL (left for each baseline) and RR (right for each baseline).</p> <p>Legend: white - scheduled, but no data, blue - no fringe, dark red/brown/green - fringes of different quality.</p> <p>c191e_FRINGE_RfAnt_Ef_LLRR_AllSrc.pdf</p> <p>Examples of fourfit fringe plots:</p> <p>No0110_all.pdf</p> <p>Same for all antennas below unless otherwise noted.</p>	weather mixed, everything from clear sky to light rain
On	X	yes	<p>c191e_FRINGE_RfAnt_On_LLRR_AllSrc.pdf</p> <p>No0110_all.pdf</p>	
Ys	Y	yes	<p>c191e_FRINGE_RfAnt_Ys_LLRR_AllSrc.pdf</p> <p>No0110_all.pdf</p>	

Station	Code	Fringes	Plots	Comments
Mh	Z	yes	c191e FRINGE RfAnt Mh LLRR AllSrc.pdf No0110_all.pdf	Rain, snow and wet snow over the whole experiment
Pv	P	yes	c191e FRINGE RfAnt Pv LLRR AllSrc.pdf No0110_all.pdf	
GLT: Gl	g	yes	Here bright red - false fringe (mostly to KVN), determined by having extremely large single-band delay, often > 0.1us. c191e SBD RfAnt Gl LLRR AllSrc.pdf No0110_all.pdf , No0159_all.pdf	confirmed correct polarization configuration for this session
VLBA: Br	b	yes	Here bright red - false fringe (mostly to KVN), determined by having extremely large single-band delay, often > 0.1us. c191e SBD RfAnt Br LLRR AllSrc.pdf No0110_all.pdf , No0159_all.pdf	problems with 7mm, possibly affecting pointing
VLBA: Fd	f	yes	Here bright red - false fringe (mostly to KVN), determined by having extremely large single-band delay, often > 0.1us. c191e SBD RfAnt Fd LLRR AllSrc.pdf No0110_all.pdf , No0159_all.pdf	
VLBA: Kp	k	yes	Here bright red - false fringe (mostly to KVN), determined by having extremely large single-band delay, often > 0.1us. c191e SBD RfAnt Kp LLRR AllSrc.pdf No0110_all.pdf , No0159_all.pdf	
VLBA: La	l	yes	c191e FRINGE RfAnt La LLRR AllSrc.pdf No0110_all.pdf , No0159_all.pdf	
VLBA: Mk	m	yes	c191e FRINGE RfAnt Mk LLRR AllSrc.pdf No0110_all.pdf	Windy. Taken out for several scans because of USNO observing. Some time loss due to recording failure.

Station	Code	Fringes	Plots	Comments
VLBA: Nl	n	yes	c191e FRINGE RfAnt Nl LLRR AllSrc.pdf No0110_all.pdf , No0159_all.pdf	
VLBA: Ov	o	yes	c191e FRINGE RfAnt Ov LLRR AllSrc.pdf No0159_all.pdf	Down for most of the experiment due to critical technical failures.
VLBA: Pt	p	yes	c191e FRINGE RfAnt Pt LLRR AllSrc.pdf No0110_all.pdf , No0159_all.pdf	Taken out for several scans because of USNO observing. Paked for half hour due to cryo work.
KVN: Kt	t	no	Here bright red - false fringe, determined by having extremely large single-band delay, often > 0.1us. c191e SBD RfAnt Kt LLRR AllSrc.pdf	no fringes, except falsely found by fourfit
KVN: Ku	u	no	Here bright red - false fringe, determined by having extremely large single-band delay, often > 0.1us. c191e FRINGE RfAnt Ku LLRR AllSrc.pdf	did not observe
KVN: Ky	y	no	Here bright red - false fringe, determined by having extremely large single-band delay, often > 0.1us. c191e SBD RfAnt Ky LLRR AllSrc.pdf	no fringes, except falsely found by fourfit

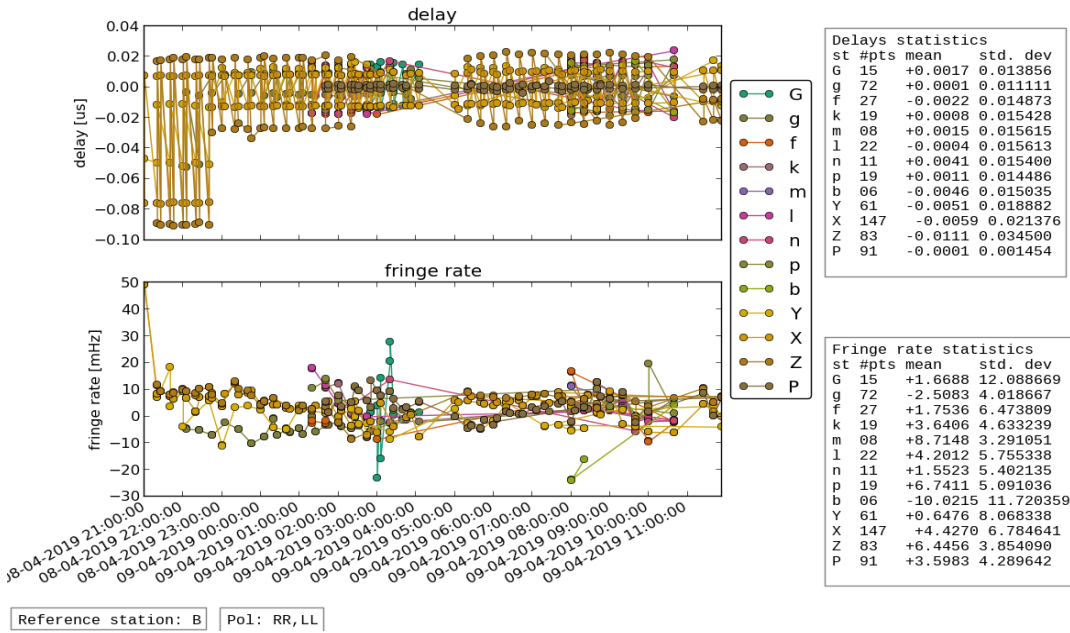
Notes

Due to an unknown yet technical problem fourfit detects false fringes for all baselines from Kt and Ky to GLT and three VLBA antennas, Br, Fd and Kp. They can be weeded off by extremely large fringe single-band delay.

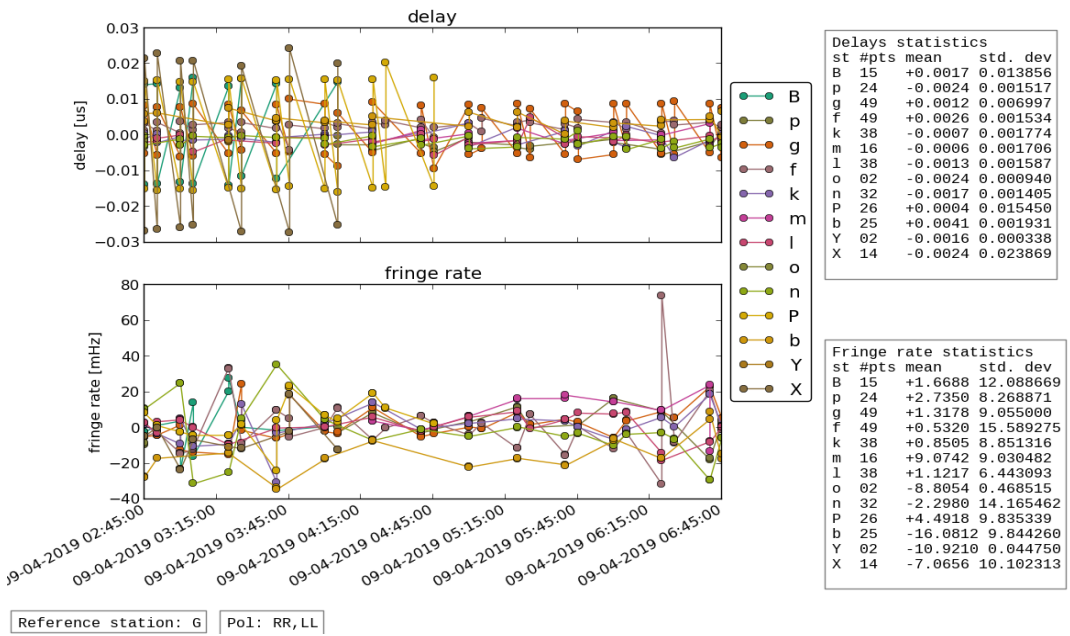
Post-Correlation checks

Residuals

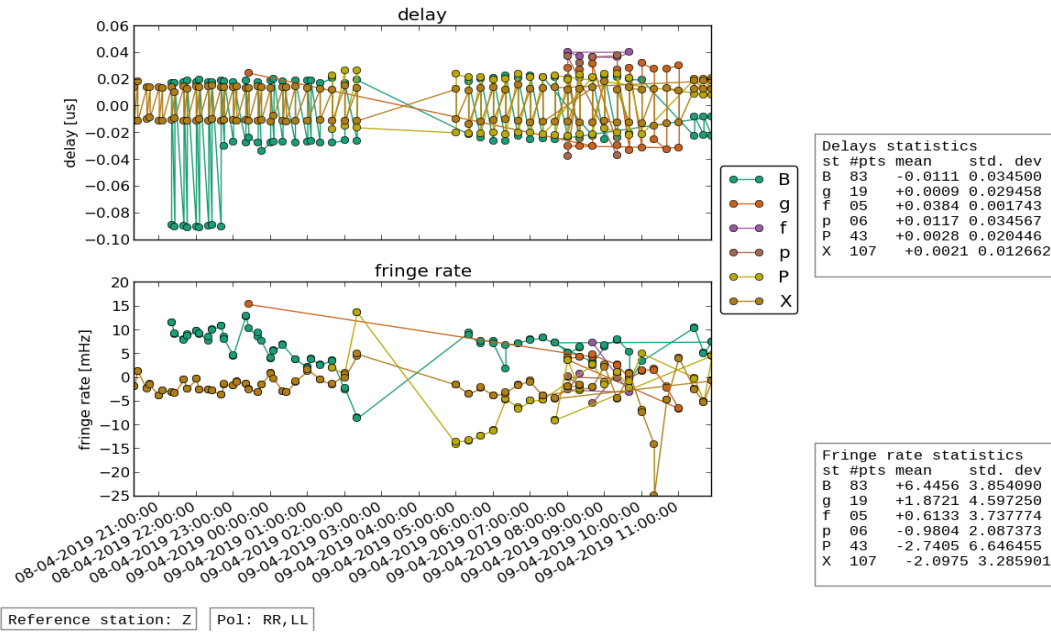
Ef:



GBT:



Mh:



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

mk011.fits:

			EF	ON	YS	PV	MH	GL	NL	FD	PT	LA	OV	KP	BR	MK	GB	KY	KU	KT
c191e_066	No0070	3C345 3mm_RDBE	o	o	o	o	o	.	.	.	.	.	.	.	.	.	.	.	.	.
c191e_067	No0071	MRK501 3mm_RDBE	o	o	o	o	o	.	.	.	.	.	.	.	.	.	.	.	.	.
c191e_070	No0075	3C345 3mm_RDBE	o	o	o	o	o	.	.	.	.	.	.	.	.	.	.	.	.	.
c191e_071	No0076	MRK501 3mm_RDBE	o	o	09	o	o	.	.	.	.	.	.	.	.	.	.	.	.	.
c191e_075	No0080	3C345 3mm_RDBE	o	o	o	o	o	.	.	.	.	.	.	.	.	.	.	.	.	.
c191e_076	No0081	MRK501 3mm_RDBE	o	o	o	o	o	.	.	.	.	.	.	.	.	.	.	.	.	.
c191e_079	No0085	3C345 3mm_RDBE	o	o	o	o	o	.	.	.	.	.	.	.	.	.	.	.	.	.
c191e_080	No0086	MRK501 3mm_RDBE	o	o	o	o	o	.	.	.	.	.	.	.	.	.	.	.	.	.
c191e_084	No0090	3C345 3mm_RDBE	o	o	o	o	o	.	.	.	.	.	.	.	.	.	.	.	.	.
c191e_085	No0091	MRK501 3mm_RDBE	o	o	o	o	o	.	.	.	.	.	.	.	.	.	.	.	.	.
c191e_088	No0095	3C345 3mm_RDBE	o	o	o	o	o	.	.	.	.	.	.	.	.	.	.	.	.	.
c191e_089	No0096	MRK501 3mm_RDBE	o	o	o	o	o	.	.	.	.	.	.	.	.	.	.	.	.	.
c191e_092	No0099	3C345 3mm_RDBE	o	o	x	o	o	.	.	.	.	.	.	.	.	.	.	.	.	.
c191e_093	No0100	MRK501 3mm_RDBE	o	o	o	o	o	.	.	.	.	.	.	.	.	.	.	.	.	.
c191e_096	No0103	3C345 3mm_RDBE	o	o	o	o	o	.	.	.	.	.	.	.	.	.	.	.	.	.
c191e_097	No0104	MRK501 3mm_RDBE	o	o	o	o	o
c191e_101	No0108	3C345 3mm_RDBE	o	o	o	o	o


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c191e_152 No0159 3C345 3mm_RDBE . . . . . o o 41 58 o 58 o 08 58 . o x o
c191e_153 No0160 MRK501 3mm_RDBE . . . . . o o 08 o 87 o o 37 o . o x o
c191e_154 No0161 1633+38 3mm_RDBE . . . . . o 41 o o o o o 58 o . o x o
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