

C191B/MM014 Correlation Report

General information

- Consists of only one science project: **MM014**
- PI: MacDonald
- Targets: 1510-089, 3C279, 1749+096
- 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:
[c191b.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 No0004, source 1510-089, fringes to Ef, Pv, On, Ys, Mh: [No0004_all.pdf](#)

Scan No0028, source 1510-089, fringes to Gb, Ef, Pv, On, Ys, Fd, Nl: [No0028_all.pdf](#)

Scan No0051, source 1510-089, fringes to Gb, Br, Fd, Kp, La, Nl, Ov, Pt: [No0051_all.pdf](#)

Station	Code	Fringes	Plots	Comments
Ef	B	yes	<p>Fringe overview of all baselines (all of C191B) 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>c191b FRINGE RfAnt Ef LLRR AllSrc.pdf</p> <p>Examples of fourfit fringe plots:</p> <p>No0004_all.pdf, No0028_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>c191b FRINGE RfAnt On LLRR AllSrc.pdf</p> <p>No0004_all.pdf, No0028_all.pdf</p>	

Station	Code	Fringes	Plots	Comments
Ys	Y	yes	c191b FRINGE RfAnt Ys LLRR AllSrc.pdf No0004_all.pdf , No0028_all.pdf	
Mh	Z	yes	c191b FRINGE RfAnt Mh LLRR AllSrc.pdf No0004_all.pdf	
Pv	P	yes	c191b FRINGE RfAnt Pv LLRR AllSrc.pdf No0004_all.pdf , No0028_all.pdf	
GBT: Gb	G	yes	c191b FRINGE RfAnt Gb LLRR AllSrc.pdf No0028_all.pdf , No0051_all.pdf	broken Cal-Wheel, no Tsys, cloudy and rainy weather
VLBA: Br	b	yes	c191b FRINGE RfAnt Br LLRR AllSrc.pdf No0051_all.pdf	
VLBA: Fd	f	yes	c191b FRINGE RfAnt Fd LLRR AllSrc.pdf No0028_all.pdf , No0051_all.pdf	
VLBA: Kp	k	yes	c191b FRINGE RfAnt Kp LLRR AllSrc.pdf No0051_all.pdf	high winds, several wind stows
VLBA: La	l	yes	c191b FRINGE RfAnt La LLRR AllSrc.pdf No0051_all.pdf	slow getting up to proper recording speed

Station	Code	Fringes	Plots	Comments
VLBA: Mk	m	no	c191b_FRINGE_RfAnt_Mk_LLRR_AllSrc.pdf	3mm receiver is still cooling and the antenna cannot be tipped. recorded only one scan, no fringes in it.
VLBA: Nl	n	yes	c191b_FRINGE_RfAnt_Nl_LLRR_AllSrc.pdf No0028_all.pdf , No0051_all.pdf	
VLBA: Ov	o	yes	c191b_FRINGE_RfAnt_Ov_LLRR_AllSrc.pdf No0051_all.pdf	.
VLBA: Pt	p	yes	c191b_FRINGE_RfAnt_Pt_LLRR_AllSrc.pdf No0051_all.pdf	Taken out for several scans because of USNO observing. 0600-0700: RDBE-1 timing issues, power cycled unit twice.

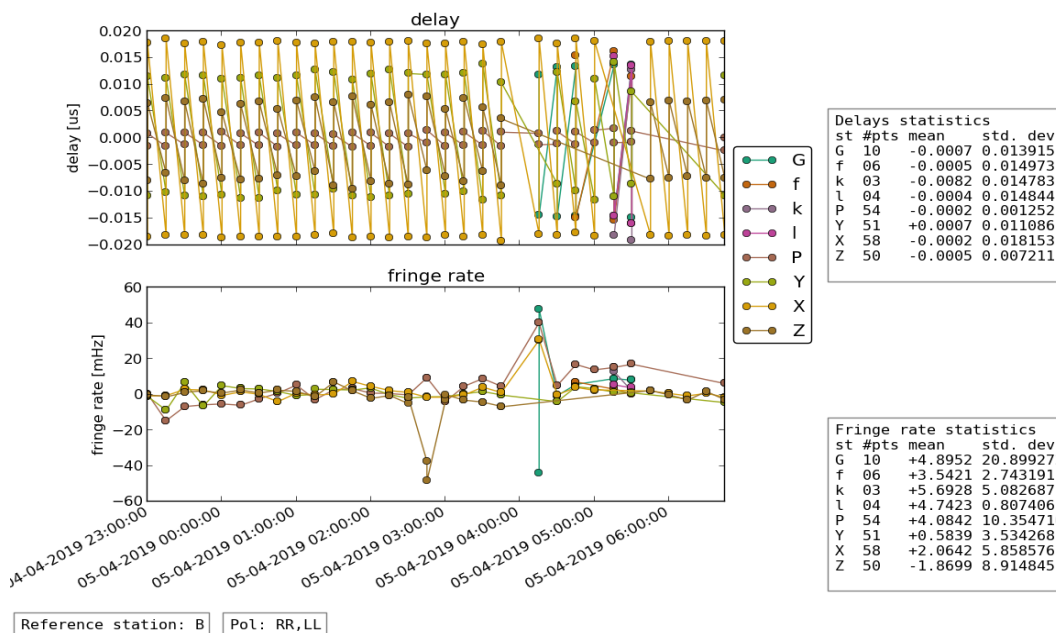
Notes

ALMA was supposed to take part in this experiment, but did not participate because of extremely harsh weather.

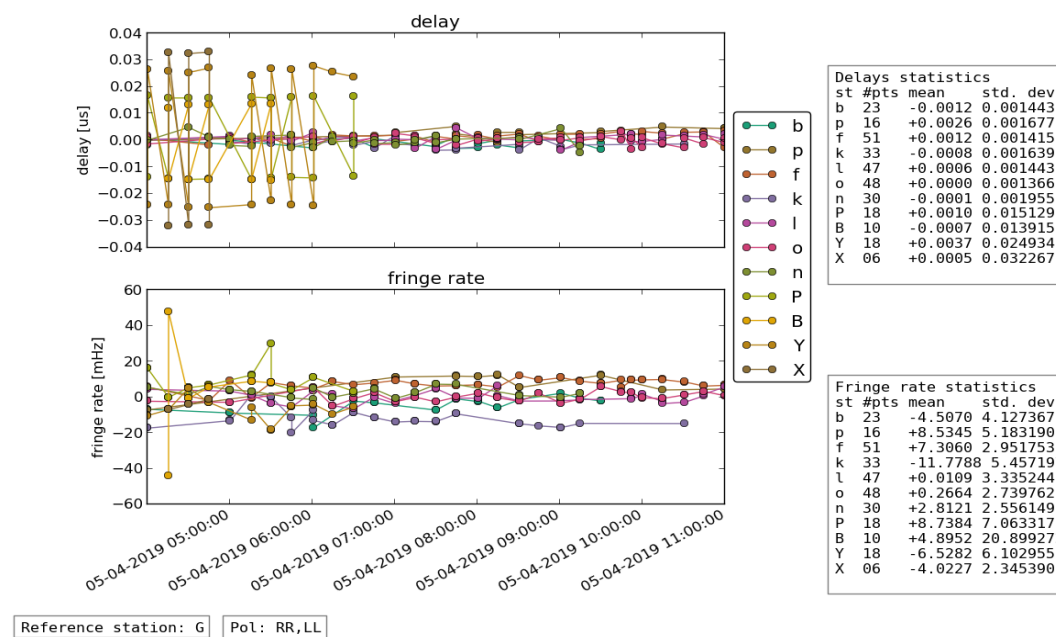
Post-Correlation checks

Residuals

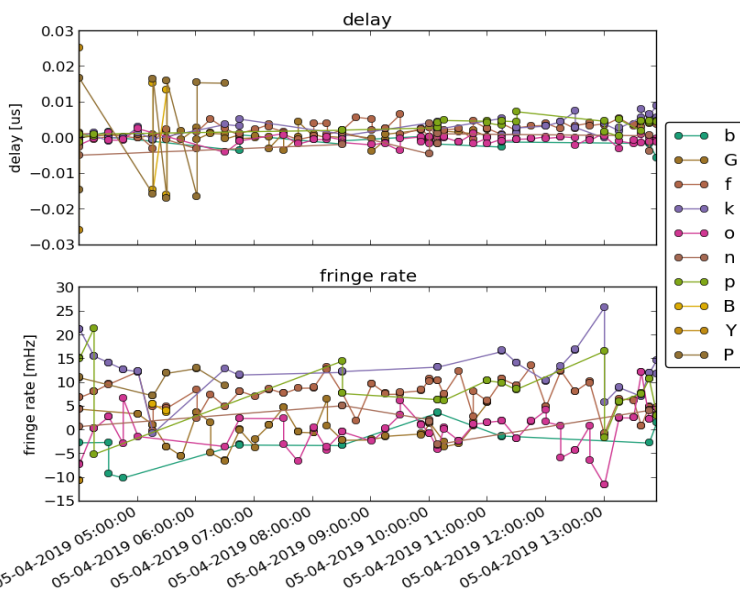
Ef:



GBT:



La:

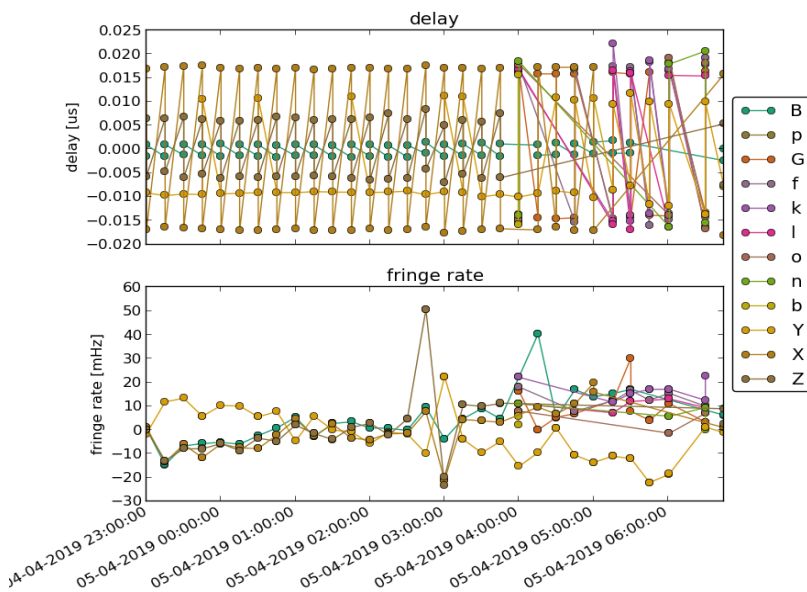


Delays statistics			
st	#pts	mean	std. dev
b	14	-0.0011	0.001876
G	47	+0.0006	0.001443
f	73	+0.0024	0.001902
k	37	+0.0030	0.002572
o	66	-0.0005	0.001130
n	10	-0.0012	0.002783
p	25	+0.0034	0.001927
B	04	-0.0004	0.014844
Y	02	-0.0003	0.025518
P	09	+0.0018	0.015924

Fringe rate statistics			
st	#pts	mean	std. dev
b	14	-2.3551	3.777053
G	47	+0.0109	3.335244
f	73	+7.5626	3.285492
k	37	+13.0667	4.480440
o	66	+0.0367	4.257829
n	10	+2.1728	2.966879
p	25	+8.6580	5.483122
B	04	+4.7423	0.807406
Y	02	-10.5005	0.002154
P	09	+10.6958	2.108969

Reference station: l Pol: RR,LL

PV:



Delays statistics			
st	#pts	mean	std. dev
B	54	-0.0002	0.001252
p	01	+0.0162	0.000000
G	18	+0.0010	0.015129
f	14	+0.0013	0.016270
k	12	+0.0017	0.016644
l	09	+0.0018	0.015924
o	06	+0.0016	0.016783
n	06	+0.0019	0.017138
b	02	-0.0001	0.015793
Y	44	-0.0036	0.009176
X	50	+0.0000	0.016971
Z	42	+0.0003	0.006171

Fringe rate statistics			
st	#pts	mean	std. dev
B	54	+4.0842	10.354710
p	01	+7.1365	0.000000
G	18	+8.7384	7.063317
f	14	+13.2787	3.351173
k	12	+16.8471	3.747059
l	09	+10.6958	2.108969
o	06	+4.5321	4.175860
n	06	+7.1950	3.840073
b	02	+4.0071	1.811266
Y	44	-2.7003	10.498108
X	50	-0.6042	8.226789
Z	42	+0.8830	13.627000

Reference station: P Pol: RR,LL

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

mm014.fits:

				EF	ON	YS	PV	MH	GB	FD	NL	OV	PT	BR	KP	LA	MK
c191b_01	No0001	3C279	3mm_RDBE	o	o	o	o	o	.	.	.	.	.	.	.	.	.
c191b_02	No0002	1510-089	3mm_RDBE	o	o	o	o	o	.	.	.	.	.	.	.	.	.
c191b_03	No0003	1510-089	3mm_RDBE	o	o	o	o	o	.	.	.	.	.	.	.	.	.
c191b_04	No0004	1510-089	3mm_RDBE	o	o	o	o	o	.	.	.	.	.	.	.	.	.
c191b_05	No0005	1510-089	3mm_RDBE	o	o	o	o	o	.	.	.	.	.	.	.	.	.
c191b_06	No0006	1510-089	3mm_RDBE	o	o	o	o	o	.	.	.	.	.	.	.	.	.
c191b_07	No0007	1510-089	3mm_RDBE	o	o	o	o	o	.	.	.	.	.	.	.	.	.
c191b_08	No0008	1510-089	3mm_RDBE	o	o	o	o	o	.	.	.	.	.	.	.	.	.
c191b_09	No0009	3C279	3mm_RDBE	o	o	o	o	o	.	.	.	.	.	.	.	.	.
c191b_10	No0010	1510-089	3mm_RDBE	o	o	o	o	o	.	.	.	.	.	.	.	.	.
c191b_11	No0011	1510-089	3mm_RDBE	o	o	o	o	o	.	.	.	.	.	.	.	.	.
c191b_12	No0012	1510-089	3mm_RDBE	o	o	o	o	o	.	.	.	.	.	.	.	.	.
c191b_13	No0013	1510-089	3mm_RDBE	o	o	o	o	o	.	.	.	.	.	.	.	.	.
c191b_14	No0014	1510-089	3mm_RDBE	o	o	o	o	o	.	.	.	.	.	.	.	.	.
c191b_15	No0015	1510-089	3mm_RDBE	o	o	o	o	o	.	.	.	.	.	.	.	.	.
c191b_16	No0016	3C279	3mm_RDBE	o	o	o	o	o	.	.	.	.	.	.	.	.	.
c191b_17	No0017	1510-089	3mm_RDBE	o	o	o	o	o	.	.	.	.	.	.	.	.	.
c191b_18	No0018	1510-089	3mm_RDBE	o	o	o	o	o	.	.	.	.	.	.	.	.	.
c191b_19	No0019	1510-089	3mm_RDBE	o	o	o	o	o	.	.	.	.	.	.	.	.	.
c191b_20	No0020	1510-089	3mm_RDBE	o	o	o	o	o	.	.	.	.	.	.	.	.	.
c191b_21	No0022	3C279	3mm_RDBE	.	.	o	o	.	o	o	o	o	o	o	o	o	.
c191b_22	No0024	1510-089	3mm_RDBE	o	o	o	o	.	o	.	o	.	.	.	.	.	.
c191b_23	No0025	3C279	3mm_RDBE	.	.	.	.	.	.	o	.	o	o	o	o	o	.
c191b_24	No0026	1510-089	3mm_RDBE	o	o	o	o	.	o	.	o	.	.	.	.	.	.
c191b_25	No0027	3C279	3mm_RDBE	.	.	.	.	.	.	o	.	o	x	o	o	o	.
c191b_26	No0028	1510-089	3mm_RDBE	o	o	o	o	.	o	o	o	.	.	.	.	.	.
c191b_27	No0029	3C279	3mm_RDBE	.	.	.	.	.	.	.	.	o	x	o	o	o	.
c191b_28	No0031	3C279	3mm_RDBE	.	.	.	.	.	o	o	o	o	x	o	o	o	.
c191b_29	No0032	1510-089	3mm_RDBE	o	o	o	o	.	.	.	.	.	.	.	.	.	.
c191b_30	No0034	1510-089	3mm_RDBE	o	.	o	o	.	o	o	o	.	x	.	o	o	.
c191b_31	No0035	1510-089	3mm_RDBE	o	.	o	o	.	o	o	o	.	x	.	o	o	.
c191b_32	No0036	1510-089	3mm_RDBE	.	.	o	o	.	o	o	o	.	x	.	o	o	.
c191b_33	No0037	1749+096	3mm_RDBE	o	o	.	.	o	.	.	.	.	.	.	.	.	.
c191b_34	No0039	1510-089	3mm_RDBE	.	.	o	o	.	o	o	o	o	x	o	o	o	.
c191b_35	No0040	1749+096	3mm_RDBE	o	o	.	.	o	.	.	.	.	.	.	.	.	.
c191b_36	No0041	1510-089	3mm_RDBE	.	.	o	o	.	o	o	o	o	x	o	o	o	.
c191b_37	No0042	1749+096	3mm_RDBE	o	o	.	.	o	.	.	.	.	.	.	.	.	.
c191b_38	No0043	1510-089	3mm_RDBE	.	.	o	o	.	o	o	o	o	x	o	o	o	.
c191b_39	No0044	1749+096	3mm_RDBE	o	o	.	.	o	.	.	.	.	.	.	.	.	.
c191b_40	No0045	1749+096	3mm_RDBE	o	o	o	o	o	.	.	.	.	.	.	.	.	.
c191b_41	No0046	3C279	3mm_RDBE	.	.	.	.	.	o	o	o	o	41	o	o	o	o
c191b_42	No0048	1510-089	3mm_RDBE	.	.	.	.	.	o	o	o	o	o	o	o	o	.
c191b_43	No0049	1510-089	3mm_RDBE	.	.	.	.	.	o	o	o	o	o	o	o	o	.
c191b_44	No0050	1510-089	3mm_RDBE	.	.	.	.	.	o	o	o	o	o	o	o	o	.
c191b_45	No0051	1510-089	3mm_RDBE	.	.	.	.	.	o	o	o	o	o	o	o	o	x
c191b_46	No0052	1510-089	3mm_RDBE	.	.	.	.	.	o	o	o	o	o	o	o	o	x

c191b_47	No0053	1510-089	3mm_RDBE	.	.	.	.	.	o	o	o	o	o	o	o	o	x
c191b_48	No0055	3C279	3mm_RDBE	.	.	.	.	.	o	o	o	o	o	o	o	o	x
c191b_49	No0056	1510-089	3mm_RDBE	.	.	.	.	.	o	o	o	o	o	o	o	o	x
c191b_50	No0057	1510-089	3mm_RDBE	.	.	.	.	.	o	o	o	o	o	o	o	o	x
c191b_51	No0058	1510-089	3mm_RDBE	.	.	.	.	.	o	o	o	o	o	o	o	o	x
c191b_52	No0060	1510-089	3mm_RDBE	.	.	.	.	.	o	o	o	o	o	o	o	o	x
c191b_53	No0061	1510-089	3mm_RDBE	.	.	.	.	.	o	o	o	o	o	o	o	o	x
c191b_54	No0062	1510-089	3mm_RDBE	.	.	.	.	.	o	o	o	o	o	o	o	o	x
c191b_55	No0063	1510-089	3mm_RDBE	.	.	.	.	.	o	o	o	o	o	o	o	o	x
c191b_56	No0064	3C279	3mm_RDBE	.	.	.	.	.	o	o	o	o	o	o	o	o	x
c191b_57	No0065	1510-089	3mm_RDBE	.	.	.	.	.	o	o	o	46	o	o	o	o	x
c191b_58	No0067	1510-089	3mm_RDBE	.	.	.	.	.	o	o	o	o	o	o	o	o	x
c191b_59	No0068	1510-089	3mm_RDBE	.	.	.	.	.	o	o	o	o	o	o	o	o	x
c191b_60	No0069	1510-089	3mm_RDBE	.	.	.	.	.	o	o	o	o	o	o	o	o	x
c191b_61	No0070	1749+096	3mm_RDBE	.	.	.	.	.	o	o	o	o	o	o	o	o	x
c191b_62	No0071	1510-089	3mm_RDBE	.	.	.	.	.	o	o	o	o	o	o	o	o	x
c191b_63	No0072	1510-089	3mm_RDBE	.	.	.	.	.	o	o	o	o	o	o	o	o	x
c191b_64	No0073	1510-089	3mm_RDBE	.	.	.	.	.	o	o	o	o	o	o	o	o	x
c191b_65	No0074	1510-089	3mm_RDBE	.	.	.	.	.	o	o	o	o	o	o	o	o	x
c191b_66	No0075	1510-089	3mm_RDBE	.	.	.	.	.	o	o	o	o	o	o	o	o	x
c191b_67	No0076	1510-089	3mm_RDBE	.	.	.	.	.	o	o	o	o	o	o	o	o	x
c191b_68	No0077	1510-089	3mm_RDBE	.	.	.	.	.	o	.	o	o	o	o	o	o	x
c191b_69	No0078	1510-089	3mm_RDBE	.	.	.	.	.	o	.	o	o	o	o	o	o	x
c191b_70	No0079	1749+096	3mm_RDBE	.	.	.	.	.	o	o	o	o	o	o	o	o	x
c191b_71	No0080	1749+096	3mm_RDBE	.	.	.	.	.	o	o	o	o	o	o	o	o	x
c191b_72	No0081	1749+096	3mm_RDBE	.	.	.	.	.	o	o	o	o	o	o	o	o	x
c191b_73	No0082	1749+096	3mm_RDBE	.	.	.	.	.	o	o	o	o	o	o	o	o	x