MK016B Correlation Report

General information

- A part of C202A.
- Includes 3mm and 7mm parts
- PI: KADLER
- Targets: Ext.Blaz OT546
- 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.

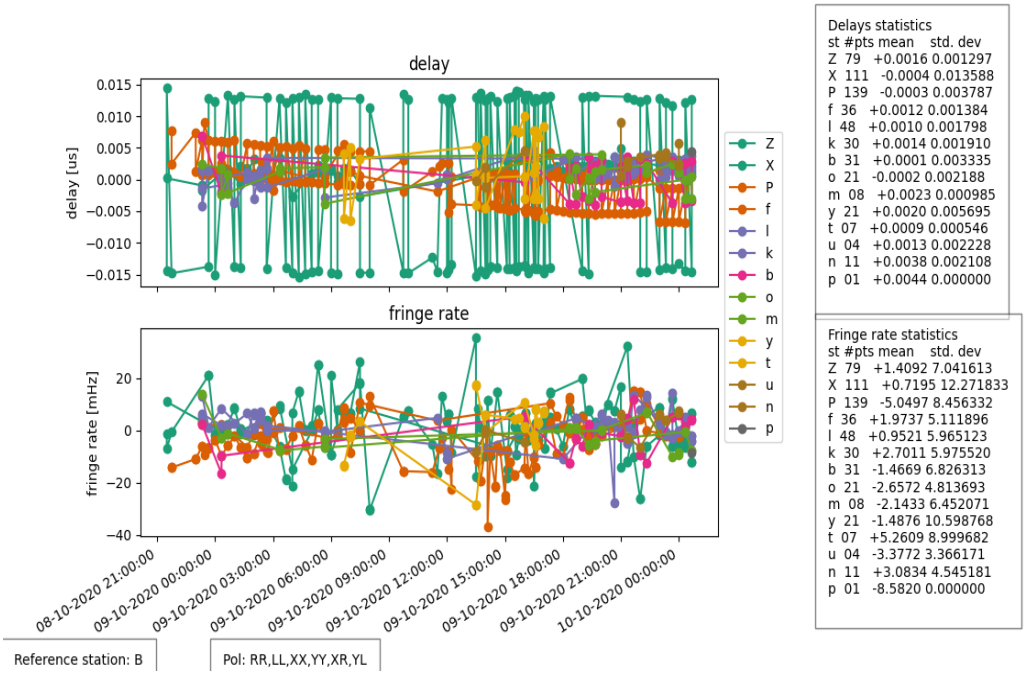
KVN: Ky	y	**yes**	c202a_FRINGE_RfAnt_Ky_LLRR_AllSrc_3mm.pdf No0103_y_3mm.pdf No0140_y_3mm.pdf c202a_Ky_3mm.antrep ----------	Participated in 100% scans (3mm only), fringes in 36% baselines*||pols, mean SNR 49.

Notes

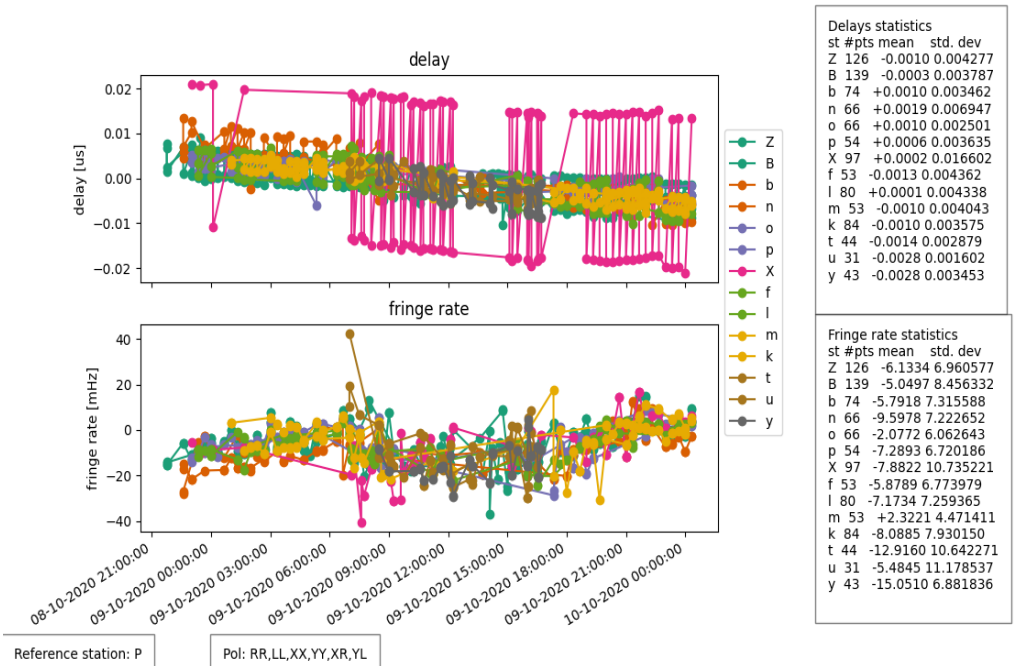
Post-Correlation checks

Residuals

Ef as reference (3mm):



Pv as reference (3mm):



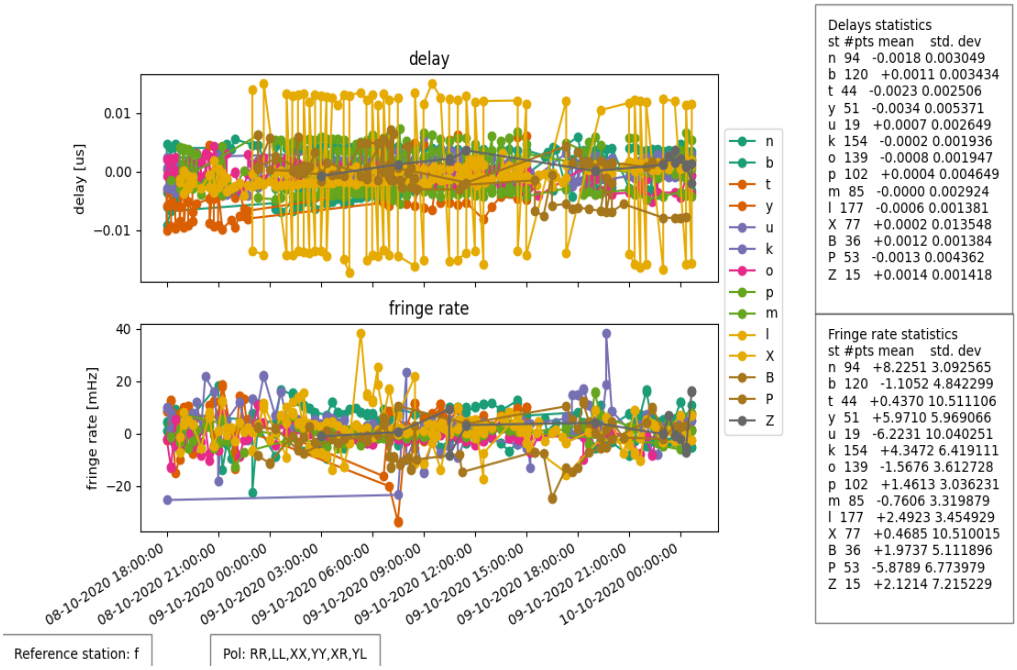
Delays statistics

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):



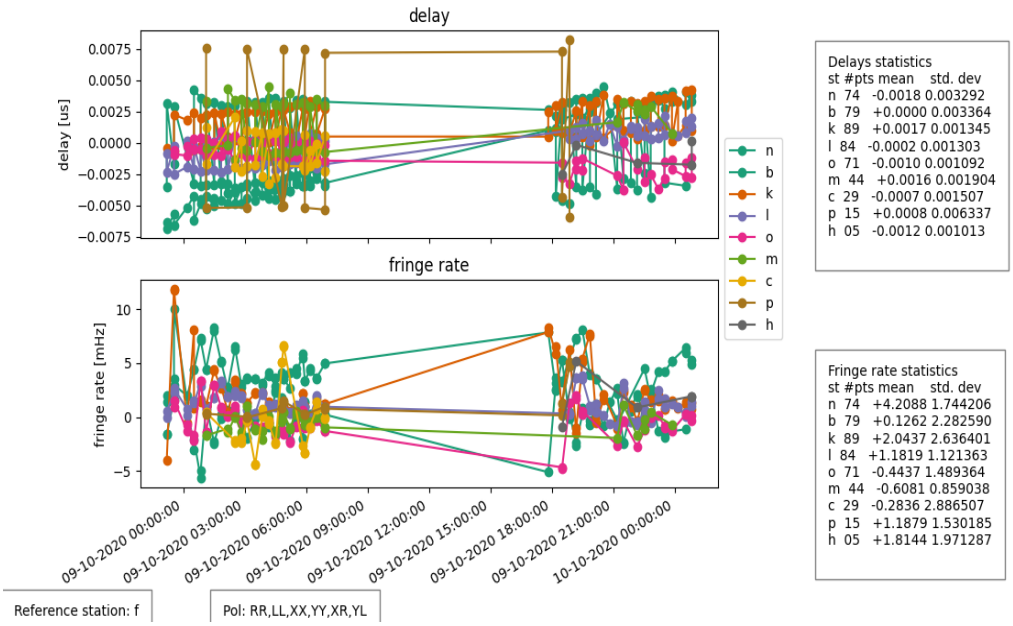
Delays statistics

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
```

mk016b.fits (3mm):

				FD	NL	OV	PT	BR	KP	MK	LA	KY	KU	KT	EF	ON	YS	PV	MH
c202a_140	No0165	3C345	3mm_ddc	o	o	o	o	o	o	.	77	.	.	.	o	o	o	o	o
c202a_141	No0166	OT546	3mm_ddc	o	o	o	o	o	o	.	x	.	.	.	o	o	o	o	o
c202a_142	No0168	3C345	3mm_ddc	o	o	o	o	o	o	.	x	.	.	.	o	o	o	o	o
c202a_143	No0169	OT546	3mm_ddc	o	o	o	o	o	o	.	x	.	.	.	o	o	o	o	o
c202a_144	No0171	3C345	3mm_ddc	o	o	o	o	o	o	.	x	.	.	.	o	o	o	o	o
c202a_145	No0172	OT546	3mm_ddc	o	o	o	o	o	o	.	x	.	.	.	o	o	o	o	o
c202a_146	No0174	3C345	3mm_ddc	o	o	o	o	o	o	.	x	.	.	.	o	o	o	o	o
c202a_147	No0175	OT546	3mm_ddc	o	o	o	o	o	o	.	x	.	.	.	o	o	o	o	o
c202a_148	No0177	3C345	3mm_ddc	o	o	o	o	o	o	.	o	.	.	.	o	o	o	o	o
c202a_149	No0178	OT546	3mm_ddc	o	o	o	o	o	o	.	o	.	.	.	o	o	o	o	o
c202a_150	No0180	3C345	3mm_ddc	o	o	o	o	o	o	.	o	.	.	.	o	o	o	o	o
c202a_151	No0181	OT546	3mm_ddc	o	o	o	o	o	o	.	o	.	.	.	o	o	o	o	o
c202a_152	No0183	3C345	3mm_ddc	o	o	o	o	o	o	.	o	.	.	.	o	o	o	o	o
c202a_153	No0184	OT546	3mm_ddc	o	o	o	o	o	o	.	o	.	.	.	o	o	o	o	o
c202a_154	No0186	3C345	3mm_ddc	o	o	o	o	o	o	.	o	.	.	.	o	o	o	o	o
c202a_155	No0187	OT546	3mm_ddc	o	o	o	o	o	o	.	o	.	.	.	o	o	o	o	o
c202a_156	No0189	3C345	3mm_ddc	o	o	o	o	o	o	o	o	.	.	.	o	o	o	o	o

c202a_157	No0190	OT546	3mm_ddc	o	o	o	o	o	o	o	o	.	.	.	o	o	o	o	o
c202a_158	No0192	3C345	3mm_ddc	o	o	o	o	o	o	o	o	.	.	.	o	o	o	o	o
c202a_159	No0193	OT546	3mm_ddc	o	o	o	o	o	o	o	o	.	.	.	o	o	o	o	o
c202a_160	No0195	3C345	3mm_ddc	o	o	o	o	o	o	o	o	.	.	.	o	o	o	o	o
c202a_161	No0196	OT546	3mm_ddc	o	o	o	o	o	o	o	o	.	.	.	o	o	o	o	o
c202a_162	No0198	3C345	3mm_ddc	o	o	o	o	o	o	o	o	.	.	.	o	o	o	o	o
c202a_163	No0199	OT546	3mm_ddc	o	o	o	o	o	o	o	o	.	.	.	o	o	o	o	o
c202a_164	No0201	3C345	3mm_ddc	o	o	o	o	o	o	o	o	.	.	.	o	o	o	o	o
c202a_165	No0202	OT546	3mm_ddc	o	o	o	o	o	o	o	o	.	.	.	o	o	o	o	o
c202a_166	No0204	3C345	3mm_ddc	o	o	o	o	o	o	o	o	.	.	.	o	o	o	o	o
c202a_167	No0205	OT546	3mm_ddc	o	o	o	o	o	o	o	o	.	.	.	o	o	o	o	o
c202a_168	No0207	3C345	3mm_ddc	o	o	o	o	o	o	o	o	.	.	.	o	o	o	o	o
c202a_169	No0208	OT546	3mm_ddc	o	o	o	o	o	o	o	o	.	.	.	o	o	o	o	o
c202a_170	No0210	3C345	3mm_ddc	o	o	o	o	o	o	o	o	.	.	.	o	o	o	o	o
c202a_171	No0211	OT546	3mm_ddc	o	o	o	o	o	o	o	o	.	.	.	o	o	o	o	o
c202a_172	No0213	3C345	3mm_ddc	o	o	o	o	o	o	o	o	.	.	.	o	o	o	o	o
c202a_173	No0214	OT546	3mm_ddc	o	o	o	o	o	o	o	o	.	.	.	o	o	o	o	o
c202a_174	No0216	2013+370	3mm_ddc	o	o	o	o	o	o	o	o	.	.	.	o	o	o	o	o
c202a_175	No0217	OT546	3mm_ddc	o	o	o	o	o	o	o	o	.	.	.	o	o	o	o	o
c202a_176	No0219	2013+370	3mm_ddc	o	o	o	o	o	o	o	o	.	.	.	o	o	o	o	o
c202a_177	No0220	OT546	3mm_ddc	o	o	o	o	o	o	o	o	.	.	.	o	o	o	o	o
c202a_178	No0222	2013+370	3mm_ddc	o	o	o	o	o	o	o	o	.	.	.	o	o	o	o	o
c202a_179	No0223	OT546	3mm_ddc	o	o	o	o	o	o	o	o	.	.	.	o	o	o	o	o
c202a_180	No0225	2013+370	3mm_ddc	o	o	o	o	o	o	o	o	.	.	.	o	o	o	o	o
c202a_181	No0226	OT546	3mm_ddc	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o
c202a_182	No0228	2013+370	3mm_ddc	o	o	o	o	o	o	o	o	.	.	.	o	o	o	o	o
c202a_183	No0229	OT546	3mm_ddc	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o
c202a_184	No0231	2013+370	3mm_ddc	o	o	o	o	o	o	o	o	.	.	.	o	o	o	o	o
c202a_185	No0232	OT546	3mm_ddc	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o

mk016b.fits (7mm):

				FD	NL	OV	PT	BR	KP	MK	LA	HN	SC
c202a_26	No0167	OT546	7mm_ddc	o	o	o	o	o	o	.	x	x	o
c202a_27	No0170	OT546	7mm_ddc	o	o	o	o	o	o	.	x	o	o
c202a_28	No0173	OT546	7mm_ddc	o	o	o	o	o	o	.	x	o	o
c202a_29	No0176	OT546	7mm_ddc	o	o	o	o	o	o	.	x	o	o
c202a_30	No0179	OT546	7mm_ddc	o	o	o	o	o	o	.	o	o	o
c202a_31	No0182	OT546	7mm_ddc	o	o	o	o	o	o	.	o	o	o
c202a_32	No0185	OT546	7mm_ddc	o	o	o	o	o	o	.	o	o	o
c202a_33	No0188	OT546	7mm_ddc	o	o	o	o	o	o	x	o	o	o
c202a_34	No0191	OT546	7mm_ddc	o	o	o	o	o	o	o	o	o	o
c202a_35	No0194	OT546	7mm_ddc	o	o	o	o	o	o	o	o	o	o
c202a_36	No0197	OT546	7mm_ddc	o	o	o	o	o	o	o	o	o	o
c202a_37	No0200	OT546	7mm_ddc	o	o	o	o	o	o	o	o	o	o
c202a_38	No0203	OT546	7mm_ddc	o	o	o	o	o	o	o	o	o	o
c202a_39	No0206	OT546	7mm_ddc	o	o	o	o	o	o	o	o	o	o
c202a_40	No0209	OT546	7mm_ddc	o	o	o	o	o	o	o	o	o	o
c202a_41	No0212	OT546	7mm_ddc	o	o	o	o	o	o	o	o	o	o

c202a_42	No0215	OT546	7mm_ddc	o	o	o	o	o	o	o	o	o	o
c202a_43	No0218	OT546	7mm_ddc	o	o	o	o	o	o	o	o	o	o
c202a_44	No0221	OT546	7mm_ddc	o	o	o	o	o	o	o	o	o	o
c202a_45	No0224	OT546	7mm_ddc	o	o	o	o	o	o	o	o	o	o
c202a_46	No0227	OT546	7mm_ddc	o	o	o	o	o	o	o	o	o	o
c202a_47	No0230	OT546	7mm_ddc	o	o	o	o	o	o	o	o	o	o
c202a_48	No0233	OT546	7mm_ddc	o	o	o	o	o	o	o	o	o	o