C191C Correlation Report

General information

- Includes two science projects: MG005A and MG005B
- 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: c191c.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 No0016, source 3C84, fringes to Br, Fd, Kp, La, Ov, Pt: No0016_all.pdf

Scan No0036, source OJ287, fringes to Ef, On, Ys, Mh, Gl, Gb, Kp, La, Nl, Ov, Pt: No0036_all.pdf

Scan No0097, source 3C345, fringes to all stations: No0097_all.pdf

Station	Code	Fringes	Plots	Comments
Ef	B	yes	Fringe overview of all baselines (all of C191C) including this antenna in LL (left for each baseline) and RR (right for each baseline). Legend: white - scheduled, but no data, blue - no fringe, dark red/brown/green - fringes of different quality. c191c_FRINGE_RfAnt_Ef_LLRR_AllSrc.pdf Examples of fourfit fringe plots: No0036_all.pdf, No0097_all.pdf **Same for all antennas below unless otherwise noted.**	weather mixed, everything from clear sky to light rain
On	X	yes	c191c_FRINGE_RfAnt_On_LLRR_AllSrc.pdf No0036_all.pdf, No0097_all.pdf	
Ys	Y	yes	c191c_FRINGE_RfAnt_Ys_LLRR_AllSrc.pdf No0036_all.pdf, No0097_all.pdf	

Station	Code	Fringes	Plots	Comments
Mh	Z	yes	c191c_FRINGE_RfAnt_Mh_LLRR_AllSrc.pdf No0036_all.pdf, No0097_all.pdf	
Pv	P	no	c191c_FRINGE_RfAnt_Pv_LLRR_AllSrc.pdf	did not observe due to bad weather
GLT: Gl	g	yes	c191c_FRINGE_RfAnt_Gl_LLRR_AllSrc.pdf No0036_all.pdf, No0097_all.pdf	confirmed correct polarization configuration for this session
GBT: Gb	G	yes	c191c_FRINGE_RfAnt_Gb_LLRR_AllSrc.pdf No0036_all.pdf, No0097_all.pdf	broken Cal-Wheel, no Tsys, cloudy and rainy weather
VLBA: Br	b	yes	c191c_FRINGE_RfAnt_Br_LLRR_AllSrc.pdf No0016_all.pdf, No0097_all.pdf	cloudy conditions, precipitation
VLBA: Fd	f	yes	c191c_FRINGE_RfAnt_Fd_LLRR_AllSrc.pdf No0016_all.pdf, No0097_all.pdf	High winds. Dropped out for technical reasons, both briefly and for significant lengths of time.
VLBA: Kp	k	yes	c191c_FRINGE_RfAnt_Kp_LLRR_AllSrc.pdf No0016_all.pdf, No0036_all.pdf, No0097_all.pdf	cloudy confitions
VLBA: La	l	yes	c191c_FRINGE_RfAnt_La_LLRR_AllSrc.pdf No0016_all.pdf, No0036_all.pdf, No0097_all.pdf	
VLBA: Mk	m	no	c191c_FRINGE_RfAnt_Mk_LLRR_AllSrc.pdf	Out for 3mm receiver repair. No scans recorded.
VLBA: Nl	n	yes	c191c_FRINGE_RfAnt_Nl_LLRR_AllSrc.pdf No0036_all.pdf, No0097_all.pdf	cloudy conditions, receiver slightly warm
VLBA: Ov	o	yes	c191c_FRINGE_RfAnt_Ov_LLRR_AllSrc.pdf No0016_all.pdf, No0036_all.pdf, No0097_all.pdf	high winds, cloudy conditions
VLBA: Pt	p	yes	c191c_FRINGE_RfAnt_Pt_LLRR_AllSrc.pdf	High winds, cloudy conditions.

Station	Code	Fringes	Plots	Comments
			No0016_all.pdf, No0036_all.pdf, No0097_all.pdf	Taken out for several scans because of USNO observing. Also briefly parked to check cryos.

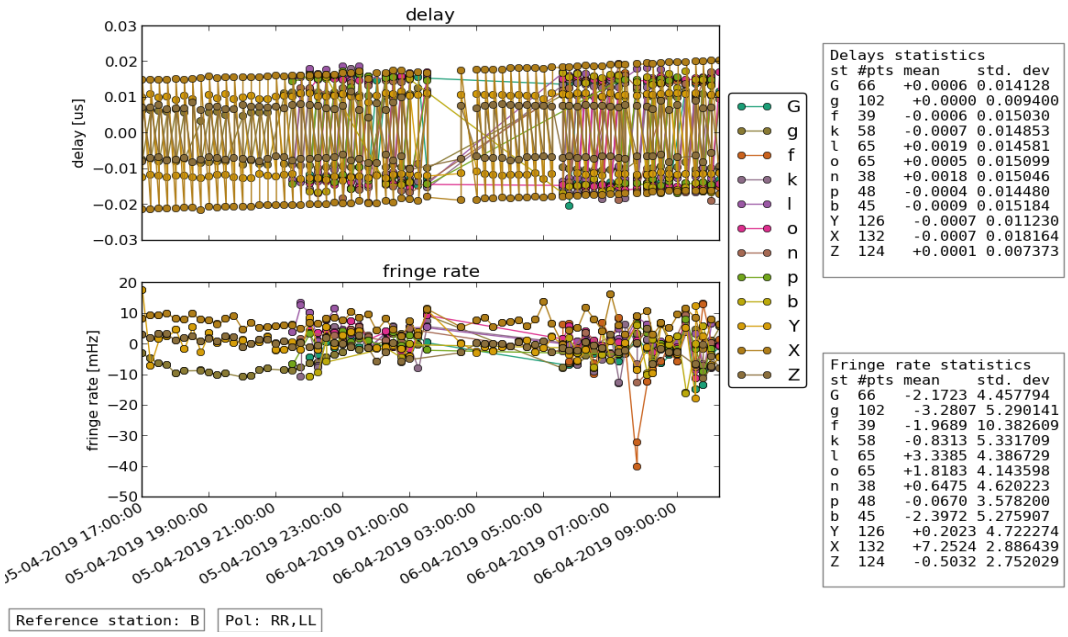
Notes

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

Post-Correlation checks

Residuals

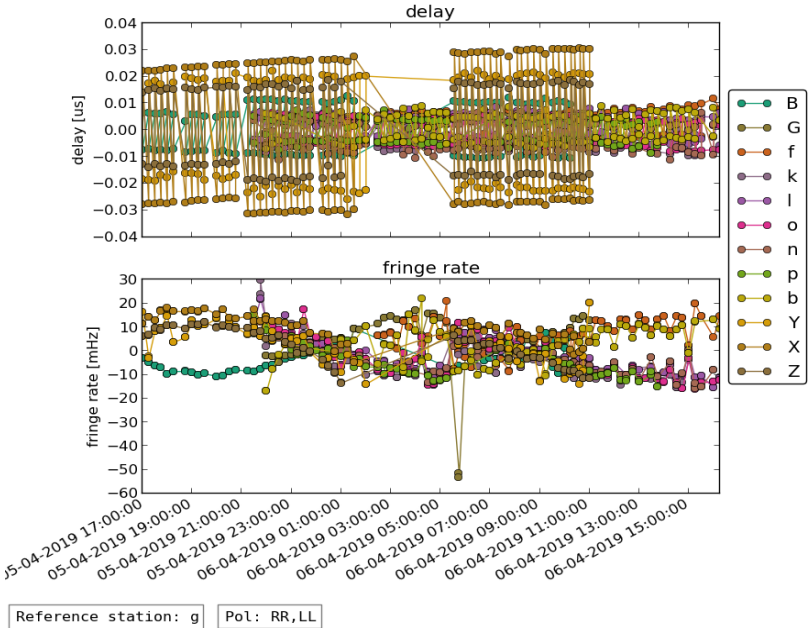
Ef:




```
Delays statistics
st #pts mean    std. dev
G  66   +0.0006 0.014128
g  102   +0.0000 0.009400
f  39   -0.0006 0.015030
k  58   -0.0007 0.014853
l  65   +0.0019 0.014581
o  65   +0.0005 0.015099
n  38   +0.0018 0.015046
p  48   -0.0004 0.014480
b  45   -0.0009 0.015184
Y  126   -0.0007 0.011230
X  132   -0.0007 0.018164
Z  124   +0.0001 0.007373
```

```
Fringe rate statistics
st #pts mean    std. dev
G  66   -2.1723 4.457794
g  102   -3.2807 5.290141
f  39   -1.9689 10.382609
k  58   -0.8313 5.331709
l  65   +3.3385 4.386729
o  65   +1.8183 4.143598
n  38   +0.6475 4.620223
p  48   -0.0670 3.578200
b  45   -2.3972 5.275907
Y  126   +0.2023 4.722274
X  132   +7.2524 2.886439
Z  124   -0.5032 2.752029
```

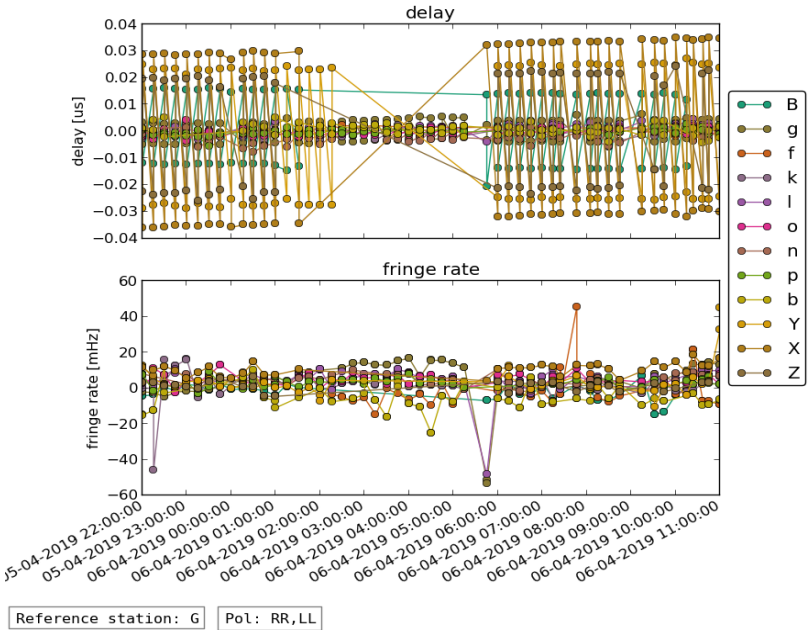
GLT:




```
Delays statistics
st #pts mean    std. dev
B  102   +0.0000 0.009400
G  100   +0.0001 0.003914
f  110   +0.0018 0.005104
k  116   -0.0018 0.005122
l  143   +0.0006 0.004797
o  146   -0.0007 0.005057
n  119   -0.0023 0.005318
p  111   -0.0003 0.004685
b  117   +0.0010 0.005214
Y  111   -0.0009 0.020415
X  110   -0.0007 0.027505
Z  104   +0.0001 0.016515
```

```
Fringe rate statistics
st #pts mean    std. dev
B  102   -3.2807 5.290141
G  100   +4.9308 10.253874
f  110   +6.4989 6.777827
k  116   -3.7166 7.833780
l  143   -1.4367 7.240880
o  146   -3.1119 8.013663
n  119   -3.1419 5.990071
p  111   -4.3266 6.124096
b  117   +2.6527 7.452123
Y  111   +2.4757 7.854985
X  110   +9.5803 5.451302
Z  104   +1.8461 7.152695
```

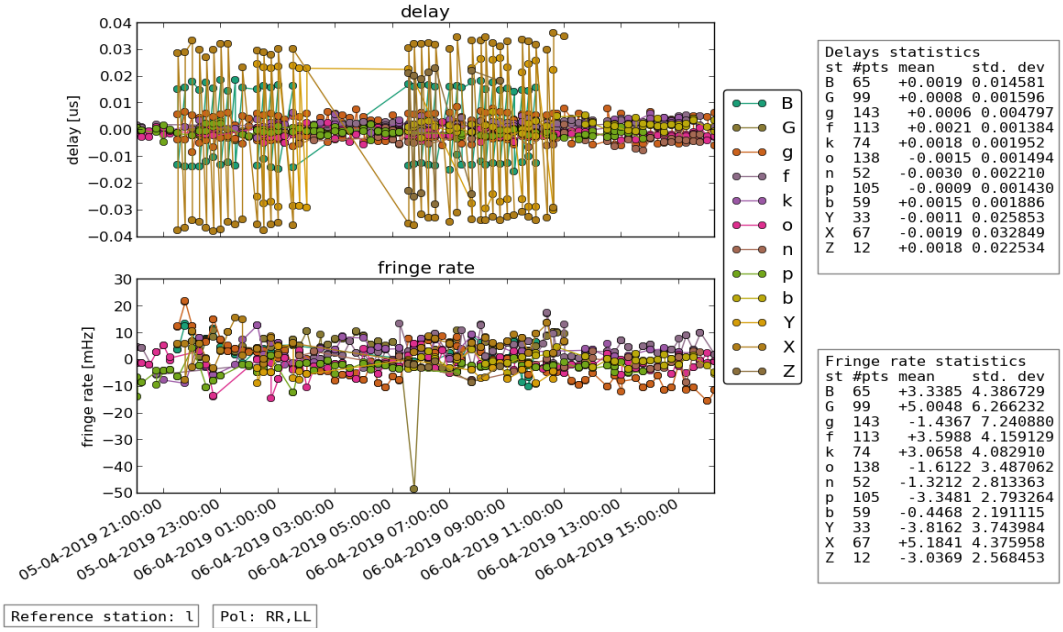
GBT:




```
Delays statistics
st #pts mean    std. dev
B  66   +0.0006 0.014128
g  100   +0.0001 0.003914
f  46   +0.0009 0.001090
k  94   -0.0008 0.001437
l  99   +0.0008 0.001596
o  100   -0.0003 0.001331
n  77   -0.0020 0.002049
p  84   -0.0001 0.001177
b  74   +0.0006 0.001964
Y  77   -0.0014 0.025161
X  71   +0.0001 0.032201
Z  57   -0.0002 0.021308
```

```
Fringe rate statistics
st #pts mean    std. dev
B  66   -2.1723 4.457794
g  100   +4.9308 10.253874
f  46   -1.0480 9.819723
k  94   +2.3108 6.673803
l  99   +5.0048 6.266232
o  100   +4.8518 2.919979
n  77   +4.4974 3.015293
p  84   +2.9928 2.397345
b  74   -5.5403 6.700978
Y  77   +3.0053 6.991135
X  71   +10.8021 3.298410
Z  57   +1.3303 2.642240
```

La:



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
```

c191c.fits:

				EF	ON	YS	PV	MH	GL	NL	FD	OV	PT	BR	KP	MK	LA	GB
c191c_001	No0001	OJ287	3mm_RDBE	o	o	o	x	o	o	.	.	.	.	.	.	.	.	.
c191c_002	No0002	OJ287	3mm_RDBE	o	o	o	x	o	o	.	.	.	.	.	.	.	.	.
c191c_003	No0003	OJ287	3mm_RDBE	o	o	o	x	o	o	.	.	.	.	.	.	.	.	.
c191c_004	No0004	OJ287	3mm_RDBE	o	o	o	x	o	o	.	.	.	.	.	.	.	.	.
c191c_005	No0005	OJ287	3mm_RDBE	o	o	o	x	o	o	.	.	.	.	.	.	.	.	.
c191c_006	No0006	OJ287	3mm_RDBE	o	o	o	x	o	o	.	.	.	.	.	.	.	.	.
c191c_007	No0007	1055+018	3mm_RDBE	o	o	o	x	o	.	.	.	.	.	.	.	.	.	.
c191c_008	No0008	OJ287	3mm_RDBE	o	o	o	x	o	o	.	.	.	.	.	.	.	.	.
c191c_009	No0009	OJ287	3mm_RDBE	o	o	o	x	o	o	.	.	.	.	.	.	.	.	.
c191c_010	No0010	OJ287	3mm_RDBE	o	o	o	x	o	o	.	.	.	.	.	.	.	.	.
c191c_011	No0011	OJ287	3mm_RDBE	o	o	o	x	o	o	.	.	.	.	.	.	.	.	.
c191c_012	No0012	1055+018	3mm_RDBE	o	o	o	x	o	.	.	.	.	.	.	.	.	.	.
c191c_013	No0013	OJ287	3mm_RDBE	o	o	o	x	o	o	o	.	.	.	.	.	.	.	.
c191c_014	No0014	3C84	3mm_RDBE	.	.	.	.	.	.	.	o	o	o	o	o	x	o	.
c191c_015	No0015	OJ287	3mm_RDBE	o	o	o	x	o	o	o	.	.	.	.	.	.	.	.
c191c_016	No0016	3C84	3mm_RDBE	.	.	.	.	.	.	.	o	o	o	o	o	x	o	.
c191c_017	No0017	OJ287	3mm_RDBE	o	o	o	x	o	o	o	.	.	.	.	.	.	.	.

c191c_018	No0018	3C84	3mm_RDBE	.	.	.	.	.	.	.	x	o	o	o	o	x	o	.
c191c_019	No0019	OJ287	3mm_RDBE	o	o	o	x	o	o	o	.	.	.	.	.	.	.	.
c191c_020	No0020	3C84	3mm_RDBE	.	.	.	.	.	.	.	o	o	o	o	o	x	o	.
c191c_021	No0021	OJ287	3mm_RDBE	o	o	o	x	o	x	o	.	.	.	.	.	.	.	.
c191c_022	No0022	3C84	3mm_RDBE	.	.	.	.	.	.	.	o	o	o	o	o	x	o	.
c191c_023	No0023	OJ287	3mm_RDBE	o	o	o	x	o	o	o	.	.	.	.	.	.	.	.
c191c_024	No0024	3C84	3mm_RDBE	.	.	.	.	.	.	.	o	o	o	o	o	x	o	.
c191c_025	No0025	OJ287	3mm_RDBE	o	o	o	x	o	o	o	o	.	o	.	.	.	o	.
c191c_026	No0026	3C84	3mm_RDBE	.	.	.	.	.	.	.	.	o	.	o	o	x	.	.
c191c_027	No0027	OJ287	3mm_RDBE	o	o	o	x	o	o	o	o	.	o	o	o	.	o	.
c191c_028	No0029	OJ287	3mm_RDBE	o	o	o	x	o	o	o	o	o	o	o	o	.	o	o
c191c_029	No0030	OJ287	3mm_RDBE	o	o	o	x	o	o	o	o	o	o	o	o	.	o	o
c191c_030	No0032	OJ287	3mm_RDBE	o	o	o	x	o	o	o	o	o	o	o	o	.	o	o
c191c_031	No0033	OJ287	3mm_RDBE	o	o	o	x	o	o	o	o	o	o	o	o	.	o	o
c191c_032	No0035	OJ287	3mm_RDBE	o	o	o	x	o	o	o	o	o	o	o	o	.	o	o
c191c_033	No0036	OJ287	3mm_RDBE	o	o	o	x	17	o	o	o	o	o	o	o	.	o	o
c191c_034	No0038	OJ287	3mm_RDBE	o	o	o	x	o	o	o	o	o	o	o	o	.	o	o
c191c_035	No0039	OJ287	3mm_RDBE	o	o	o	x	o	o	o	o	o	o	o	o	.	o	o
c191c_036	No0041	1055+018	3mm_RDBE	o	o	o	x	o	.	o	.	.	.	.	.	.	.	o
c191c_037	No0042	OJ287	3mm_RDBE	.	.	.	.	.	o	.	o	o	o	o	o	.	o	.
c191c_038	No0044	OJ287	3mm_RDBE	o	o	o	x	o	o	o	o	o	o	o	o	.	o	o
c191c_039	No0045	OJ287	3mm_RDBE	o	o	o	x	o	o	o	o	o	o	o	o	.	o	o
c191c_040	No0047	OJ287	3mm_RDBE	o	o	o	x	o	o	o	o	o	o	o	o	x	o	o
c191c_041	No0049	OJ287	3mm_RDBE	o	o	o	x	o	o	o	o	o	o	o	o	x	o	o
c191c_042	No0050	1055+018	3mm_RDBE	o	o	o	x	.	o	o	o	o	o	o	o	.	o	o
c191c_043	No0052	OJ287	3mm_RDBE	o	o	o	x	.	o	66	o	o	o	o	o	x	o	o
c191c_044	No0053	OJ287	3mm_RDBE	.	.	o	x	.	o	o	o	o	o	o	o	x	o	o
c191c_045	No0055	OJ287	3mm_RDBE	.	.	o	x	.	o	o	o	o	o	o	o	x	o	o
c191c_046	No0057	1055+018	3mm_RDBE	.	.	o	x	.	x	o	o	o	o	o	o	.	o	o
c191c_047	No0058	OJ287	3mm_RDBE	.	.	.	.	.	o	o	o	o	o	o	o	x	o	o
c191c_048	No0059	3C345	3mm_RDBE	o	o	o	x	o	.	.	.	.	.	.	.	.	.	.
c191c_049	No0060	OJ287	3mm_RDBE	.	.	.	.	.	o	o	o	o	o	o	o	x	o	o
c191c_050	No0061	3C345	3mm_RDBE	o	o	o	x	o	.	.	.	.	.	.	.	.	.	.
c191c_051	No0063	OJ287	3mm_RDBE	.	.	.	.	.	o	o	o	o	o	86	o	x	o	o
c191c_052	No0064	1633+38	3mm_RDBE	o	o	o	x	o	.	.	.	.	.	.	.	.	.	.
c191c_053	No0065	OJ287	3mm_RDBE	.	.	.	.	.	o	o	o	o	o	o	o	x	o	o
c191c_054	No0066	3C345	3mm_RDBE	o	o	o	x	o	.	.	.	.	.	.	.	.	.	.
c191c_055	No0068	OJ287	3mm_RDBE	.	.	.	.	.	o	o	o	o	o	o	o	x	o	o
c191c_056	No0069	3C345	3mm_RDBE	o	o	o	x	o	.	.	.	.	.	.	.	.	.	.
c191c_057	No0070	OJ287	3mm_RDBE	.	.	.	.	.	o	o	o	o	o	o	o	x	o	o
c191c_058	No0071	1749+096	3mm_RDBE	o	o	o	x	o	.	.	.	.	.	.	.	.	.	.
c191c_059	No0073	OJ287	3mm_RDBE	.	.	.	.	.	o	o	o	o	o	o	o	x	o	o
c191c_060	No0074	1749+096	3mm_RDBE	o	o	o	x	o	.	.	.	.	.	.	.	.	.	.
c191c_061	No0075	1055+018	3mm_RDBE	.	.	.	.	.	o	o	o	o	o	o	o	x	o	o
c191c_062	No0076	1749+096	3mm_RDBE	o	o	o	x	o	.	.	.	.	.	.	.	.	.	.
c191c_063	No0078	OJ287	3mm_RDBE	.	.	.	.	.	o	o	o	o	o	o	o	x	o	o
c191c_064	No0079	3C345	3mm_RDBE	o	o	o	x	o	.	.	.	.	.	.	.	.	.	.
c191c_065	No0080	OJ287	3mm_RDBE	.	.	.	.	.	o	o	o	o	o	o	o	x	o	o
c191c_066	No0081	3C345	3mm_RDBE	o	o	o	x	o	.	.	.	.	.	.	.	.	.	.
c191c_067	No0083	OJ287	3mm_RDBE	.	.	.	.	.	o	o	o	o	o	o	o	x	o	o

c191c_068	No0084	1633+38	3mm_RDBE	o	o	o	x	o	.	.	.	.	.	.	.	.	.
c191c_069	No0085	OJ287	3mm_RDBE	.	.	.	.	.	o	o	o	o	o	o	o	x	o	o
c191c_070	No0086	3C345	3mm_RDBE	o	o	o	x	o	.	.	.	.	.	.	.	.	.
c191c_071	No0088	3C345	3mm_RDBE	o	o	o	x	o	o	o	o	o	x	o	o	.	o	o
c191c_072	No0089	3C345	3mm_RDBE	o	o	o	x	o	o	o	o	o	x	o	o	.	o	o
c191c_073	No0090	3C345	3mm_RDBE	o	o	o	x	o	o	o	o	o	x	o	o	.	o	o
c191c_074	No0091	3C345	3mm_RDBE	o	o	o	x	o	o	o	o	o	x	o	o	.	o	o
c191c_075	No0093	3C345	3mm_RDBE	o	o	o	x	o	o	o	o	o	x	o	o	.	o	o
c191c_076	No0094	1633+38	3mm_RDBE	o	o	o	x	o	o	o	o	o	x	o	o	.	o	o
c191c_077	No0095	3C345	3mm_RDBE	o	o	o	x	o	o	o	o	o	x	o	o	.	o	o
c191c_078	No0097	3C345	3mm_RDBE	o	o	o	x	o	o	o	o	o	o	o	o	.	o	o
c191c_079	No0098	3C345	3mm_RDBE	o	o	o	x	o	o	o	o	o	o	06	o	.	o	o
c191c_080	No0100	1749+096	3mm_RDBE	o	o	o	x	o	o	o	o	o	o	o	o	.	o	o
c191c_081	No0102	3C345	3mm_RDBE	o	o	o	x	o	o	o	o	o	o	o	o	x	o	o
c191c_082	No0103	3C345	3mm_RDBE	o	o	o	x	o	o	o	o	o	o	o	o	x	o	o
c191c_083	No0104	3C345	3mm_RDBE	o	o	o	x	o	o	o	o	o	o	o	o	x	o	o
c191c_084	No0106	3C345	3mm_RDBE	o	o	o	x	o	o	o	o	o	o	o	o	x	o	o
c191c_085	No0107	3C345	3mm_RDBE	o	o	o	x	o	o	o	o	o	o	o	o	x	o	.
c191c_086	No0109	1749+096	3mm_RDBE	o	o	o	x	.	o	o	o	o	o	o	o	.	o	o
c191c_087	No0111	3C345	3mm_RDBE	o	o	o	x	o	o	o	o	o	o	o	o	x	o	o
c191c_088	No0112	3C345	3mm_RDBE	o	o	o	x	o	o	o	o	o	o	o	o	x	o	o
c191c_089	No0113	3C345	3mm_RDBE	o	o	o	x	o	o	o	o	o	o	o	o	x	o	o
c191c_090	No0115	1633+38	3mm_RDBE	o	o	o	x	o	o	o	o	o	o	o	o	x	o	o
c191c_091	No0116	3C345	3mm_RDBE	o	o	o	x	o	o	o	o	o	o	o	o	x	o	o
c191c_092	No0117	3C345	3mm_RDBE	o	o	o	x	o	o	o	o	o	o	o	o	x	o	o
c191c_093	No0118	3C345	3mm_RDBE	o	o	o	x	o	o	o	o	o	o	o	o	x	o	o
c191c_094	No0119	3C345	3mm_RDBE	.	o	o	.	o	o	o	o	o	o	o	o	x	o	o
c191c_095	No0120	3C345	3mm_RDBE	.	.	.	.	.	o	o	o	o	o	o	o	x	o	.
c191c_096	No0121	1633+38	3mm_RDBE	.	.	.	.	.	o	o	o	o	o	o	o	x	o	.
c191c_097	No0122	3C345	3mm_RDBE	.	.	.	.	.	o	o	o	o	o	o	o	x	o	.
c191c_098	No0123	1749+096	3mm_RDBE	.	.	.	.	.	o	o	o	o	o	o	o	x	o	.
c191c_099	No0124	1633+38	3mm_RDBE	.	.	.	.	.	o	o	o	o	o	o	o	x	o	.
c191c_100	No0125	3C345	3mm_RDBE	.	.	.	.	.	o	o	o	o	o	o	o	x	o	.
c191c_101	No0126	1749+096	3mm_RDBE	.	.	.	.	.	o	o	o	o	o	o	o	x	o	.
c191c_102	No0127	1633+38	3mm_RDBE	.	.	.	.	.	o	o	o	o	o	o	o	x	o	.
c191c_103	No0128	3C345	3mm_RDBE	.	.	.	.	.	o	o	o	o	o	o	o	x	o	.
c191c_104	No0129	1749+096	3mm_RDBE	.	.	.	.	.	o	o	o	o	o	o	o	x	o	.
c191c_105	No0130	1633+38	3mm_RDBE	.	.	.	.	.	o	o	o	o	o	70	o	x	o	.
c191c_106	No0131	3C345	3mm_RDBE	.	.	.	.	.	o	o	o	o	o	o	o	x	o	.
c191c_107	No0132	1749+096	3mm_RDBE	.	.	.	.	.	o	o	o	o	o	66	o	x	o	.
c191c_108	No0133	1633+38	3mm_RDBE	.	.	.	.	.	o	o	o	o	o	o	o	x	o	.
c191c_109	No0134	3C345	3mm_RDBE	.	.	.	.	.	o	o	o	o	x	o	o	x	o	.
c191c_110	No0135	1749+096	3mm_RDBE	.	.	.	.	.	o	o	o	o	x	o	o	x	o	.
c191c_111	No0136	1633+38	3mm_RDBE	.	.	.	.	.	o	o	o	o	x	o	o	x	o	.
c191c_112	No0137	3C345	3mm_RDBE	.	.	.	.	.	o	o	o	o	x	o	o	x	o	.
c191c_113	No0138	1749+096	3mm_RDBE	.	.	.	.	.	.	o	o	o	x	o	o	x	o	.
c191c_114	No0139	1633+38	3mm_RDBE	.	.	.	.	.	o	o	o	o	x	o	o	x	o	.
c191c_115	No0140	3C345	3mm_RDBE	.	.	.	.	.	o	o	o	o	x	o	o	x	o	.