ML005 Correlation Report

General information

- A part of C181C
- Targets: M87, 3C273, 3C279
- 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
- GBT calibration info (Tsys files for download) and other related information for this session can be found here: https://safe.nrao.edu/wiki/bin/view/GB/Observing/WbandVLBACal/C181
- *Special processing* was applied to all data in order to correlate mismatching frequency setups of ALMA and other GMVA stations. See details here.

Current Status

Correlation finished, data **released** on 10/12/2018.

A **second** data release, with a problem, spotted in the original release, corrected, was made on 31/01/2019.

A **third** data release, rerunning PolConvert with the latest (25.06.2019) ALMA QA2 release, was made on 26/09/2019.

Fringes

Station	Code	Fringes	Plots	Comments
Ef	B	**yes**	Fringe overview of all baselines (all of C181C) including Ef in LL (left for each baseline) and RR (right for each baseline). Legend: white - scheduled, but no data, blue - no fringe, red-green - fringes of different quality. D -- fourfit error, in this case due to mixing upper and lower subbands in the KVN compatibility mode, no real problem with the data. Scans 30, 33, 77-78, 80, 82-83, 92 are missing from all diagnostic plots due to a difx2mark4 error. They are present in the final correlation products. c181c_FRINGE_RfAnt_Ef_LLRR_AllSrc.pdf Examples of fourfit fringe plots: c181c_No0075_3C279_AB_LL.pdf, c181c_No0075_3C279_AB_LR.pdf, c181c_No0075_3C279_AB_RL.pdf, c181c_No0075_3C279_AB_RR.pdf Same for all antennas below unless otherwise noted.	in the plots Ef is "missing" all the baselines except to ALMA, GLT and KVN. This is due to a fourfit error, the baselines are missing only from some of the diagnostic plots, but are present in the final correlation products.
On	X	**yes**	c181c_FRINGE_RfAnt_On_LLRR_AllSrc.pdf c181c_No0075_3C279_AX_LL.pdf, c181c_No0075_3C279_AX_LR.pdf, c181c_No0075_3C279_AX_RL.pdf, c181c_No0075_3C279_AX_RR.pdf	in the plots On is "missing" all the baselines except to ALMA, GLT and KVN. This is due to a fourfit

Station	Code	Fringes	Plots	Comments
				error, the baselines are missing only from some of the diagnostic plots, but are present in the final correlation products.
Ys	Y	**yes**	c181c_FRINGE_RfAnt_Ys_LLRR_AllSrc.pdf c181c_No0075_3C279_AY_LL.pdf, c181c_No0075_3C279_AY_LR.pdf, c181c_No0075_3C279_AY_RL.pdf, c181c_No0075_3C279_AY_RR.pdf	As usual, Ys observed LCP only, but it was also recorded as fake RCP, that's why there are common Ys "right" to other antenna's left fringes. in the plots Ys is "missing" all the baselines except to ALMA, GLT and KVN. This is due to a fourfit error, the baselines are missing only from some of the diagnostic plots, but are present in the final correlation products.
Mh	Z	**yes**	c181c_FRINGE_RfAnt_Mh_LLRR_AllSrc.pdf	in the plots Mh is "missing" all the baselines

Station	Code	Fringes	Plots	Comments
			c181c_No0071_3C273_AZ_LL.pdf, c181c_No0071_3C273_AZ_LR.pdf, c181c_No0071_3C273_AZ_RL.pdf, c181c_No0071_3C273_AZ_RR.pdf	except to ALMA, GLT and KVN. This is due to a fourfit error, the baselines are missing only from some of the diagnostic plots, but are present in the final correlation products.
Pv	P	yes	c181c_FRINGE_RfAnt_Pv_LLRR_AllSrc.pdf c181c_No0084_3C273_AP_LL.pdf, c181c_No0084_3C273_AP_LR.pdf, c181c_No0084_3C273_AP_RL.pdf, c181c_No0084_3C273_AP_RR.pdf c181c_No0084_3C273_gP_LL.pdf, c181c_No0084_3C273_gP_LR.pdf, c181c_No0084_3C273_gP_RL.pdf, c181c_No0084_3C273_gP_RR.pdf	in the plots Pv is "missing" all the baselines except to ALMA, GLT and KVN. This is due to a fourfit error, the baselines are missing only from some of the diagnostic plots, but are present in the final correlation products.
VLBA: Br	b	yes	c181c_FRINGE_RfAnt_Br_LLRR_AllSrc.pdf c181c_No0075_3C279_Af_LL.pdf, c181c_No0075_3C279_Af_LR.pdf, c181c_No0075_3C279_Af_RL.pdf, c181c_No0075_3C279_Af_RR.pdf c181c_No0084_3C273_Ab_LL.pdf, c181c_No0084_3C273_Ab_LR.pdf, c181c_No0084_3C273_Ab_RL.pdf, c181c_No0084_3C273_Ab_RR.pdf	Baselines to EVN stations are "missing" due to a fourfit error. They are present in the final correlation products.
VLBA: Fd	f	yes	c181c_FRINGE_RfAnt_Fd_LLRR_AllSrc.pdf c181c_No0075_3C279_Af_LL.pdf, c181c_No0075_3C279_Af_LR.pdf, c181c_No0075_3C279_Af_RL.pdf, c181c_No0075_3C279_Af_RR.pdf	Baselines to EVN stations are "missing" due to a fourfit

Station	Code	Fringes	Plots	Comments
				error. They are present in the final correlation products.
VLBA: Kp	k	yes	c181c_FRINGE_RfAnt_Kp_LLRR_AllSrc.pdf c181c_No0075_3C279_Ak_LL.pdf, c181c_No0075_3C279_Ak_LR.pdf, c181c_No0075_3C279_Ak_RL.pdf, c181c_No0075_3C279_Ak_RR.pdf	Baselines to EVN stations are "missing" due to a fourfit error. They are present in the final correlation products.
VLBA: La	l	yes	c181c_FRINGE_RfAnt_La_LLRR_AllSrc.pdf c181c_No0075_3C279_Al_LL.pdf, c181c_No0075_3C279_Al_LR.pdf, c181c_No0075_3C279_Al_RL.pdf, c181c_No0075_3C279_Al_RR.pdf	Baselines to EVN stations are "missing" due to a fourfit error. They are present in the final correlation products.
VLBA: Mk	m	yes	c181c_FRINGE_RfAnt_Mk_LLRR_AllSrc.pdf c181c_No0103_3C279_Am_LL.pdf, c181c_No0103_3C279_Am_LR.pdf, c181c_No0103_3C279_Am_RL.pdf, c181c_No0103_3C279_Am_RR.pdf	Baselines to EVN stations are "missing" due to a fourfit error. They are present in the final correlation products. Taken out for several scans because of USNO observing.
VLBA: Nl	n	yes	c181c_FRINGE_RfAnt_Nl_LLRR_AllSrc.pdf c181c_No0075_3C279_An_LL.pdf, c181c_No0075_3C279_An_LR.pdf, c181c_No0075_3C279_An_RL.pdf, c181c_No0075_3C279_An_RR.pdf	Baselines to EVN stations are "missing" due to a fourfit

Station	Code	Fringes	Plots	Comments
				error. They are present in the final correlation products.
VLBA: Ov	o	yes	c181c_FRINGE_RfAnt_Ov_LLRR_AllSrc.pdf c181c_No0103_3C279_Ao_LL.pdf, c181c_No0103_3C279_Ao_LR.pdf, c181c_No0103_3C279_Ao_RL.pdf, c181c_No0103_3C279_Ao_RR.pdf	Baselines to EVN stations are "missing" due to a fourfit error. They are present in the final correlation products.
VLBA: Pt	p	yes	c181c_FRINGE_RfAnt_Pt_LLRR_AllSrc.pdf c181c_No0075_3C279_Ap_LL.pdf, c181c_No0075_3C279_Ap_LR.pdf, c181c_No0075_3C279_Ap_RL.pdf, c181c_No0075_3C279_Ap_RR.pdf	Baselines to EVN stations are "missing" due to a fourfit error. They are present in the final correlation products. Taken out for several scans because of USNO observing.
GBT: Gb	G	yes	c181c_FRINGE_RfAnt_Gb_LLRR_AllSrc.pdf c181c_No0075_3C279_AG_LL.pdf, c181c_No0075_3C279_AG_LR.pdf, c181c_No0075_3C279_AG_RL.pdf, c181c_No0075_3C279_AG_RR.pdf	Baselines to EVN stations are "missing" due to a fourfit error. They are present in the final correlation products.
GLT: Gl	g	yes	c181c_FRINGE_RfAnt_Gl_LLRR_AllSrc.pdf c181c_No0071_3C273_Ag_LL.pdf, c181c_No0071_3C273_Ag_LR.pdf, c181c_No0071_3C273_Ag_RL.pdf, c181c_No0071_3C273_Ag_RR.pdf	Data analysis has shown that GLT recorded

Station	Code	Fringes	Plots	Comments
			c181c_No0084_3C273_gP_LL.pdf, c181c_No0084_3C273_gP_LR.pdf, c181c_No0084_3C273_gP_RL.pdf, c181c_No0084_3C273_gP_RR.pdf	in unknown polarization instead of circular (most probably unknown elliptic). At this moment **IT SHOULD NOT BE USED FOR ANY POLARIMETRY** and in general dealt with very carefully.
ALMA: Aa	A	**yes**	c181c_FRINGE_RfAnt_Aa_LLRR_AllSrc.pdf c181c_No0071_3C273_Ag_LL.pdf, c181c_No0071_3C273_Ag_LR.pdf, c181c_No0071_3C273_Ag_RL.pdf, c181c_No0071_3C273_Ag_RR.pdf c181c_No0071_3C273_AZ_LL.pdf, c181c_No0071_3C273_AZ_LR.pdf, c181c_No0071_3C273_AZ_RL.pdf, c181c_No0071_3C273_AZ_RR.pdf c181c_No0075_3C279_AB_LL.pdf, c181c_No0075_3C279_AB_LR.pdf, c181c_No0075_3C279_AB_RL.pdf, c181c_No0075_3C279_AB_RR.pdf c181c_No0075_3C279_Af_LL.pdf, c181c_No0075_3C279_Af_LR.pdf, c181c_No0075_3C279_Af_RL.pdf, c181c_No0075_3C279_Af_RR.pdf c181c_No0075_3C279_AG_LL.pdf, c181c_No0075_3C279_AG_LR.pdf, c181c_No0075_3C279_AG_RL.pdf, c181c_No0075_3C279_AG_RR.pdf c181c_No0075_3C279_Ak_LL.pdf, c181c_No0075_3C279_Ak_LR.pdf, c181c_No0075_3C279_Ak_RL.pdf, c181c_No0075_3C279_Ak_RR.pdf c181c_No0075_3C279_Al_LL.pdf, c181c_No0075_3C279_Al_LR.pdf, c181c_No0075_3C279_Al_RL.pdf, c181c_No0075_3C279_Al_RR.pdf c181c_No0075_3C279_An_LL.pdf, c181c_No0075_3C279_An_LR.pdf, c181c_No0075_3C279_An_RL.pdf, c181c_No0075_3C279_An_RR.pdf c181c_No0075_3C279_Ap_LL.pdf, c181c_No0075_3C279_Ap_LR.pdf, c181c_No0075_3C279_Ap_RL.pdf, c181c_No0075_3C279_Ap_RR.pdf c181c_No0075_3C279_AX_LL.pdf, c181c_No0075_3C279_AX_LR.pdf, c181c_No0075_3C279_AX_RL.pdf, c181c_No0075_3C279_AX_RR.pdf	Observed in linear polarization, converted to circular polarization in post-correlation uning PolConvert. For technical reasons the atmospheric correction was applied twice -- both in original ALMA data and during the correlation. Although a special procedure was developed to compensate for this, we found that its application leads to other difficulties, in

Station	Code	Fringes	Plots	Comments
			c181c_No0075_3C279_AY_LL.pdf, c181c_No0075_3C279_AY_LR.pdf, c181c_No0075_3C279_AY_RL.pdf, c181c_No0075_3C279_AY_RR.pdf c181c_No0084_3C273_Ab_LL.pdf, c181c_No0084_3C273_Ab_LR.pdf, c181c_No0084_3C273_Ab_RL.pdf, c181c_No0084_3C273_Ab_RR.pdf c181c_No0103_3C279_Am_LL.pdf, c181c_No0103_3C279_Am_LR.pdf, c181c_No0103_3C279_Am_RL.pdf, c181c_No0103_3C279_Am_RR.pdf c181c_No0103_3C279_Ao_LL.pdf, c181c_No0103_3C279_Ao_LR.pdf, c181c_No0103_3C279_Ao_RL.pdf, c181c_No0103_3C279_Ao_RR.pdf c181c_No0084_3C273_AP_LL.pdf, c181c_No0084_3C273_AP_LR.pdf, c181c_No0084_3C273_AP_RL.pdf, c181c_No0084_3C273_AP_RR.pdf	particular to abnormally high fringe rate jumps, so in the final production run the double atmospheric correction was left as is.
KVN: Kt	t	**n/a**	c181c_FRINGE_RfAnt_Kt_LLRR_AllSrc.pdf _____	no KVN participation in this part of c181c
KVN: Ku	u	**n/a**	c181c_FRINGE_RfAnt_Ku_LLRR_AllSrc.pdf _____	no KVN participation in this part of c181c
KVN: Ky	y	**n/a**	c181c_FRINGE_RfAnt_Ky_LLRR_AllSrc.pdf _____	no KVN participation in this part of c181c

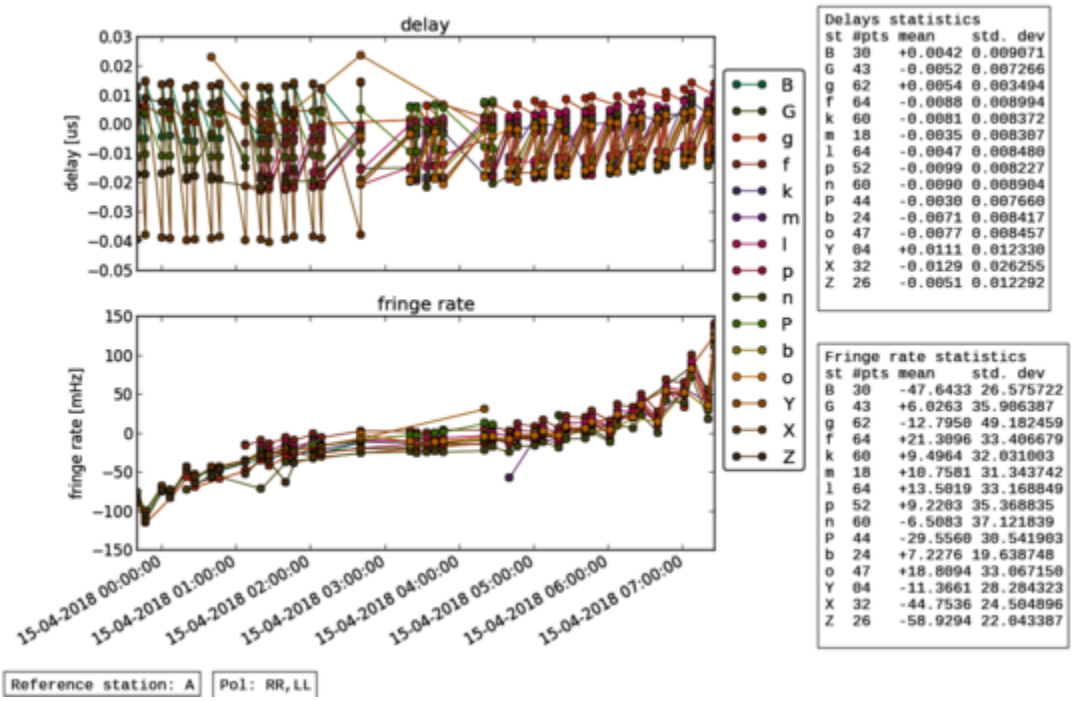
Notes

There were problems with some diagnostic plots of this experiment due to yet poorly understood errors of fourfit and other HOPS components. But this does not change the quality of the final correlation products. *(These issues were **fixed** in the second data release of 31/01/2019)*

GLT participated in this session for the first time as a test, and serious problems were detected when analysing its data. Be very carerful when using them.

Post-Correlation checks

Residuals



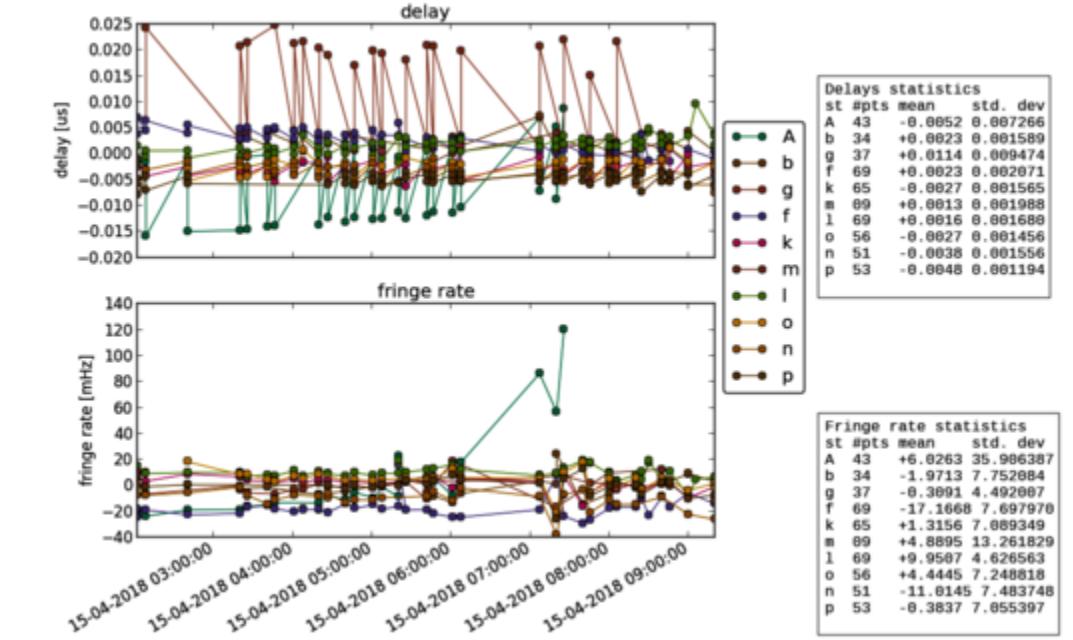
Delays statistics

st	#pts	mean	std. dev
B	30	+0.0042	0.009071
G	43	-0.0052	0.007266
g	62	+0.0054	0.003494
f	64	-0.0088	0.008994
k	60	-0.0081	0.008372
m	18	-0.0035	0.008307
l	64	-0.0047	0.008480
p	52	-0.0099	0.008227
n	60	-0.0090	0.008904
P	44	-0.0030	0.007660
b	24	-0.0071	0.008417
o	47	-0.0077	0.008457
Y	04	+0.0111	0.012330
X	32	-0.0129	0.026255
Z	26	-0.0051	0.012292

Fringe rate statistics

st	#pts	mean	std. dev
B	30	-47.6433	26.575722
G	43	+6.0263	35.906387
g	62	-12.7950	49.182459
f	64	+21.3096	33.406679
k	60	+9.4964	32.031003
m	18	+10.7581	31.343742
l	64	+13.5819	33.168849
p	52	+9.2203	35.368835
n	60	-6.5083	37.121839
P	44	-29.5560	30.541903
b	24	+7.2276	19.638748
o	47	+18.8094	33.067150
Y	04	-11.3661	28.284323
X	32	-44.7536	24.504896
Z	26	-58.9294	22.043387

Reference station: A | Pol: RR,LL



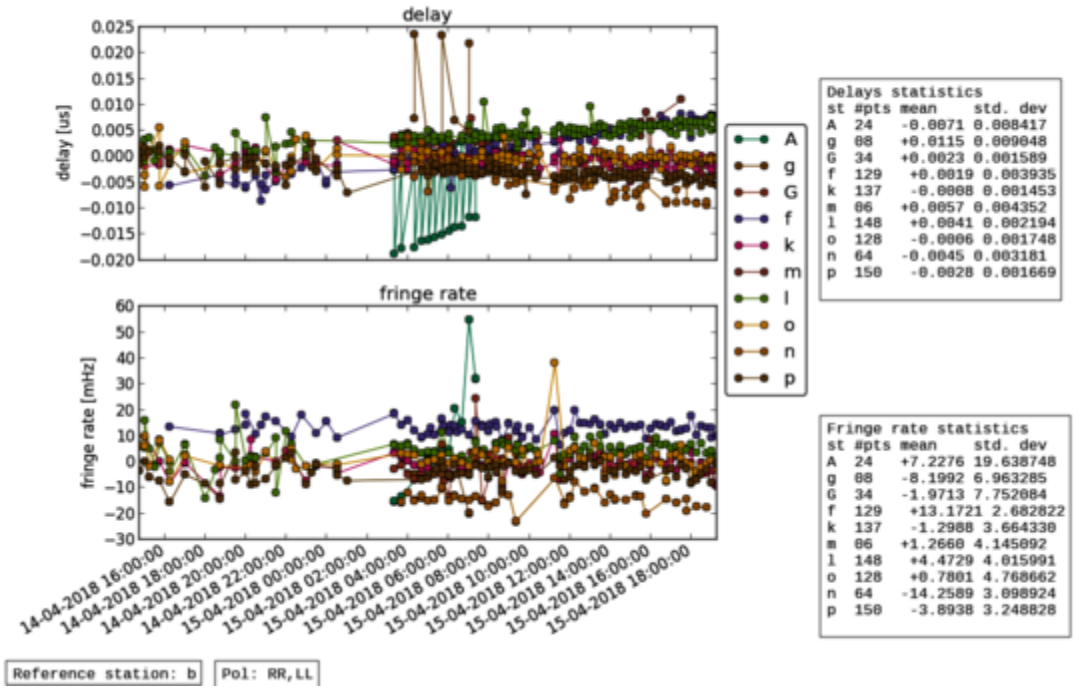
Delays statistics

st	#pts	mean	std. dev
A	43	-0.0052	0.007266
b	34	+0.0023	0.001589
g	37	+0.0114	0.009474
f	69	+0.0023	0.002071
k	65	-0.0027	0.001565
m	09	+0.0013	0.001988
l	69	+0.0016	0.001680
o	56	-0.0027	0.001456
n	51	-0.0038	0.001556
p	53	-0.0048	0.001194

Fringe rate statistics

st	#pts	mean	std. dev
A	43	+6.0263	35.906387
b	34	-1.9713	7.752084
g	37	-0.3091	4.492007
f	69	-17.1668	7.697970
k	65	+1.3156	7.089349
m	09	+4.8895	13.261829
l	69	+9.9507	4.626563
o	56	+4.4445	7.248818
n	51	-11.0145	7.483748
p	53	-0.3837	7.055397

Reference station: G | Pol: RR,LL



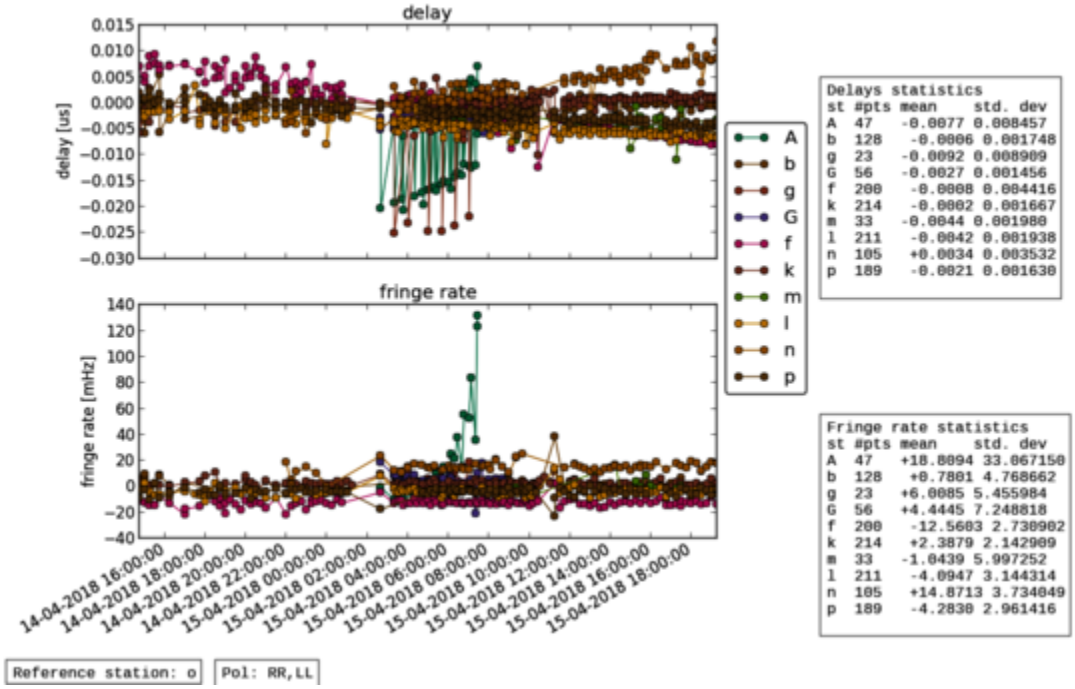
Delays statistics

st	#pts	mean	std. dev
A	24	-0.0071	0.008417
g	88	+0.0115	0.009048
G	34	+0.0023	0.001589
f	129	+0.0019	0.003935
k	137	-0.0008	0.001453
m	86	+0.0057	0.004352
l	148	+0.0041	0.002194
o	128	-0.0006	0.001748
n	64	-0.0045	0.003181
p	150	-0.0028	0.001669

Fringe rate statistics

st	#pts	mean	std. dev
A	24	+7.2276	19.638748
g	88	-8.1992	6.963285
G	34	-1.9713	7.752084
f	129	+13.1721	2.682822
k	137	-1.2988	3.664330
m	86	+1.2660	4.145092
l	148	+4.4729	4.015991
o	128	+0.7801	4.768662
n	64	-14.2589	3.098924
p	150	-3.8938	3.248828

Reference station: b | Pol: RR,LL



Delays statistics

st	#pts	mean	std. dev
A	47	-0.0077	0.008457
b	128	-0.0006	0.001748
g	23	-0.0092	0.008909
G	56	-0.0027	0.001456
f	200	-0.0008	0.004416
k	214	-0.0002	0.001667
m	33	-0.0044	0.001980
l	211	-0.0042	0.001938
n	105	+0.0034	0.003532
p	189	-0.0021	0.001638

Fringe rate statistics

st	#pts	mean	std. dev
A	47	+18.8094	33.067150
b	128	+0.7801	4.768662
g	23	+6.0085	5.455984
G	56	+4.4445	7.248818
f	200	-12.5603	2.730902
k	214	+2.3879	2.142909
m	33	-1.0439	5.997252
l	211	-4.0947	3.144314
n	105	+14.8713	3.734849
p	189	-4.2830	2.961416

Reference station: o | Pol: RR,LL

FITS completeness (pclist)

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
```

mm013b_setup1.fits:

			EF	ON	PV	YS	MH	NL	FD	PT	LA	OV	KP	BR	GL	MK	AA	AA	GB	KY	KU	KT
c181c_035D2D	No0035	3C273 3mm_RDBE	o	o	o	o	o	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
c181c_036D2D	No0036	M87 3mm_RDBE	o	o	o	o	o	.	.	.	.	.	.	.	o	.	.	.	.	.	.	.
c181c_038D2D	No0038	3C279 3mm_RDBE	o	o	o	o	o	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
c181c_039D2D	No0039	M87 3mm_RDBE	o	o	o	o	o	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
c181c_041D2D	No0041	3C273 3mm_RDBE	o	o	o	o	o	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
c181c_042D2D	No0042	M87 3mm_RDBE	o	o	o	o	o	.	.	.	.	.	.	.	o	.	.	.	.	.	.	.
c181c_044D2D	No0044	3C273 3mm_RDBE	o	o	o	o	o	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
c181c_045D2D	No0045	M87 3mm_RDBE	o	o	o	o	o	.	.	.	.	.	.	.	o	.	.	.	.	.	.	.
c181c_048D2D	No0048	3C279 3mm_RDBE	o	o	o	o	o	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
c181c_049D2D	No0049	M87 3mm_RDBE	o	o	o	o	o	.	.	.	.	.	.	.	o	.	.	.	.	.	.	.
c181c_051D2D	No0051	3C273 3mm_RDBE	o	o	o	o	o	.	.	.	.	.	.	.	o	.	o	o	.	.	.	.
c181c_052D2D	No0052	M87 3mm_RDBE	o	o	o	o	o	.	.	.	.	.	.	.	o	.	94	94	.	.	.	.
c181c_054D2D	No0054	3C279 3mm_RDBE	o	o	o	o	o	.	.	.	.	.	.	.	.	.	o	o	.	.	.	.
c181c_055D2D	No0055	M87 3mm_RDBE	o	o	o	o	o	.	.	.	.	.	.	.	o	.	o	o	.	.	.	.
c181c_058D2D	No0058	3C273 3mm_RDBE	o	o	o	o	o	o	.	.	.	.	.	.	o	.	o	o	.	.	.	.
c181c_059D2D	No0059	M87 3mm_RDBE	o	o	o	o	o	o	.	.	.	.	.	.	o	.	o	o	.	.	.	.
c181c_061D2D	No0061	3C279 3mm_RDBE	o	o	o	o	o	o	.	.	.	.	.	.	.	.	o	o	.	.	.	.
c181c_062D2D	No0062	M87 3mm_RDBE	o	o	o	o	o	o	.	.	.	.	.	.	o	.	94	94	.	.	.	.
c181c_064D2D	No0064	3C273 3mm_RDBE	o	o	o	o	o	o	o	.	.	.	.	.	o	.	x	x	.	.	.	.
c181c_065D2D	No0065	M87 3mm_RDBE	o	o	o	o	o	o	o	.	.	.	.	.	o	.	o	o	.	.	.	.
c181c_068D2D	No0068	3C273 3mm_RDBE	o	o	o	o	o	o	o	o	o	.	.	.	o	.	o	o	.	.	.	.
c181c_069D2D	No0069	M87 3mm_RDBE	o	o	o	o	o	o	o	o	o	.	.	.	o	.	o	o	.	.	.	.
c181c_070D2D	No0071	3C273 3mm_RDBE	o	o	o	o	o	o	o	o	o	.	o	.	o	.	o	o	o	.	.	.
c181c_071D2D	No0072	M87 3mm_RDBE	o	o	o	o	o	o	o	o	o	.	o	.	o	.	94	94	o	.	.	.
c181c_072D2D	No0073	M87 3mm_RDBE	.	o	.	.	o	o	o	o	o	.	o	.	o	.	.	.	.	.	.	.
c181c_073D2D	No0075	3C279 3mm_RDBE	o	o	o	o	.	o	o	o	o	.	o	.	.	.	o	o	o	.	.	.
c181c_074D2D	No0076	M87 3mm_RDBE	o	o	o	o	.	o	o	o	o	.	o	.	o	.	o	o	o	.	.	.
c181c_075D2D	No0077	3C273 3mm_RDBE	o	o	o	o	o	o	o	o	o	o	o	o	o	.	o	o	o	.	.	.
c181c_076D2D	No0078	M87 3mm_RDBE	o	o	o	o	o	o	o	o	o	o	o	o	o	.	o	o	o	.	.	.
c181c_077D2D	No0079	3C279 3mm_RDBE	o	o	o	o	.	o	o	o	o	o	o	o	.	.	o	o	o	.	.	.
c181c_078D2D	No0080	M87 3mm_RDBE	o	o	o	o	.	o	o	o	o	o	o	o	o	.	o	o	o	.	.	.
c181c_079D2D	No0082	3C273 3mm_RDBE	o	o	o	o	.	o	o	x	o	o	o	o	o	.	o	o	o	.	.	.
c181c_080D2D	No0083	M87 3mm_RDBE	o	o	o	o	.	o	o	x	o	o	o	o	o	.	o	o	o	.	.	.
c181c_081D2D	No0084	3C273 3mm_RDBE	o	.	o	o	.	o	o	x	o	o	o	o	o	.	o	o	o	.	.	.
c181c_082D2D	No0085	M87 3mm_RDBE	o	.	o	o	.	o	o	x	o	o	o	o	o	.	o	o	o	.	.	.
c181c_083D2D	No0086	M87 3mm_RDBE	.	.	.	o	.	o	o	x	o	o	o	o	o	.	o	o	.	.	.	.
c181c_084D2D	No0088	3C279 3mm_RDBE	.	.	o	o	.	o	o	x	o	o	o	o	.	.	o	o	o	.	.	.
c181c_085D2D	No0089	M87 3mm_RDBE	.	.	o	o	.	o	o	x	o	o	o	o	o	.	o	o	o	.	.	.
c181c_086D2D	No0091	3C273 3mm_RDBE	.	.	o	o	.	o	o	x	o	o	o	o	o	x	91	91	o	.	.	.
c181c_087D2D	No0092	M87 3mm_RDBE	.	.	o	o	.	o	o	x	o	o	o	o	o	x	x	x	o	.	.	.
c181c_088D2D	No0093	3C273 3mm_RDBE	.	.	o	o	.	o	o	x	o	o	o	o	o	x	o	o	o	.	.	.
c181c_089D2D	No0094	M87 3mm_RDBE	.	.	o	o	.	o	o	16	o	o	o	o	o	16	o	o	o	.	.	.
c181c_090D2D	No0095	3C279 3mm_RDBE	.	.	.	.	.	o	o	o	o	o	o	o	.	o	o	o	o	.	.	.
c181c_091D2D	No0096	M87 3mm_RDBE	.	.	.	.	.	o	o	o	o	o	o	o	o	o	93	93	o	.	.	.
c181c_093D2D	No0099	3C273 3mm_RDBE	.	.	.	.	.	o	o	o	o	o	o	o	o	o	91	91	o	.	.	.
c181c_094D2D	No0100	M87 3mm_RDBE	.	.	.	.	.	o	o	o	o	o	o	o	o	o	o	o	o	.	.	.

```
c181c_097D2D No0103    3C279 3mm_RDBE . . . . . o o o o o o o . o o o o . . .
c181c_098D2D No0104      M87 3mm_RDBE . . . . . o o o o o o o o o o o o . . .
c181c_100D2D No0107    3C273 3mm_RDBE . . . . . o o o o o o o o o o o o . . .
c181c_101D2D No0108      M87 3mm_RDBE . . . . . o o o o o o o o o o o o . . .
c181c_103D2D No0111    3C279 3mm_RDBE . . . . . o o o o o o o . o o o o . . .
c181c_104D2D No0112      M87 3mm_RDBE . . . . . o o o o o o o o o o o o . . .
c181c_107D2D No0115    3C273 3mm_RDBE . . . . . o o o o o o o o o o o o . . .
c181c_108D2D No0116      M87 3mm_RDBE . . . . . o o o o o o o o o o o o . . .
c181c_110D2D No0118    3C279 3mm_RDBE . . . . . o o o o o o o . o o o o . . .
c181c_111D2D No0119      M87 3mm_RDBE . . . . . o o o o o o o o o 94 94 o . . .
c181c_113D2D No0122    3C273 3mm_RDBE . . . . . o o o o o o o o o o o o . . .
c181c_114D2D No0123      M87 3mm_RDBE . . . . . o o o o o o o o o 94 94 o . . .
c181c_117D2D No0126    3C279 3mm_RDBE . . . . . o o o o o o o . o o o o . . .
c181c_118D2D No0127      M87 3mm_RDBE . . . . . o o o o o o o o o o o o . . .
c181c_120D2D No0130    3C273 3mm_RDBE . . . . . o o o o o o o . o . . o . . .
c181c_121D2D No0131      M87 3mm_RDBE . . . . . o o o o o o o o o . . o . . .
c181c_123D2D No0134    3C279 3mm_RDBE . . . . . o o o o o o o . o . . o . . .
c181c_124D2D No0135      M87 3mm_RDBE . . . . . o o o o o o o o o . . o . . .
c181c_127D2D No0138    3C273 3mm_RDBE . . . . . o o o o o o o . o . . o . . .
c181c_129D2D No0139      M87 3mm_RDBE . . . . . o o o o o o o o o . . o . . .
c181c_131D2D No0142    3C279 3mm_RDBE . . . . . o o o o o o o . o . . o . . .
c181c_132D2D No0143      M87 3mm_RDBE . . . . . o o o o o o o o o . . o . . .
c181c_134D2D No0145    3C273 3mm_RDBE . . . . . o o o o o o o . o . . o . . .
c181c_135D2D No0146      M87 3mm_RDBE . . . . . o o o o o o o o o . . o . . .
c181c_138D2D No0149    3C279 3mm_RDBE . . . . . o o o o o o o . o . . o . . .
c181c_139D2D No0150      M87 3mm_RDBE . . . . . o o o o o o o . o . . . . . .
c181c_141D2D No0152    3C273 3mm_RDBE . . . . . o o o o o o o . o . . . . . .
c181c_142D2D No0153      M87 3mm_RDBE . . . . . o o o o o o o . o . . . . . .
c181c_143D2D No0154      M87 3mm_RDBE . . . . . o o o o o o o . o . . . . . .
c181c_145D2D No0156    3C279 3mm_RDBE . . . . . o o o o o o o . o . . . . . .
c181c_146D2D No0157      M87 3mm_RDBE . . . . . o o o o o o o . o . . . . . .
c181c_147D2D No0158      M87 3mm_RDBE . . . . . o o o o o o o . o . . . . . .
c181c_150D2D No0161    3C273 3mm_RDBE . . . . . o o o o o o o . o . . . . . .
c181c_151D2D No0162      M87 3mm_RDBE . . . . . o o o o o o o . o . . . . . .
c181c_152D2D No0163      M87 3mm_RDBE . . . . . o o o o o o o . o . . . . . .
```