

# C232A Correlation Report

## General information

- Session info: <http://www3.mpifr-bonn.mpg.de/div/vlbi/globalmm/>
- Station feedback: [https://www3.mpifr-bonn.mpg.de/div/vlbi/globalmm/sessions/oct23/feedback\\_oct23.asc](https://www3.mpifr-bonn.mpg.de/div/vlbi/globalmm/sessions/oct23/feedback_oct23.asc)

## Status

what	date
Clock search started	1 Feb 2024
Clock search finished	3 Feb 2024
Correlation started	5 Feb 2024
Correlation finished	9 Feb 2024
Re-correlation of 4 scans that did not work	16 Feb 2024
Sent to PI	28 Feb 2024

## Fringes

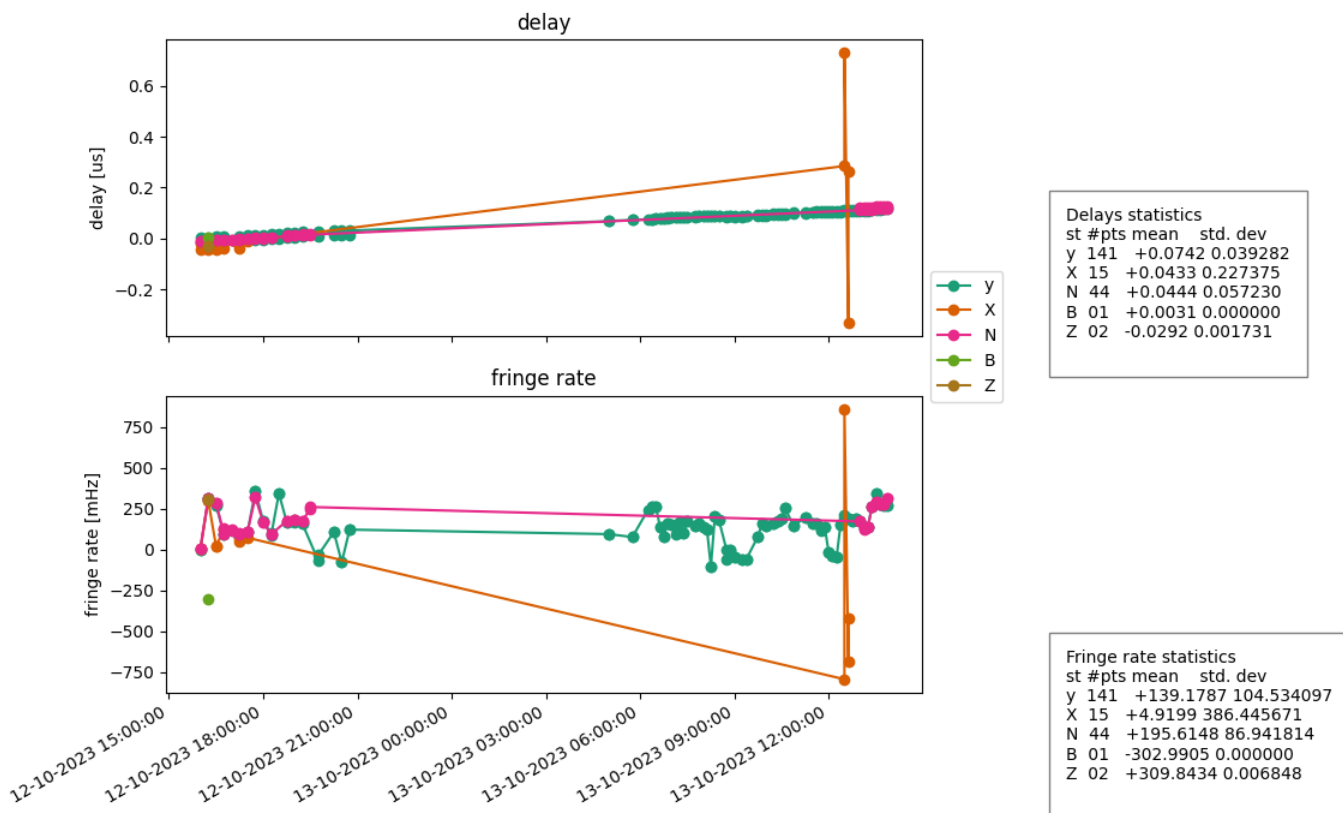
Station	Code	Fringes	Plots	Comments
VLBA 3mm		yes		all good
Noema		yes		all good
EU (No Ys)		yes		all good
EU-VLBA (Nn used for reference in all)		yes		all good
KVN (No Ku)		yes		problem with Kt maser
Ky-Nn		yes		all good

## Notes

- 13.10.2023 13:31: MRO is dropping out of the session due to receiver change
- VLBA\_MK module not initialized correctly before observations, 1 of 8 disks not partitioned (and not recorded on), 12.5% loss
- There is a problem with the maser of KT, two peaks at the multi-band delay
- No PV, Ku, GB, Ys scheduled

## Post-Correlation checks

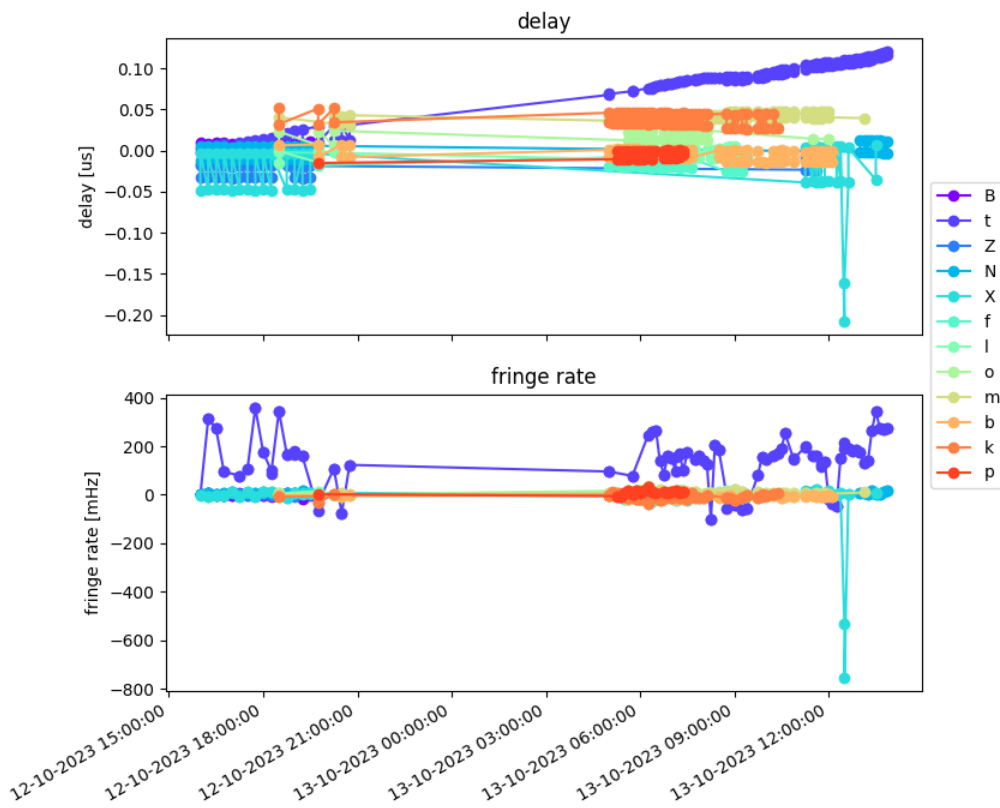
### Residuals



Reference station: t

Pol: LL,RR

Reference: Kt



Delays statistics

st	#pts	mean	std. dev
B	27	+0.0035	0.005683
t	141	+0.0742	0.039282
Z	33	-0.0240	0.007809
N	44	+0.0001	0.008804
X	49	-0.0290	0.038967
f	54	-0.0144	0.006010
l	53	-0.0043	0.005473
o	46	+0.0177	0.006312
m	100	+0.0412	0.003575
b	86	-0.0049	0.006397
k	75	+0.0380	0.007717
p	34	-0.0052	0.005000

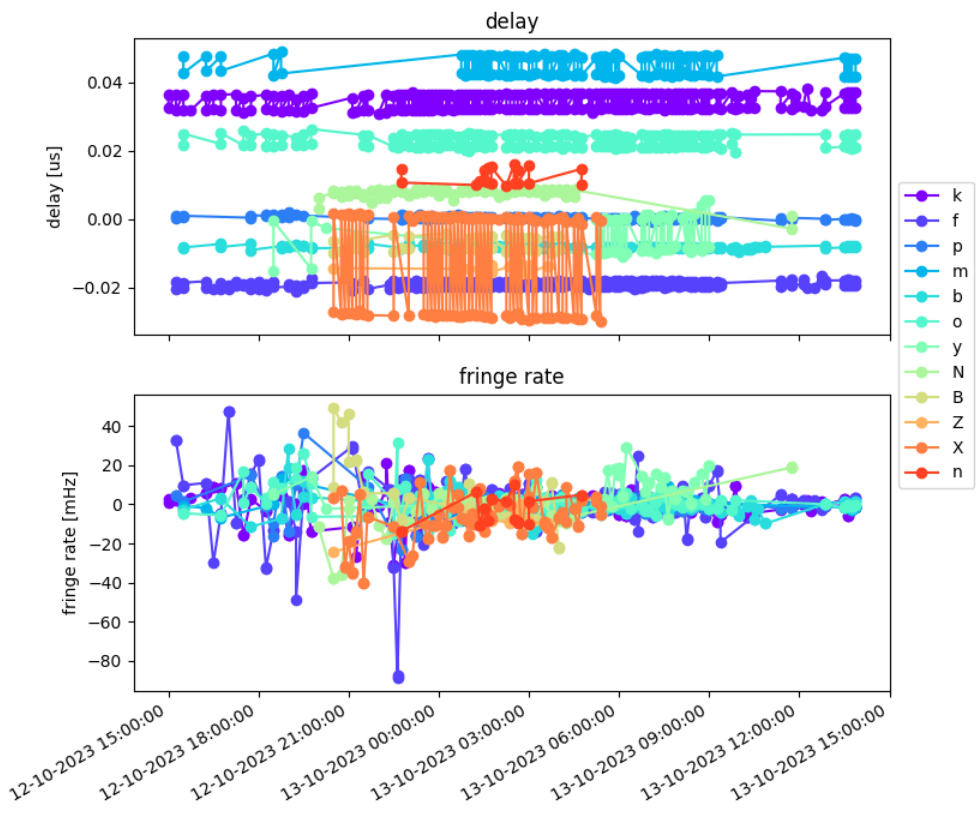
Fringe rate statistics

st	#pts	mean	std. dev
B	27	-0.2862	5.479259
t	141	+139.1787	104.534097
Z	33	+2.7752	5.277034
N	44	+7.2548	4.704963
X	49	-22.8232	130.369256
f	54	-9.1726	9.643706
l	53	+8.9916	8.053969
o	46	+9.6316	8.495427
m	100	+7.5821	6.519174
b	86	-8.3895	6.928172
k	75	-9.0037	8.687142
p	34	+9.9695	8.787962

Reference station: y

Pol: LL,RR

Reference: Ky



Delays statistics

st	#pts	mean	std. dev
k	234	+0.0343	0.002207
f	214	-0.0191	0.000807
p	171	+0.0003	0.000400
m	122	+0.0450	0.002772
b	181	-0.0082	0.000329
o	180	+0.0229	0.001746
y	53	-0.0043	0.005473
N	70	+0.0075	0.001829
B	38	-0.0072	0.001884
Z	16	-0.0142	0.000852
X	101	-0.0136	0.014420
n	19	+0.0124	0.002295

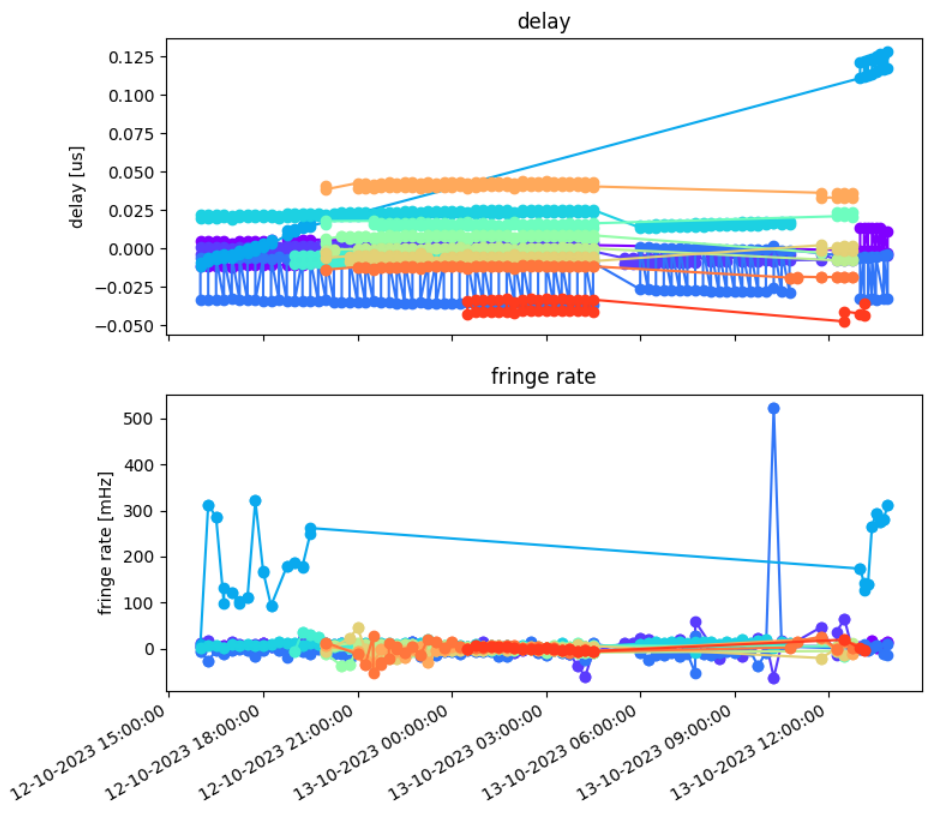
Fringe rate statistics

st	#pts	mean	std. dev
k	234	-0.2776	7.500312
f	214	+0.1347	14.259781
p	171	-0.8102	6.180931
m	122	-0.2220	3.965542
b	181	+0.1749	5.387715
o	180	+0.6579	6.161271
y	53	+8.9916	8.053969
N	70	-3.5980	10.974845
B	38	+4.0337	15.600170
Z	16	-7.1798	5.574760
X	101	-6.5413	12.547015
n	19	-3.2545	7.131129

Reference station: l

Pol: LL,RR

Reference: La



Delays statistics

st	#pts	mean	std. dev
y	44	+0.0001	0.008804
B	152	-0.0020	0.003909
X	156	-0.0193	0.014163
t	44	+0.0444	0.057230
Z	142	+0.0207	0.003533
n	45	-0.0058	0.002836
o	66	+0.0159	0.002372
l	70	+0.0075	0.001829
b	72	-0.0008	0.002028
p	73	-0.0058	0.002675
k	72	+0.0408	0.002655
f	75	-0.0130	0.002598
m	39	-0.0379	0.004210

Fringe rate statistics

st	#pts	mean	std. dev
y	44	+7.2548	4.704963
B	152	+5.3429	17.483066
X	156	-0.6521	60.681473
t	44	+195.6148	86.941814
Z	142	+8.5808	5.006551
n	45	+8.0593	10.972634
o	66	-0.8591	5.282728
l	70	-3.5980	10.974845
b	72	+2.6458	5.854840
p	73	-2.0535	11.570555
k	72	-2.9113	10.741244
f	75	-0.0911	13.751445
m	39	+0.6320	5.614662

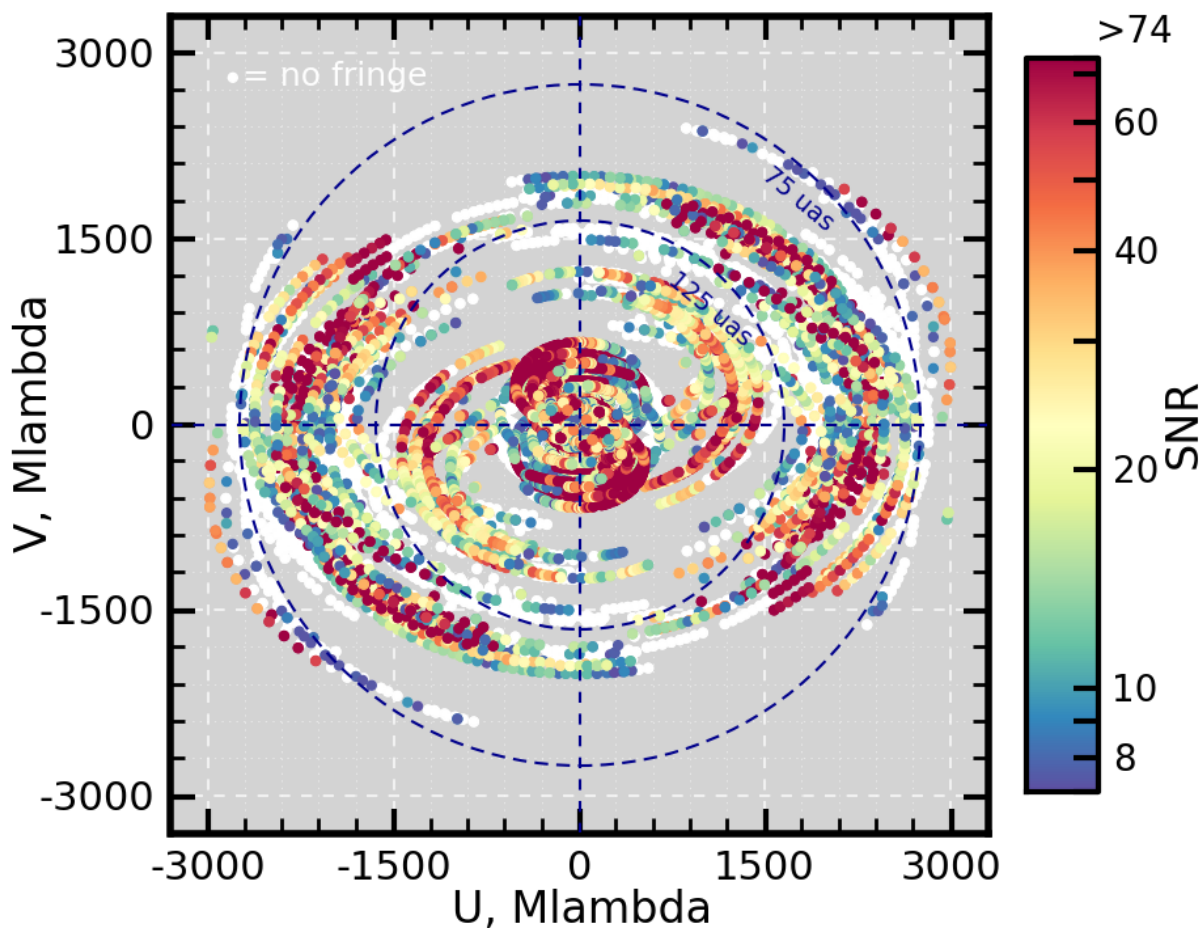
Reference station: N

Pol: LL,RR

Reference: Nn

Detections

UV cov.: all sources, all antennas, all pols.



FITS completeness (pclist)

				NL	FD	PT	LA	KP	OV	BR	MK	HS	EF	ON	PV	NN	MH
KY	KU	KT															
c232a_001	No0001	OJ287	86ghz	o	o	o	o	o	o	o	o	x	.	.	.	.	.
.	.	.															
c232a_002	No0002	OJ287	86ghz	o	o	o	o	o	o	o	o	x	.	.	.	.	.
.	.	.															
c232a_003	No0003	OJ287	86ghz	o	o	o	o	o	o	o	o	x	.	.	.	.	.
.	.	.															
c232a_004	No0004	OJ287	86ghz	o	o	o	o	o	o	o	o	x	.	.	.	.	.
.	.	.															
c232a_005	No0005	BLLAC	86ghz	.	.	.	.	.	.	.	.	.	o	o	x	o	o
o	x	o															
c232a_006	No0006	3C345	86ghz	o	o	o	o	o	o	o	.	x	.	.	.	.	.
.	.	.															
c232a_007	No0007	BLLAC	86ghz	.	.	.	.	.	.	.	.	.	o	o	x	o	o
o	x	o															
c232a_008	No0008	OJ287	86ghz	o	o	o	o	o	o	o	o	x	.	.	.	.	.

. c232a_009 o x o	No0009	BLLAC	86ghz	.	.	.	.	.	.	.	.	.	.	.	.	o	o	x	o	o
c232a_010	No0010	OJ287	86ghz	o	o	o	o	o	o	o	o	o	x	.	.	.	.	.	.	
. c232a_011 o x o	No0011	BLLAC	86ghz	.	.	.	.	.	.	.	.	.	.	.	.	o	o	x	o	o
c232a_012	No0012	OJ287	86ghz	o	o	o	o	o	o	o	o	o	x	.	.	.	.	.	.	
. c232a_013 o x o	No0013	2013+370	86ghz	.	.	.	.	.	.	.	.	.	.	.	.	o	o	x	o	o
c232a_014	No0014	3C345	86ghz	o	o	o	o	o	o	o	.	x	.	.	.	.	.	.	.	
. c232a_015 o x o	No0015	BLLAC	86ghz	.	.	.	.	.	.	.	.	.	.	.	o	o	x	o	o	
c232a_016	No0016	OJ287	86ghz	o	o	o	o	o	o	o	o	o	x	.	.	.	.	.	.	
. c232a_017 o x o	No0017	BLLAC	86ghz	.	.	.	.	.	.	.	.	.	.	.	o	o	x	o	o	
c232a_018	No0018	OJ287	86ghz	o	o	o	o	o	o	o	o	o	x	.	.	.	.	.	.	
. c232a_019 o x o	No0019	BLLAC	86ghz	.	.	.	.	.	.	.	.	.	.	.	o	o	x	o	o	
c232a_020	No0020	OJ287	86ghz	o	o	o	o	o	o	o	o	o	x	.	.	.	.	.	.	
. c232a_021 o x o	No0021	BLLAC	86ghz	.	.	.	.	.	.	.	.	.	.	.	o	o	x	o	o	
c232a_022	No0022	3C345	86ghz	o	o	o	o	o	o	o	.	x	.	.	.	.	.	.	.	
. c232a_023 o x o	No0023	BLLAC	86ghz	.	.	.	.	.	.	.	.	.	.	.	o	o	x	o	o	
c232a_024	No0024	OJ287	86ghz	o	o	o	o	o	o	o	o	o	x	.	.	.	.	.	.	
. c232a_025 o x o	No0025	2013+370	86ghz	.	.	.	.	.	.	.	.	.	.	.	x	o	o	x	o	o
c232a_026	No0026	OJ287	86ghz	o	o	o	o	o	o	o	o	o	.	.	.	.	.	.	.	
. c232a_027 o x o	No0027	BLLAC	86ghz	.	.	.	.	.	.	.	.	.	.	.	x	o	o	x	o	o
c232a_028	No0028	OJ287	86ghz	o	o	o	o	o	o	o	o	o	.	.	.	.	.	.	.	
. c232a_029 o x o	No0029	BLLAC	86ghz	o	.	.	.	.	.	.	.	.	.	.	x	o	o	x	o	o
c232a_030	No0030	3C345	86ghz	.	o	o	o	o	o	o	.	.	.	.	.	.	.	.	.	
. c232a_031 o x o	No0031	BLLAC	86ghz	o	.	.	.	.	.	.	.	.	.	.	x	o	o	x	o	o
c232a_032	No0032	OJ287	86ghz	.	o	o	o	o	o	o	o	o	.	.	.	.	.	.	.	
. c232a_033	No0033	BLLAC	86ghz	o	.	.	.	.	.	.	.	.	.	.	x	o	o	x	o	o

o x o																			
c232a_034	No0034	OJ287	86ghz	.	o	o	o	o	o	o	o	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
c232a_035	No0035	BLLAC	86ghz	o	.	.	.	.	.	.	.	x	o	o	x	o	o	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
c232a_036	No0036	OJ287	86ghz	.	o	o	o	o	o	o	o	.	.	.	.	.	.	.	.
o x o																			
c232a_037	No0037	2013+370	86ghz	o	o	o	o	o	o	o	o	.	x	o	o	x	o	o	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
c232a_038	No0038	BLLAC	86ghz	o	.	.	.	.	.	o	.	x	o	o	x	o	o	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
c232a_039	No0039	OJ287	86ghz	.	o	o	o	o	o	.	o	.	.	.	.	.	.	.	.
o x o																			
c232a_040	No0040	BLLAC	86ghz	o	o	.	o	.	.	.	.	.	x	o	o	x	o	o	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
c232a_041	No0041	OJ287	86ghz	.	.	o	.	o	o	o	o	.	.	.	.	.	.	.	.
o x o																			
c232a_042	No0042	BLLAC	86ghz	o	o	o	o	.	.	.	.	.	x	o	o	.	o	o	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
c232a_043	No0043	BLLAC	86ghz	o	o	o	o	.	.	.	.	.	x	.	o	.	.	.	o
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
c232a_044	No0044	OJ287	86ghz	.	.	.	.	o	o	o	o	.	.	.	.	.	.	.	.
o x o																			
c232a_045	No0045	BLLAC	86ghz	o	o	o	o	o	o	o	o	.	x	o	o	.	o	o	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
c232a_046	No0046	BLLAC	86ghz	o	o	o	o	o	o	o	o	.	x	.	o	.	.	.	o
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
c232a_047	No0047	BLLAC	86ghz	o	o	o	o	o	o	o	o	.	x	o	o	x	o	o	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
c232a_048	No0048	BLLAC	86ghz	o	o	o	o	o	o	o	o	.	x	.	o	.	.	.	o
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
c232a_049	No0049	2013+370	86ghz	o	o	o	o	o	o	o	o	.	x	o	o	x	o	o	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
c232a_050	No0050	2013+370	86ghz	o	o	o	o	o	o	o	o	.	x	.	o	.	.	.	o
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
c232a_051	No0051	BLLAC	86ghz	o	o	o	o	o	o	o	o	.	x	o	o	x	o	o	.
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c232a_052	No0052	BLLAC	86ghz	o	o	o	o	o	o	o	o	.	x	.	o	.	.	.	o
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
c232a_053	No0053	BLLAC	86ghz	o	o	o	o	o	o	o	o	.	x	o	o	x	o	o	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
c232a_054	No0054	BLLAC	86ghz	o	o	o	o	o	o	o	o	.	x	.	o	.	.	.	o
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
c232a_055	No0055	BLLAC	86ghz	o	o	o	o	o	o	o	o	.	x	o	o	x	o	o	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
c232a_056	No0056	BLLAC	86ghz	o	o	o	o	o	o	o	o	.	x	.	o	.	.	.	o
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c232a_057	No0057	BLLAC	86ghz	o	o	o	o	o	o	o	o	.	x	o	o	x	o	o	.
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c232a_058	No0058	BLLAC	86ghz	o	o	o	o	o	o	o	o	.	x	.	o	.	.	.	o



c232a_059	No0059	BLLAC	86ghz	o	o	o	o	o	o	o	.	x	o	o	x	o	o
c232a_060	No0060	BLLAC	86ghz	o	o	o	o	o	o	o	.	x	.	o	.	.	o
c232a_061	No0061	2013+370	86ghz	o	o	o	o	o	o	o	.	x	o	o	x	o	o
c232a_062	No0062	2013+370	86ghz	o	o	o	o	o	o	o	.	x	.	o	.	.	o
c232a_063	No0063	BLLAC	86ghz	o	o	o	o	o	o	o	.	x	o	o	x	o	o
c232a_064	No0064	BLLAC	86ghz	o	o	o	o	o	o	o	.	x	.	o	.	.	o
c232a_065	No0065	BLLAC	86ghz	o	o	o	o	o	o	o	.	x	o	o	x	o	o
c232a_066	No0066	BLLAC	86ghz	o	o	o	o	o	o	o	.	x	.	o	.	.	o
c232a_067	No0067	BLLAC	86ghz	o	o	o	o	o	o	o	.	x	o	o	x	o	o
c232a_068	No0068	BLLAC	86ghz	o	o	o	o	o	o	o	.	x	.	o	.	.	o
c232a_069	No0069	BLLAC	86ghz	o	o	o	o	o	o	o	.	x	o	o	x	o	o
c232a_070	No0070	BLLAC	86ghz	o	o	o	o	o	o	o	.	x	.	o	.	.	o
c232a_071	No0071	BLLAC	86ghz	o	o	o	o	o	o	o	.	x	o	o	x	o	o
c232a_072	No0072	BLLAC	86ghz	o	o	o	o	o	o	o	.	x	.	o	.	.	o
c232a_073	No0073	2013+370	86ghz	o	o	o	o	o	o	o	o	x	o	o	x	o	o
c232a_074	No0074	2013+370	86ghz	o	o	o	o	o	o	o	o	x	.	o	.	.	o
c232a_075	No0075	BLLAC	86ghz	o	o	o	o	o	o	o	o	x	o	o	x	o	o
c232a_076	No0076	BLLAC	86ghz	o	o	o	o	o	o	o	o	x	.	o	.	.	o
c232a_077	No0077	BLLAC	86ghz	o	o	o	o	o	o	o	o	x	o	o	x	o	o
c232a_078	No0078	BLLAC	86ghz	o	o	o	o	o	o	o	o	x	.	o	.	.	o
c232a_079	No0079	BLLAC	86ghz	o	o	o	o	o	o	o	o	x	o	o	x	o	o
c232a_080	No0080	BLLAC	86ghz	o	o	o	o	o	o	o	o	x	.	o	.	.	o
c232a_081	No0081	BLLAC	86ghz	o	o	o	o	o	o	o	o	x	o	o	x	o	o
c232a_082	No0082	BLLAC	86ghz	o	o	o	o	o	o	o	o	x	.	o	.	.	o
c232a_083	No0083	BLLAC	86ghz	o	o	o	o	o	o	o	o	x	o	o	x	o	o

c232a_084	No0084	2013+370	86ghz	o	o	o	o	o	o	o	o	x	o	o	x	o	o
c232a_085	No0085	BLLAC	86ghz	o	o	o	o	o	o	o	o	x	o	o	x	o	o
c232a_086	No0086	BLLAC	86ghz	o	o	o	o	o	o	o	o	x	.	o	.	.	o
c232a_087	No0087	BLLAC	86ghz	o	o	o	o	o	o	o	o	x	o	o	x	o	o
c232a_088	No0088	BLLAC	86ghz	o	o	o	o	o	o	o	o	x	.	o	.	.	o
c232a_089	No0089	BLLAC	86ghz	o	o	o	o	o	o	o	o	x	o	o	x	o	o
c232a_090	No0090	BLLAC	86ghz	o	o	o	o	o	o	o	o	x	o	o	x	o	o
c232a_091	No0091	BLLAC	86ghz	o	o	o	o	o	o	o	o	x	.	o	.	.	o
c232a_092	No0092	BLLAC	86ghz	o	o	o	o	o	o	o	o	x	o	o	x	o	o
c232a_093	No0093	BLLAC	86ghz	o	o	o	o	o	o	o	o	x	o	o	x	o	o
c232a_094	No0094	BLLAC	86ghz	o	o	o	o	o	o	o	o	x	.	o	.	.	o
c232a_095	No0095	BLLAC	86ghz	o	o	o	o	o	o	o	o	x	o	o	x	o	o
c232a_096	No0096	BLLAC	86ghz	o	o	o	o	o	o	o	o	x	o	o	x	o	o
c232a_097	No0097	BLLAC	86ghz	o	o	o	o	o	o	o	o	x	.	o	.	.	o
c232a_098	No0098	BLLAC	86ghz	o	o	o	o	o	o	o	o	x	o	o	x	o	o
c232a_099	No0099	BLLAC	86ghz	o	o	o	o	o	o	o	o	x	o	o	.	o	o
c232a_100	No0100	BLLAC	86ghz	o	o	o	o	o	o	o	o	x	.	o	.	.	o
c232a_101	No0101	BLLAC	86ghz	o	o	o	o	o	o	o	o	x	o	o	.	.	o
c232a_102	No0102	2013+370	86ghz	o	o	o	o	o	o	o	o	x	.	.	.	.	.
c232a_103	No0103	2013+370	86ghz	o	o	o	o	o	o	o	o	x	.	.	.	.	.
c232a_104	No0104	BLLAC	86ghz	o	o	o	o	o	o	o	o	x	.	o	.	.	o
c232a_105	No0105	BLLAC	86ghz	o	o	o	o	o	o	o	o	x	.	o	.	.	o
c232a_106	No0106	OJ287	86ghz	.	.	.	.	.	.	.	.	.	o	.	x	o	.
c232a_107	No0107	BLLAC	86ghz	o	o	o	o	o	o	o	o	x	.	o	.	.	o
c232a_108	No0108	BLLAC	86ghz	o	o	o	o	o	o	o	o	x	.	o	.	.	o



. c232a_134 o x o	No0134	BLLAC	86ghz	o	o	o	o	o	o	o	o	.	.	.	.	.	.
. c232a_135 o x o	No0135	BLLAC	86ghz	o	o	o	o	o	o	o	o	.	.	.	.	.	.
. c232a_136 o x o	No0136	OJ287	86ghz	.	.	.	.	.	.	.	.	x	o	o	x	o	o
. c232a_137 o x o	No0137	BLLAC	86ghz	o	o	o	o	o	o	o	o	.	.	.	.	.	.
. c232a_138 o x o	No0138	BLLAC	86ghz	o	o	o	o	o	o	o	o	.	.	.	.	.	.
. c232a_139 o x o	No0139	OJ287	86ghz	.	.	.	.	.	.	.	.	x	o	o	x	o	o
. c232a_140 o x o	No0140	BLLAC	86ghz	o	o	o	o	o	o	o	o	.	.	.	.	.	.
. c232a_141 o x o	No0141	BLLAC	86ghz	o	o	o	o	o	o	o	o	.	.	.	.	.	.
. c232a_142 o x o	No0142	OJ287	86ghz	.	.	.	.	.	.	.	.	x	o	o	x	o	o
. c232a_143 o x o	No0143	BLLAC	86ghz	o	o	o	o	o	o	o	o	.	.	.	.	.	.
. c232a_144 o x o	No0144	OJ287	86ghz	.	.	.	.	.	.	.	.	x	o	o	x	o	o
. c232a_145 o x o	No0145	BLLAC	86ghz	o	o	o	o	o	o	o	o	.	.	.	.	.	.
. c232a_146 o x o	No0146	BLLAC	86ghz	o	o	o	o	o	o	o	o	.	.	.	.	.	.
. c232a_147 o x o	No0147	OJ287	86ghz	.	.	.	.	.	.	.	.	x	o	o	x	o	o
. c232a_148 o x o	No0148	BLLAC	86ghz	o	o	o	o	o	o	o	o	.	.	.	.	.	.
. c232a_149 o x o	No0149	OJ287	86ghz	.	.	.	.	.	.	.	.	x	o	o	x	o	o
. c232a_150 o x o	No0150	BLLAC	86ghz	o	o	o	o	o	o	o	o	.	.	.	.	.	.
. c232a_151 o x o	No0151	BLLAC	86ghz	o	o	o	o	o	o	o	o	.	.	.	.	.	.
. c232a_152 o x o	No0152	OJ287	86ghz	.	.	.	.	.	.	.	.	x	o	o	x	o	o
. c232a_153 o x o	No0153	BLLAC	86ghz	x	x	x	x	x	x	x	x	.	.	.	.	.	.
. c232a_154 o x o	No0154	OJ287	86ghz	.	.	.	.	.	.	.	.	x	o	o	x	o	o
. c232a_155 o x o	No0155	BLLAC	86ghz	o	o	o	o	o	o	o	o	.	.	.	.	.	.
. c232a_156 o x o	No0156	BLLAC	86ghz	o	o	o	o	o	o	o	o	.	.	.	.	.	.
. c232a_157 o x o	No0157	OJ287	86ghz	.	.	.	.	.	.	.	.	x	o	o	x	o	o
. c232a_158 o x o	No0158	BLLAC	86ghz	o	o	o	o	o	o	o	o	.	.	.	.	.	.

o x o	c232a_159	No0159	OJ287	86ghz	.	.	.	.	.	.	.	.	x	o	o	x	o	o
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
o x o	c232a_160	No0160	BLLAC	86ghz	o	o	o	o	o	o	o	o	.	.	.	.	.	.
o x o	c232a_161	No0161	BLLAC	86ghz	o	o	o	o	o	o	o	o	.	.	.	.	.	.
o x o	c232a_162	No0162	OJ287	86ghz	.	.	.	.	.	.	.	.	x	o	o	x	o	o
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
o x o	c232a_163	No0163	BLLAC	86ghz	o	o	o	o	o	o	o	o	.	.	.	.	.	.
o x o	c232a_164	No0164	BLLAC	86ghz	o	o	o	o	o	o	o	o	.	.	.	.	.	.
o x o	c232a_165	No0165	OJ287	86ghz	.	.	.	.	.	.	.	.	x	o	o	x	o	o
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
x x x		No0166	BLLAC	86ghz	.	.	x	x	x	x	x	x	.	.	.	.	.	.
o x o	c232a_167	No0167	BLLAC	86ghz	.	.	o	o	o	o	o	o	.	.	.	.	.	.
o x o	c232a_168	No0168	OJ287	86ghz	o	o	.	.	.	.	.	.	x	o	o	x	o	o
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
x x x		No0169	BLLAC	86ghz	.	.	x	x	x	x	x	x	.	.	x	.	.	x
o x o	c232a_170	No0170	OJ287	86ghz	o	o	.	.	.	.	.	.	x	o	.	x	o	.
o x o	c232a_171	No0171	BLLAC	86ghz	.	.	.	.	.	o	o	o	.	.	o	.	.	o
o x o		No0172	OJ287	86ghz	x	x	x	x	x	.	.	.	x	x	.	x	x	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
o x o	c232a_173	No0173	OJ287	86ghz	o	o	o	o	o	.	.	.	x	.	.	.	.	.
o x o	c232a_174	No0174	BLLAC	86ghz	.	.	.	.	.	o	o	o	.	.	o	.	.	o
o x o	c232a_175	No0175	BLLAC	86ghz	.	.	.	.	.	o	o	o	.	.	o	.	.	44
o x o		No0176	OJ287	86ghz	x	x	x	x	x	.	.	.	x	x	.	x	x	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
o x o		No0177	OJ287	86ghz	x	x	x	x	x	.	.	.	x	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
o x o	c232a_178	No0178	BLLAC	86ghz	.	.	.	.	.	o	o	o	.	.	o	.	.	x
o x o	c232a_179	No0179	BLLAC	86ghz	.	.	.	.	.	o	o	o	.	.	o	.	.	x
o x o	c232a_180	No0180	OJ287	86ghz	o	o	o	o	o	.	.	.	x	o	.	x	o	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
o x o	c232a_181	No0181	OJ287	86ghz	o	o	o	o	o	.	.	.	x	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
o x o	c232a_182	No0182	BLLAC	86ghz	.	.	.	.	.	o	o	o	.	.	o	.	.	.
o x o	c232a_183	No0183	BLLAC	86ghz	.	.	.	.	.	o	o	o	.	.	o	.	.	x

o x o	No0184	OJ287	86ghz	x	x	x	x	x	.	.	.	x	x	.	x	x	.		
. . .	c232a_185	No0185	OJ287	86ghz	o	o	o	o	o	.	.	.	x	.	.	.	.		
. . .	c232a_186	No0186	BLLAC	86ghz	.	.	.	.	.	.	.	o	.	.	o	.	x		
95 x 85	c232a_187	No0187	BLLAC	86ghz	.	.	.	.	.	.	.	o	.	.	o	.	x		
o x o	c232a_188	No0188	OJ287	86ghz	o	o	o	o	o	o	o	.	x	o	.	x	o	.	
. . .	c232a_189	No0189	OJ287	86ghz	o	o	o	o	o	o	o	.	x	.	.	.	.		
. . .	c232a_190	No0190	2013+370	86ghz	.	.	.	.	.	.	.	.	.	.	o	.	x		
o x o	c232a_191	No0191	2013+370	86ghz	.	.	.	.	.	.	.	.	.	.	o	.	x		
o x o	c232a_192	No0192	OJ287	86ghz	o	o	o	o	o	o	o	o	x	o	.	x	o	.	
. . .	c232a_193	No0193	OJ287	86ghz	o	o	o	o	o	o	o	o	x	.	.	.	.		
. . .	c232a_194	No0194	BLLAC	86ghz	.	.	.	.	.	.	.	o	.	.	o	.	x		
o x o	c232a_195	No0195	BLLAC	86ghz	.	.	.	.	.	.	.	o	.	.	o	.	x		
o x o	c232a_196	No0196	OJ287	86ghz	o	o	o	o	o	o	o	.	x	o	.	x	o	.	
. . .	c232a_197	No0197	OJ287	86ghz	o	o	o	o	o	o	o	.	x	.	.	.	.		
. . .	c232a_198	No0198	BLLAC	86ghz	.	.	.	.	.	.	.	o	.	.	o	.	o	x	
o x o	c232a_199	No0199	BLLAC	86ghz	.	.	.	.	.	.	.	o	.	.	o	.	o	x	
o x o		No0200	OJ287	86ghz	x	x	x	x	x	x	x	.	x	x	.	x	.		
. . .	c232a_201	No0201	BLLAC	86ghz	.	.	.	.	.	.	.	.	.	.	o	.	o	x	
o x o	c232a_202	No0202	BLLAC	86ghz	.	.	.	.	.	.	.	.	.	.	o	.	o	x	
o x o		No0203	OJ287	86ghz	x	x	x	x	x	x	x	x	x	x	.	x	.		
. . .	c232a_204	No0204	BLLAC	86ghz	.	.	.	.	.	.	.	.	.	.	o	.	o	x	
o x o	c232a_205	No0205	BLLAC	86ghz	.	.	.	.	.	.	.	.	.	.	o	.	o	x	
o x o	c232a_206	No0206	OJ287	86ghz	o	o	o	o	o	o	o	o	x	.	.	x	.		
. . .	c232a_207	No0207	OJ287	86ghz	o	o	o	o	o	o	o	o	x	.	.	.	.		
. . .	c232a_208	No0208	2013+370	86ghz	.	.	.	.	.	.	.	.	.	.	o	o	.	o	x

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o  x  o
c232a_209 No0209 2013+370 86ghz . . . . . . . . . . o o x o x
o  x  o
c232a_210 No0210      OJ287 86ghz o o o o o o o o x . . . . .
. . .
c232a_211 No0211      OJ287 86ghz o o o o o o o o x . . . . .
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