

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

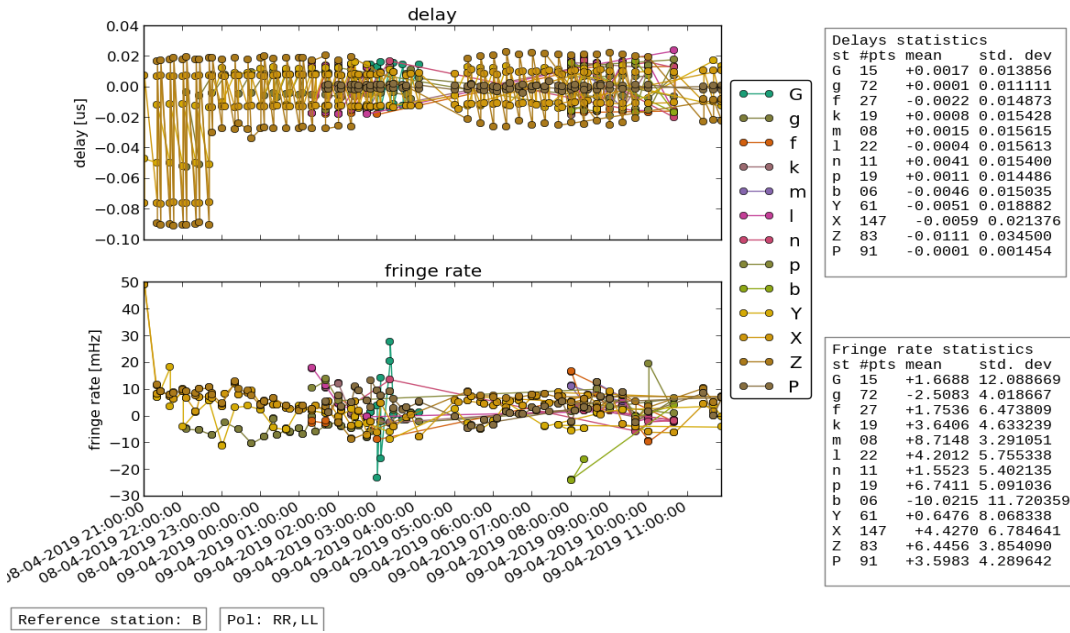
Notes

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.

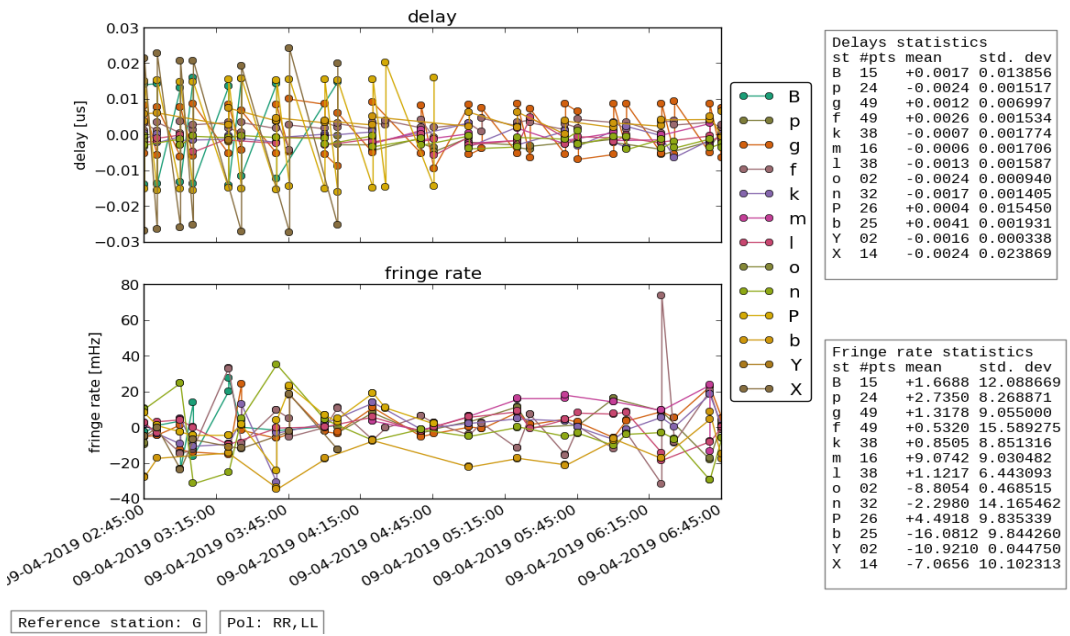
Post-Correlation checks

Residuals

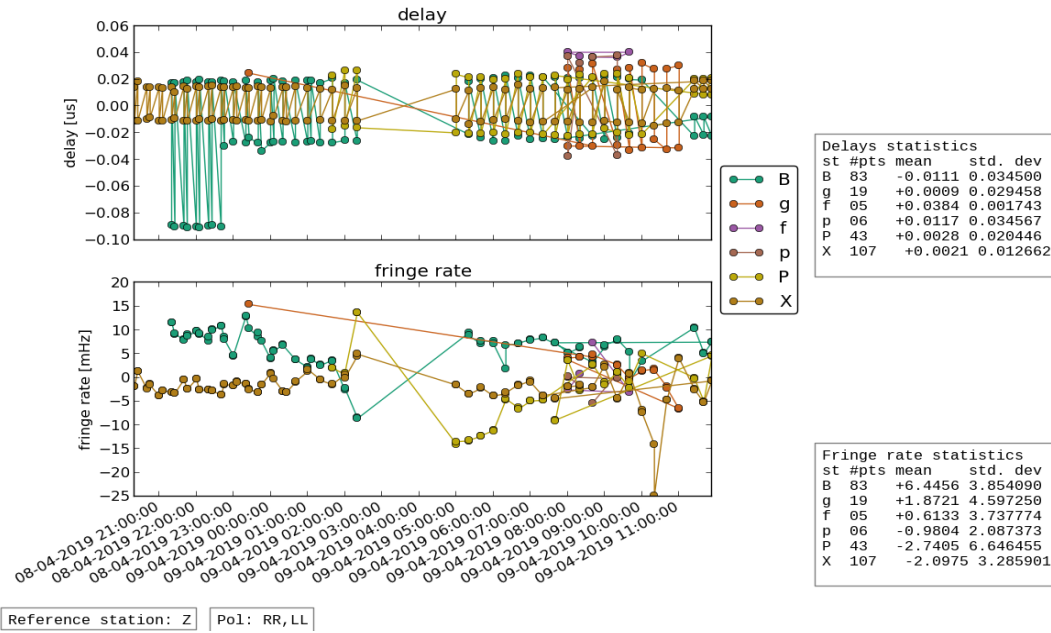
Ef:



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	.	.	.	.	.	.	.	.	.	.	.	.	.	.

c191e_102	No0109	MRK501	3mm_RDBE	o	o	o	o	o	.	.	.	.	.	.	.	.	.	.	.
c191e_103	No0110	3C345	3mm_RDBE	o	o	o	o	o	o	41	33	o	o	x	o	41	o	.	.	.	.
c191e_104	No0111	MRK501	3mm_RDBE	o	o	o	o	o	o	o	o	o	o	x	o	14	o	.	.	.	.
c191e_105	No0112	3C345	3mm_RDBE	o	o	o	o	o	o	16	41	41	o	x	o	41	o	.	.	.	.
c191e_106	No0113	MRK501	3mm_RDBE	o	o	o	o	o	o	o	47	o	o	x	o	38	o	.	.	.	.
c191e_107	No0114	3C345	3mm_RDBE	o	o	o	o	o	o	33	41	41	o	x	o	16	41	.	.	.	.
c191e_108	No0115	MRK501	3mm_RDBE	o	o	o	o	o	o	42	o	o	04	x	o	19	o	.	.	.	.
c191e_109	No0116	1633+38	3mm_RDBE	o	o	o	o	o	o	25	50	50	o	x	o	50	41	.	.	.	.
c191e_110	No0117	MRK501	3mm_RDBE	o	o	o	o	o	o	28	14	o	o	x	o	14	o	.	.	.	.
c191e_111	No0118	3C345	3mm_RDBE	o	o	o	o	o	o	16	41	41	o	x	o	16	41	.	.	.	.
c191e_112	No0119	MRK501	3mm_RDBE	o	o	o	o	o	o	23	o	o	o	x	o	14	o	.	.	.	.
c191e_113	No0120	3C345	3mm_RDBE	o	o	o	o	o	o	41	41	o	x	o	50	41	.	.	.	.	.
c191e_114	No0121	MRK501	3mm_RDBE	o	o	o	o	o	o	33	o	o	o	x	o	19	o	.	.	.	.
c191e_115	No0122	3C345	3mm_RDBE	o	o	o	o	o	o	41	41	o	x	o	25	41	.	.	.	.	.
c191e_116	No0123	MRK501	3mm_RDBE	o	o	o	o	o	o	19	o	33	x	o	19	o	.	.	.	.	.
c191e_117	No0124	3C345	3mm_RDBE	o	o	o	o	o	o	41	41	58	x	o	25	41	.	.	.	.	.
c191e_118	No0125	MRK501	3mm_RDBE	o	o	o	o	o	o	o	o	52	x	o	14	o	.	.	.	.	.
c191e_119	No0126	3C345	3mm_RDBE	o	o	o	o	o	o	41	41	o	x	58	91	41	.	.	.	.	.
c191e_120	No0127	MRK501	3mm_RDBE	o	o	o	o	o	o	66	03	o	o	x	o	23	o	.	.	.	.
c191e_121	No0128	3C345	3mm_RDBE	.	o	.	.	o	o	o	83	83	o	x	o	33	83	.	.	.	.
c191e_122	No0129	MRK501	3mm_RDBE	o	o	o	o	o	o	63	o	96	x	o	10	o	.	.	.	.	.
c191e_123	No0130	3C345	3mm_RDBE	.	.	.	.	.	o	o	25	83	o	x	o	91	83	.	.	.	.
c191e_124	No0131	MRK501	3mm_RDBE	.	.	.	.	.	o	o	o	o	o	x	o	20	o	.	.	.	.
c191e_125	No0132	3C454.3	3mm_RDBE	o	o	o	o	o	.	.	.	.	.	.	.	.	.	.	.	.	.
c191e_126	No0133	3C454.3	3mm_RDBE	o	o	o	o	o	.	.	.	.	.	.	.	.	.	.	.	.	.
c191e_127	No0134	3C345	3mm_RDBE	.	.	.	.	.	o	o	41	83	o	x	o	o	83	.	.	.	.
c191e_128	No0135	MRK501	3mm_RDBE	.	.	.	.	.	o	09	04	o	o	x	o	14	o	.	.	.	.
c191e_129	No0136	3C454.3	3mm_RDBE	o	o	o	o	o	.	.	.	.	.	.	.	.	.	.	.	.	.
c191e_130	No0137	1633+38	3mm_RDBE	.	.	.	.	.	o	93	40	53	o	x	o	o	60	.	.	.	.
c191e_131	No0138	MRK501	3mm_RDBE	.	.	.	.	.	o	06	06	o	o	x	o	03	o	.	.	.	.
c191e_132	No0139	3C345	3mm_RDBE	.	.	.	.	.	o	o	66	66	o	x	o	06	66	.	o	x	o
c191e_133	No0140	MRK501	3mm_RDBE	.	.	.	.	.	o	90	30	o	63	x	o	10	o	.	o	x	80
c191e_134	No0141	3C345	3mm_RDBE	.	.	.	.	.	o	o	58	58	o	x	o	33	58	.	o	x	o
c191e_135	No0142	MRK501	3mm_RDBE	.	.	.	.	.	o	43	10	o	o	x	o	23	o	.	o	x	o
c191e_136	No0143	3C345	3mm_RDBE	.	.	.	.	.	o	33	41	83	o	x	o	08	83	.	o	x	o
c191e_137	No0144	MRK501	3mm_RDBE	.	.	.	.	.	o	o	10	o	o	x	o	20	o	.	o	x	o
c191e_138	No0145	3C345	3mm_RDBE	.	.	.	.	.	o	46	86	86	o	x	o	06	86	.	o	x	o
c191e_139	No0146	MRK501	3mm_RDBE	.	.	.	.	.	o	o	o	o	o	x	o	13	o	.	o	x	o
c191e_140	No0147	3C345	3mm_RDBE	.	.	.	.	.	o	o	66	66	o	x	o	20	66	.	o	x	o
c191e_141	No0148	MRK501	3mm_RDBE	.	.	.	.	.	o	76	63	o	o	x	o	13	o	.	o	x	o
c191e_142	No0149	1633+38	3mm_RDBE	.	.	.	.	.	o	o	58	33	o	x	o	66	58	.	o	x	o
c191e_143	No0150	MRK501	3mm_RDBE	.	.	.	.	.	o	o	78	o	o	x	o	11	x	.	o	x	o
c191e_144	No0151	3C345	3mm_RDBE	.	.	.	.	.	o	o	53	53	o	x	o	26	x	.	o	x	o
c191e_145	No0152	MRK501	3mm_RDBE	.	.	.	.	.	o	83	56	o	o	x	o	60	x	.	o	x	o
c191e_146	No0153	3C345	3mm_RDBE	.	.	.	.	.	o	06	33	66	o	x	o	33	x	.	o	x	o
c191e_147	No0154	MRK501	3mm_RDBE	.	.	.	.	.	o	63	13	o	o	x	o	10	o	.	o	x	o
c191e_148	No0155	3C345	3mm_RDBE	.	.	.	.	.	o	o	25	58	o	x	o	58	33	.	o	x	o
c191e_149	No0156	MRK501	3mm_RDBE	.	.	.	.	.	o	50	03	o	o	x	o	26	o	.	o	x	o
c191e_150	No0157	3C345	3mm_RDBE	o	o	13	86	o	x	o	13	86	.	o	x	o
c191e_151	No0158	MRK501	3mm_RDBE	o	o	03	o	13	x	o	06	o	.	o	x	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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