MK016A Correlation Report

General information

- A part of C202A.
- Includes 3mm and 7mm parts
- PI: KADLER
- Targets: Ext.Blaz 2344+514
- Session info: http://www3.mpifr-bonn.mpg.de/div/vlbi/globalmm/
- Station feedback: http://www3.mpifr-bonn.mpg.de/div/vlbi/globalmm/sessions/oct20/feedback_oct20.asc
- Text files with detailed antenna statistics, scroll down to get to the cumulative statistics for the whole experiment:

  c202a_ALL_3mm.antrep

  c202a_ALL_7mm.antrep

Current Status

Correlation finished, data **released to PI** on 28.04.2021.

Fringes

Station	Code	Fringes	Plots	Comments
Ef	B	**yes**	**Note: all plots and statistics are done for the whole of c202a** Fringe overview of all baselines including this antenna in LL(left for each baseline) and RR (right for each baseline). Legend: white box - scheduled, but no data (or sometimes fourfit had trouble with the particular baseline/pol, so no data in alist), blue - no fringe, shades of green and brown -- fringes of varying quality. c202a_FRINGE_RfAnt_Ef_LLRR_AllSrc_3mm.pdf Examples of fourfit fringe plots can be found in (all fringe plots with baselines including the given antenna): No0189_B_3mm.pdf Antenna statistics: c202a_Ef_3mm.antrep **Same for all antennas below unless otherwise noted.**	Participated in 100% scans (3mm only), fringes in 16% baselines*||pols, mean SNR 48. **bad weather**

On	X	**yes**	c202a_FRINGE_RfAnt_On_LLRR_AllSrc_3mm.pdf No0131_X_3mm.pdf c202a_On_3mm.antrep	Participated in 100% scans (3mm only), fringes in 23% baselines*||pols, mean SNR 36.
Ys	Y	**no**	c202a_FRINGE_RfAnt_Ys_LLRR_AllSrc_3mm.pdf c202a_Ys_3mm.antrep	No fringes in c202a, due to some probem with clocks: fringes found in the fringe test with one clock setting, and in c202b shifted by more than 0.5us. None of these settings produced fringes in c202a and fringe search with a wide window also yileded no result.
Mh	Z	**yes**	c202a_FRINGE_RfAnt_Mh_LLRR_AllSrc_3mm.pdf No0087_Z_3mm.pdf c202a_Mh_3mm.antrep	Participated in 100% scans (3mm only), fringes in 10% baselines*||pols, mean SNR 25. **bad weather**
Pv	P	**yes**	c202a_FRINGE_RfAnt_Pv_LLRR_AllSrc_3mm.pdf No0100_P_3mm.pdf c202a_Pv_3mm.antrep	Participated in 100% scans (3mm only), fringes in 35% baselines*||pols, mean SNR 52.
VLBA: Br	b	**yes**	c202a_FRINGE_RfAnt_Br_LLRR_AllSrc_3mm.pdf No0128_b_3mm.pdf c202a_Br_3mm.antrep c202a_FRINGE_RfAnt_Br_LLRR_AllSrc_7mm.pdf No0090_b_7mm.pdf c202a_Br_7mm.antrep	3mm: participated in 100% scans, fringes in 23% baselines*||pols, mean SNR 23. 7mm: participated in 100% scans, fringes in 54% baselines*||pols, mean SNR 99.
VLBA: Fd	f	**yes**	c202a_FRINGE_RfAnt_Fd_LLRR_AllSrc_3mm.pdf No0150_f_3mm.pdf c202a_Fd_3mm.antrep c202a_FRINGE_RfAnt_Fd_LLRR_AllSrc_7mm.pdf No0090_f_7mm.pdf c202a_Fd_7mm.antrep	3mm: participated in 100% scans, fringes in 30% baselines*||pols, mean SNR 33. 7mm: participated in 100% scans, fringes in 63% baselines*||pols, mean SNR 103.

VLBA: Kp	k	**yes**	c202a_FRINGE_RfAnt_Kp_LLRR_AllSrc_3mm.pdf No0150_k_3mm.pdf c202a_Kp_3mm.antrep c202a_FRINGE_RfAnt_Kp_LLRR_AllSrc_7mm.pdf No0090_k_7mm.pdf c202a_Kp_7mm.antrep	3mm: participated in 100% scans, fringes in 24% baselines*||pols, mean SNR 24. 7mm: participated in 100% scans, fringes in 64% baselines*||pols, mean SNR 118.
VLBA: La	l	**yes**	c202a_FRINGE_RfAnt_La_LLRR_AllSrc_3mm.pdf No0131_l_3mm.pdf c202a_La_3mm.antrep c202a_FRINGE_RfAnt_La_LLRR_AllSrc_7mm.pdf No0090_l_7mm.pdf c202a_La_7mm.antrep	3mm: participated in 94% scans, fringes in 30% baselines*||pols, mean SNR 30. 7mm: participated in 92% scans, fringes in 61% baselines*||pols, mean SNR 101. **dropped out for several scans due to USNO observations**
VLBA: Mk	m	**yes**	c202a_FRINGE_RfAnt_Mk_LLRR_AllSrc_3mm.pdf No0150_m_3mm.pdf c202a_Mk_3mm.antrep c202a_FRINGE_RfAnt_Mk_LLRR_AllSrc_7mm.pdf No0090_m_7mm.pdf c202a_Mk_7mm.antrep	3mm: participated in 97% scans, fringes in 21% baselines*||pols, mean SNR 19. 7mm: participated in 97% scans, fringes in 46% baselines*||pols, mean SNR 143. **dropped out for several scans due to USNO observations**
VLBA: Nl	n	**yes**	c202a_FRINGE_RfAnt_Nl_LLRR_AllSrc_3mm.pdf No0122_n_3mm.pdf No0219_n_3mm.pdf c202a_Nl_3mm.antrep c202a_FRINGE_RfAnt_Nl_LLRR_AllSrc_7mm.pdf No0090_n_7mm.pdf c202a_Nl_7mm.antrep	3mm: participated in 100% scans, fringes in 11% baselines*||pols, mean SNR 15. 7mm: participated in 100% scans, fringes in 48% baselines*||pols, mean SNR 88.

VLBA: Ov	o	yes	c202a_FRINGE_RfAnt_Ov_LLRR_AllSrc_3mm.pdf No0150_o_3mm.pdf No0228_o_3mm.pdf c202a_Ov_3mm.antrep c202a_FRINGE_RfAnt_Ov_LLRR_AllSrc_7mm.pdf No0090_o_7mm.pdf c202a_Ov_7mm.antrep	3mm: participated in 100% scans, fringes in 27% baselines*||pols, mean SNR 29. 7mm: participated in 100% scans, fringes in 53% baselines*||pols, mean SNR 135.
VLBA: Pt	p	yes	c202a_FRINGE_RfAnt_Pt_LLRR_AllSrc_3mm.pdf No0128_p_3mm.pdf c202a_Pt_3mm.antrep c202a_FRINGE_RfAnt_Pt_LLRR_AllSrc_7mm.pdf No0090_p_7mm.pdf c202a_Pt_7mm.antrep	3mm: participated in 95% scans, fringes in 13% baselines*||pols, mean SNR 19. 7mm: participated in 100% scans, fringes in 12% baselines*||pols, mean SNR 56. **lots of technical problems, see logs**
VLBA: Hn	h	yes	c202a_FRINGE_RfAnt_Hn_LLRR_AllSrc_7mm.pdf No0233_h_7mm.pdf c202a_Hn_7mm.antrep	Participated in 46% scans (7mm only), fringes in 3% baselines*||pols, mean SNR 8. **mostly out due to AZ wheel damage**
VLBA: Sc	c	yes	c202a_FRINGE_RfAnt_Sc_LLRR_AllSrc_7mm.pdf No0090_c_7mm.pdf c202a_Sc_7mm.antrep	Participated in 100% scans (7mm only), fringes in 23% baselines*||pols, mean SNR 117.
KVN: Kt	t	yes	c202a_FRINGE_RfAnt_Kt_LLRR_AllSrc_3mm.pdf No0110_t_3mm.pdf c202a_Kt_3mm.antrep	Participated in 99% scans (3mm only), fringes in 29% baselines*||pols, mean SNR 54.
KVN: Ku	u	yes	c202a_FRINGE_RfAnt_Ku_LLRR_AllSrc_3mm.pdf No0113_u_3mm.pdf c202a_Ku_3mm.antrep	Participated in 86% scans (3mm only), fringes in 25% baselines*||pols, mean SNR 52.

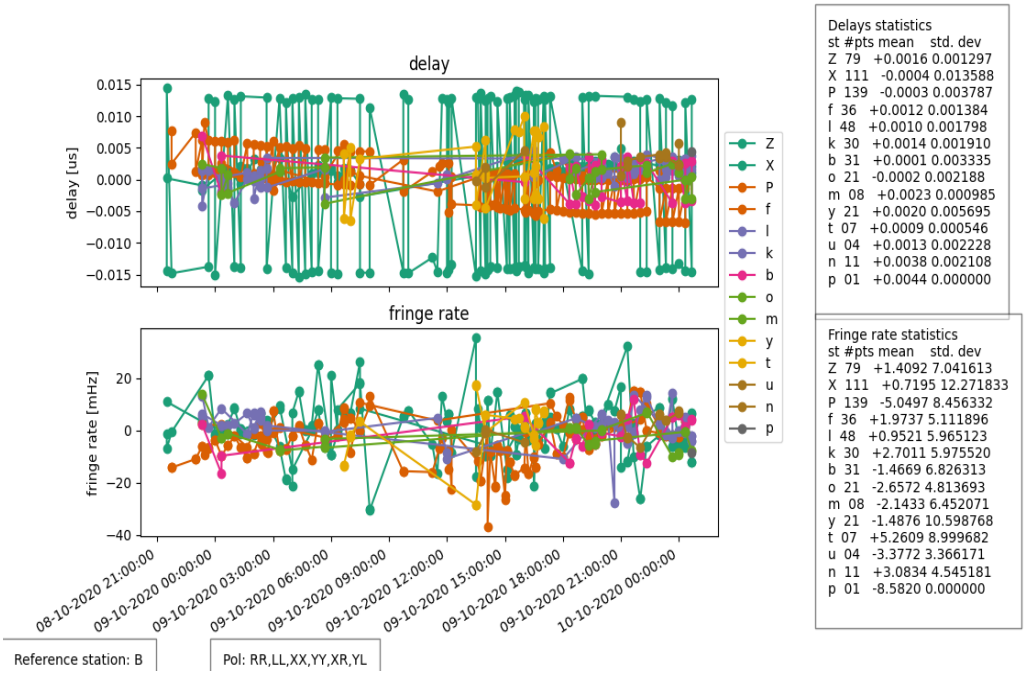
KVN: Ky	y	yes	c202a_FRINGE_RfAnt_Ky_LLRR_AllSrc_3mm.pdf No0103_y_3mm.pdf No0140_y_3mm.pdf c202a_Ky_3mm.antrep ----------	Participated in 100% scans (3mm only), fringes in 36% baselines*||pols, mean SNR 49.

Notes

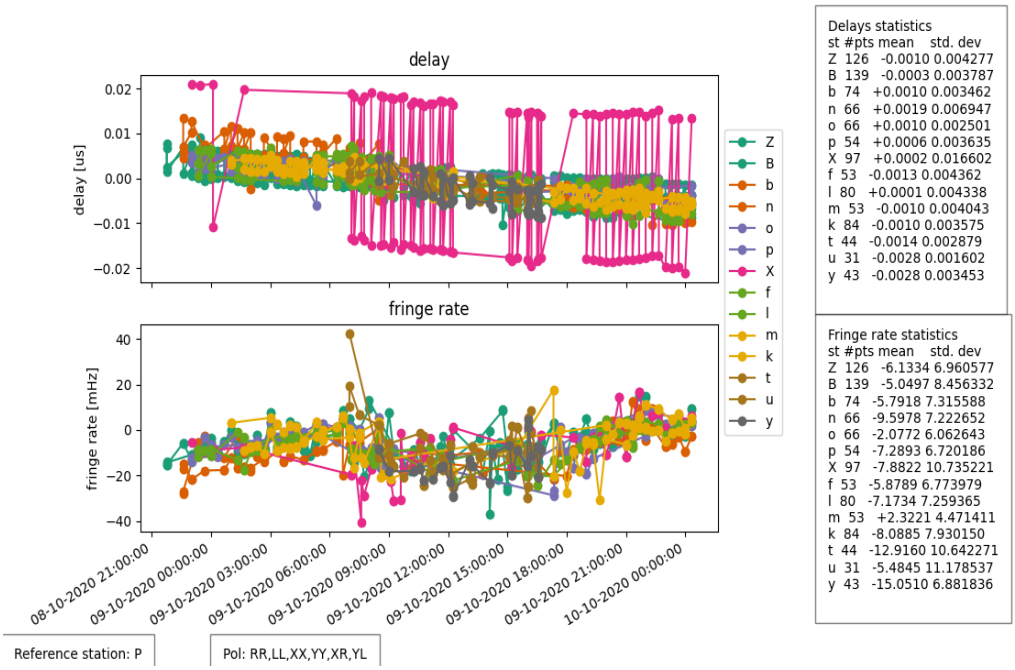
Post-Correlation checks

Residuals

Ef as reference (3mm):



Pv as reference (3mm):



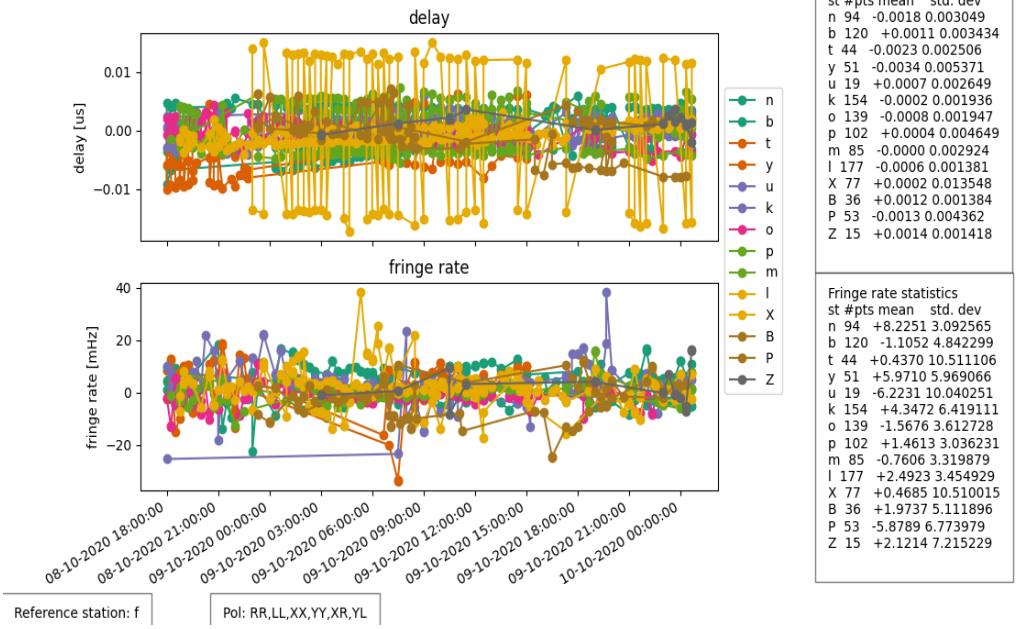
Delays statistics

st	#pts	mean	std. dev
Z	126	-0.0010	0.004277
B	139	-0.0003	0.003787
b	74	+0.0010	0.003462
n	66	+0.0019	0.006947
o	66	+0.0010	0.002501
p	54	+0.0006	0.003635
X	97	+0.0002	0.016602
f	53	-0.0013	0.004362
l	80	+0.0001	0.004338
m	53	-0.0010	0.004043
k	84	-0.0010	0.003575
t	44	-0.0014	0.002879
u	31	-0.0028	0.001602
y	43	-0.0028	0.003453

Fringe rate statistics

st	#pts	mean	std. dev
Z	126	-6.1334	6.960577
B	139	-5.0497	8.456332
b	74	-5.7918	7.315588
n	66	-9.5978	7.222652
o	66	-2.0772	6.062643
p	54	-7.2893	6.720186
X	97	-7.8822	10.735221
f	53	-5.8789	6.773979
l	80	-7.1734	7.259365
m	53	+2.3221	4.471411
k	84	-8.0885	7.930150
t	44	-12.9160	10.642271
u	31	-5.4845	11.178537
y	43	-15.0510	6.881836

Fd as reference (3mm):



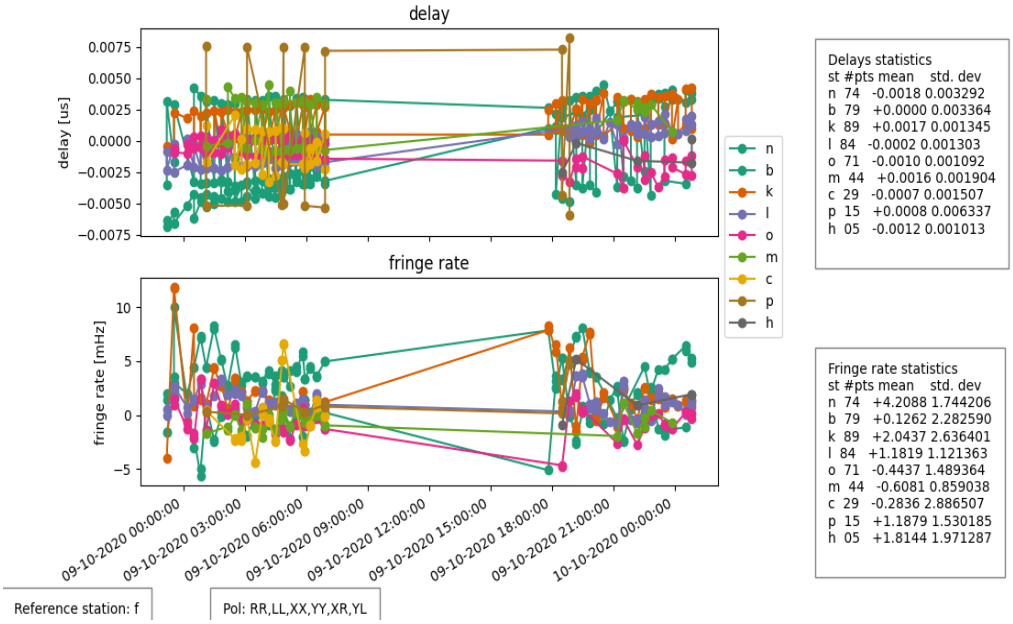
Delays statistics

st	#pts	mean	std. dev
n	94	-0.0018	0.003049
b	120	+0.0011	0.003434
t	44	-0.0023	0.002506
y	51	-0.0034	0.005371
u	19	+0.0007	0.002649
k	154	-0.0002	0.001936
o	139	-0.0008	0.001947
p	102	+0.0004	0.004649
m	85	-0.0000	0.002924
l	177	-0.0006	0.001381
X	77	+0.0002	0.013548
B	36	+0.0012	0.001384
P	53	-0.0013	0.004362
Z	15	+0.0014	0.001418

Fringe rate statistics

st	#pts	mean	std. dev
n	94	+8.2251	3.092565
b	120	-1.1052	4.842299
t	44	+0.4370	10.511106
y	51	+5.9710	5.969066
u	19	-6.2231	10.040251
k	154	+4.3472	6.419111
o	139	-1.5676	3.612728
p	102	+1.4613	3.036231
m	85	-0.7606	3.319879
l	177	+2.4923	3.454929
X	77	+0.4685	10.510015
B	36	+1.9737	5.111896
P	53	-5.8789	6.773979
Z	15	+2.1214	7.215229

Fd as reference (7mm):



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
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mk016a.fits (3mm):

```
                                  FD NL OV PT BR KP MK LA KY KU KT EF ON YS PV MH
c202a_016 No0016    BLLAC 3mm_ddc .  .  .  .  .  .  .  .  .  .  .  o  o  o  o  o
c202a_018 No0018    BLLAC 3mm_ddc .  .  .  .  .  .  .  .  .  .  .  o  o  o  o  o
c202a_020 No0020 2344+514 3mm_ddc .  .  .  .  .  .  .  .  .  .  .  o  o  o  o  o
c202a_022 No0022 2344+514 3mm_ddc .  .  .  .  .  .  .  .  .  .  .  o  o  o  o  o
c202a_024 No0024    BLLAC 3mm_ddc .  o  .  .  o  .  .  .  .  .  .  o  o  o  o  o
c202a_025 No0025 2344+514 3mm_ddc .  o  .  .  o  .  .  .  .  .  .  o  o  o  o  o
c202a_027 No0027    BLLAC 3mm_ddc o  o  o  o  o  o  .  o  .  .  .  o  o  o  o  o
c202a_028 No0028 2344+514 3mm_ddc o  o  o  o  o  o  .  o  .  .  .  o  o  o  o  o
c202a_029 No0030 0102+584 3mm_ddc o  o  o  o  o  o  .  o  .  .  .  o  .  o  o  o
c202a_030 No0031 2344+514 3mm_ddc o  o  o  o  o  o  .  o  .  .  .  o  o  o  o  o
c202a_031 No0033 0102+584 3mm_ddc o  o  o  o  o  o  .  o  .  .  .  o  o  o  o  o
c202a_032 No0034 2344+514 3mm_ddc o  o  o  o  o  o  .  o  .  .  .  o  o  o  o  o
c202a_033 No0035 0102+584 3mm_ddc o  o  o  o  o  o  .  o  .  .  .  o  o  o  o  o
c202a_034 No0036 2344+514 3mm_ddc o  o  o  o  o  o  .  o  .  .  .  o  o  o  o  o
c202a_035 No0038 0102+584 3mm_ddc o  o  o  o  o  o  .  o  .  .  .  o  o  o  o  o
c202a_036 No0039 2344+514 3mm_ddc o  o  o  o  o  o  .  o  .  .  .  o  o  o  o  o
c202a_037 No0041 0102+584 3mm_ddc o  o  o  o  o  o  .  o  .  .  .  o  o  o  o  o
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c202a_038 No0042 2344+514 3mm_ddc o  o  o  o  o  o  .  o  .  .  .  o  o  o  o  o
c202a_039 No0044    BLLAC 3mm_ddc o  o  o  o  o  o  o  o  .  .  .  o  o  o  o  o
c202a_040 No0046 0102+584 3mm_ddc o  o  o  o  o  o  .  o  .  .  .  o  o  o  o  o
c202a_041 No0047 2344+514 3mm_ddc o  o  o  o  o  o  .  o  .  .  .  o  o  o  o  o
c202a_042 No0049 0102+584 3mm_ddc o  o  o  o  o  o  .  o  .  .  .  o  o  o  o  o
c202a_043 No0050 2344+514 3mm_ddc o  o  o  o  o  o  .  o  .  .  .  o  o  o  o  o
c202a_044 No0052 0102+584 3mm_ddc o  o  o  o  o  o  .  o  .  .  .  o  o  o  o  o
c202a_045 No0053 2344+514 3mm_ddc o  o  o  o  o  o  .  o  .  .  .  o  o  o  o  o
c202a_046 No0055 0102+584 3mm_ddc o  o  o  o  o  o  .  o  .  .  .  o  o  o  o  o
c202a_047 No0056 2344+514 3mm_ddc o  o  o  o  o  o  .  o  .  .  .  o  o  o  o  o
c202a_048 No0058 0102+584 3mm_ddc o  o  o  o  o  o  o  o  .  .  .  o  o  o  o  o
c202a_049 No0059 2344+514 3mm_ddc o  o  o  o  o  o  o  o  .  .  .  o  o  o  o  o
c202a_050 No0061    BLLAC 3mm_ddc o  o  o  o  o  o  o  o  .  .  .  o  o  o  o  o
c202a_051 No0063 0102+584 3mm_ddc o  o  o  o  o  o  o  o  .  .  .  o  o  o  o  o
c202a_052 No0064 2344+514 3mm_ddc o  o  o  o  o  o  o  o  .  .  .  o  o  o  o  o
c202a_053 No0066 0102+584 3mm_ddc o  o  o  o  o  o  o  o  .  .  .  o  o  o  o  o
c202a_054 No0067 2344+514 3mm_ddc o  o  o  o  o  o  o  o  .  .  .  o  o  o  o  o
c202a_055 No0069 0102+584 3mm_ddc o  o  o  o  o  o  o  o  .  .  .  o  o  o  o  o
c202a_056 No0070 2344+514 3mm_ddc o  o  o  o  o  o  o  o  .  .  .  o  o  o  o  o
c202a_057 No0072 0102+584 3mm_ddc o  o  o  o  o  o  o  o  .  .  .  o  o  o  o  o
c202a_058 No0073 2344+514 3mm_ddc o  o  o  o  o  o  o  o  .  .  .  o  o  o  o  o
c202a_059 No0075 0102+584 3mm_ddc o  o  o  o  o  o  o  o  .  .  .  o  o  o  o  o
c202a_060 No0076 2344+514 3mm_ddc o  o  o  o  o  o  o  o  .  .  .  o  o  o  o  o
c202a_061 No0079    BLLAC 3mm_ddc o  o  o  o  o  o  o  o  .  .  .  .  .  .  .  .
c202a_062 No0080 2344+514 3mm_ddc o  o  o  o  o  o  o  o  .  .  .  .  .  .  .  .
c202a_063 No0082 0102+584 3mm_ddc .  .  .  .  .  .  .  .  .  .  .  o  o  o  o  o
c202a_064 No0083 2344+514 3mm_ddc .  .  .  .  .  .  .  .  .  .  .  o  o  o  o  o
c202a_065 No0084 0102+584 3mm_ddc o  o  o  o  o  o  o  o  .  .  .  o  o  o  o  o
c202a_066 No0085 2344+514 3mm_ddc o  o  o  o  o  o  o  o  .  .  .  o  o  o  o  o
c202a_067 No0087 0102+584 3mm_ddc o  o  o  o  o  o  o  o  .  .  .  o  o  o  o  o
c202a_068 No0088 2344+514 3mm_ddc o  o  o  o  o  o  o  o  .  .  .  o  o  o  o  o
c202a_069 No0091 0102+584 3mm_ddc o  o  o  o  o  o  o  o  .  .  .  o  o  o  o  o
c202a_070 No0092 2344+514 3mm_ddc o  o  o  o  o  o  o  o  .  .  .  o  o  o  o  o
c202a_071 No0094 0102+584 3mm_ddc o  o  o  o  o  o  o  o  .  .  .  o  o  o  o  o
c202a_072 No0095 2344+514 3mm_ddc o  o  o  o  o  o  o  o  .  .  .  o  o  o  o  o
c202a_073 No0097 0102+584 3mm_ddc o  o  o  o  o  o  o  o  88 x  o  o  o  o  o  o
c202a_074 No0098 2344+514 3mm_ddc o  o  o  o  o  o  o  o  o  o  o  o  o  o  o  o
c202a_075 No0100 0102+584 3mm_ddc o  o  o  o  o  o  o  o  o  o  o  o  o  o  o  o
```

mk016a.fits (7mm):

```
                              FD NL OV PT BR KP MK LA HN SC
c202a_01 No0029 2344+514 7mm_ddc o  o  o  o  o  o  .  o  x  o
c202a_02 No0032 2344+514 7mm_ddc o  o  o  o  o  o  .  o  x  o
c202a_03 No0037 2344+514 7mm_ddc o  o  o  o  o  o  .  o  x  o
c202a_04 No0040 2344+514 7mm_ddc o  o  o  o  o  o  .  o  x  o
c202a_05 No0043 2344+514 7mm_ddc o  o  o  o  o  o  .  o  x  o
c202a_06 No0045    BLLAC 7mm_ddc o  o  o  o  o  o  o  o  x  o
c202a_07 No0048 2344+514 7mm_ddc o  o  o  o  o  o  o  o  x  o
```

```
c202a_08 No0051 2344+514 7mm_ddc o  o  o  o  o  o  o  o  x  o
c202a_09 No0054 2344+514 7mm_ddc o  o  o  o  o  o  o  o  x  o
c202a_10 No0057 2344+514 7mm_ddc o  o  o  o  o  o  o  o  x  o
c202a_11 No0060 2344+514 7mm_ddc o  o  o  o  o  o  o  o  x  o
c202a_12 No0062    BLLAC 7mm_ddc o  o  o  o  o  o  o  o  x  o
c202a_13 No0065 2344+514 7mm_ddc o  o  o  o  o  o  o  o  x  o
c202a_14 No0068 2344+514 7mm_ddc o  o  o  o  o  o  o  o  x  o
c202a_15 No0071 2344+514 7mm_ddc o  o  o  o  o  o  o  o  x  o
c202a_16 No0074 2344+514 7mm_ddc o  o  o  o  o  o  o  o  x  o
c202a_17 No0077 2344+514 7mm_ddc o  o  o  o  o  o  o  o  x  o
c202a_18 No0078    BLLAC 7mm_ddc o  o  o  o  o  o  o  o  x  o
c202a_19 No0081 2344+514 7mm_ddc o  o  o  o  o  o  o  o  x  o
c202a_20 No0086 2344+514 7mm_ddc o  o  o  o  o  o  o  o  x  o
c202a_21 No0089 2344+514 7mm_ddc o  o  o  o  o  o  o  o  x  o
c202a_22 No0090 0102+584 7mm_ddc o  o  o  o  o  o  o  o  x  o
c202a_23 No0093 2344+514 7mm_ddc o  o  o  o  o  o  o  o  x  o
c202a_24 No0096 2344+514 7mm_ddc o  o  o  o  o  o  o  o  x  o
c202a_25 No0099 0102+584 7mm_ddc o  o  o  o  o  o  o  o  x  o
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