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The tumbling rotational state of 1I/'Oumuamua

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Supplementary Information for: The tumbling rotational state of 1I/'Oumuamua

Supplementary Table 1: Observed photometry and colour and geometry corrected absolute magnitude.

MJD	m	Filter	H(r')
Meech et al. (2017)			
58051.044624	22.012 ± 0.081	g	22.485 ± 0.096
58051.045624	22.115 ± 0.087	g	22.588 ± 0.101
58051.046494	22.205 ± 0.092	g	22.678 ± 0.105
58051.047483	22.261 ± 0.094	g	22.734 ± 0.106
58051.048573	22.056 ± 0.084	g	22.528 ± 0.097
58051.101156	24.479 ± 0.397	g	24.940 ± 0.400
58051.101986	24.009 ± 0.289	g	24.470 ± 0.293
58051.102786	24.003 ± 0.277	g	24.464 ± 0.281
58051.103576	24.171 ± 0.300	g	24.632 ± 0.304
58051.104366	23.667 ± 0.205	g	24.127 ± 0.211
58052.052515	22.367 ± 0.229	g	22.628 ± 0.234
58052.053274	22.046 ± 0.179	g	22.307 ± 0.186
58052.054064	22.798 ± 0.421	g	23.059 ± 0.424
58052.056044	22.679 ± 0.106	g	22.939 ± 0.118
58052.056814	22.674 ± 0.106	g	22.934 ± 0.117
58052.057584	22.780 ± 0.119	g	23.040 ± 0.129
58052.058354	22.729 ± 0.121	g	22.989 ± 0.131
58052.059124	22.636 ± 0.107	g	22.896 ± 0.118
58052.059894	22.772 ± 0.111	g	23.032 ± 0.122
58052.060663	22.602 ± 0.102	g	22.861 ± 0.113
58052.134503	23.620 ± 0.226	g	23.864 ± 0.231
58052.136343	23.332 ± 0.184	g	23.576 ± 0.191
58052.181137	23.517 ± 0.192	g	23.752 ± 0.199
58052.181877	23.392 ± 0.172	g	23.627 ± 0.180
58052.182677	23.356 ± 0.174	g	23.590 ± 0.181
58052.183916	23.182 ± 0.152	g	23.416 ± 0.160
58052.185066	23.374 ± 0.177	g	23.608 ± 0.184
58053.085812	24.673 ± 0.767	g	24.728 ± 0.769
58053.089612	25.180 ± 2.355	g	25.234 ± 2.355
58051.050353	21.380 ± 0.066	r	22.712 ± 0.066
58051.051323	21.319 ± 0.063	r	22.651 ± 0.063
58051.055332	21.481 ± 0.068	r	22.812 ± 0.068
58051.056232	21.493 ± 0.069	r	22.824 ± 0.069
58051.057072	21.611 ± 0.074	r	22.942 ± 0.074
58051.057892	21.587 ± 0.073	r	22.917 ± 0.073
58051.058772	21.685 ± 0.077	r	23.015 ± 0.077
58051.059612	21.642 ± 0.075	r	22.972 ± 0.075
58051.060462	21.802 ± 0.083	r	23.132 ± 0.083
58051.106915	23.323 ± 0.236	r	24.643 ± 0.236
58051.107725	23.601 ± 0.290	r	24.921 ± 0.290
58051.108515	23.486 ± 0.271	r	24.805 ± 0.271
58051.109285	23.727 ± 0.316	r	25.046 ± 0.316
58051.110415	23.394 ± 0.253	r	24.713 ± 0.253
58051.111195	22.986 ± 0.186	r	24.305 ± 0.186
58051.112244	23.200 ± 0.214	r	24.519 ± 0.214
58052.045376	21.234 ± 0.080	r	22.356 ± 0.080
58052.046145	21.244 ± 0.077	r	22.366 ± 0.077
58052.046935	21.284 ± 0.053	r	22.406 ± 0.053
58052.047735	21.246 ± 0.092	r	22.368 ± 0.092
58052.048505	21.187 ± 0.083	r	22.309 ± 0.083
58052.049315	21.708 ± 0.185	r	22.830 ± 0.185
58052.050125	21.362 ± 0.109	r	22.484 ± 0.109
58052.050895	21.367 ± 0.128	r	22.488 ± 0.128
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Table 1 – continued from previous page

MJD	m	Filter	H(r')
58052.051675	21.013 ± 0.085	r	22.134 ± 0.085
58052.061493	21.791 ± 0.057	r	22.910 ± 0.057
58052.062293	21.849 ± 0.062	r	22.968 ± 0.062
58052.063063	21.937 ± 0.066	r	23.056 ± 0.066
58052.063843	21.997 ± 0.066	r	23.116 ± 0.066
58052.064613	22.028 ± 0.072	r	23.147 ± 0.072
58052.065793	21.623 ± 0.050	r	22.741 ± 0.050
58052.067372	21.926 ± 0.074	r	23.044 ± 0.074
58052.077241	21.900 ± 0.064	r	23.016 ± 0.064
58052.078041	21.893 ± 0.058	r	23.009 ± 0.058
58052.078841	22.049 ± 0.068	r	23.165 ± 0.068
58052.079611	21.863 ± 0.060	r	22.978 ± 0.060
58052.080381	21.971 ± 0.062	r	23.086 ± 0.062
58052.081171	21.862 ± 0.059	r	22.977 ± 0.059
58052.081940	21.794 ± 0.055	r	22.909 ± 0.055
58052.082710	21.871 ± 0.057	r	22.986 ± 0.057
58052.138593	22.441 ± 0.125	r	23.544 ± 0.125
58052.139323	22.543 ± 0.137	r	23.646 ± 0.137
58052.140062	22.650 ± 0.149	r	23.753 ± 0.149
58052.140792	22.874 ± 0.173	r	23.977 ± 0.173
58052.142472	22.999 ± 0.198	r	24.102 ± 0.198
58053.078873	23.615 ± 0.291	r	24.532 ± 0.291
58053.082443	23.834 ± 0.344	r	24.750 ± 0.344
58053.093831	23.989 ± 0.280	r	24.903 ± 0.280
58053.097381	23.651 ± 0.235	r	24.564 ± 0.235
58053.110099	23.068 ± 0.139	r	23.978 ± 0.139
58053.113619	23.323 ± 0.167	r	24.233 ± 0.167
58053.151943	22.039 ± 0.066	r	22.941 ± 0.066
58053.155533	21.954 ± 0.055	r	22.856 ± 0.055
58053.220474	23.551 ± 0.260	r	24.440 ± 0.260
58053.224043	23.916 ± 0.340	r	24.804 ± 0.340
58051.061721	21.203 ± 0.099	i	22.843 ± 0.111
58051.062601	21.344 ± 0.108	i	22.983 ± 0.119
58051.063621	21.622 ± 0.133	i	23.261 ± 0.142
58051.064441	21.603 ± 0.133	i	23.242 ± 0.142
58051.065311	21.541 ± 0.130	i	23.180 ± 0.139
58051.066151	21.784 ± 0.152	i	23.423 ± 0.160
58051.067131	21.547 ± 0.127	i	23.185 ± 0.136
58051.068001	21.479 ± 0.122	i	23.117 ± 0.131
58051.068890	21.778 ± 0.148	i	23.416 ± 0.157
58051.069710	21.778 ± 0.152	i	23.416 ± 0.160
58051.070630	21.719 ± 0.142	i	23.357 ± 0.150
58051.071430	21.588 ± 0.128	i	23.225 ± 0.137
58051.072350	21.656 ± 0.139	i	23.293 ± 0.147
58051.073130	21.880 ± 0.163	i	23.517 ± 0.171
58051.074170	22.022 ± 0.183	i	23.659 ± 0.190
58051.113374	22.752 ± 0.298	i	24.380 ± 0.303
58051.114164	22.881 ± 0.332	i	24.509 ± 0.336
58051.116104	22.574 ± 0.261	i	24.202 ± 0.265
58051.116934	22.451 ± 0.235	i	24.079 ± 0.240
58051.117754	23.194 ± 0.444	i	24.821 ± 0.447
58052.068592	21.468 ± 0.061	i	22.896 ± 0.079
58052.069362	21.598 ± 0.071	i	23.026 ± 0.087
58052.070132	21.582 ± 0.070	i	23.009 ± 0.086
58052.070942	21.618 ± 0.071	i	23.045 ± 0.087
58052.071702	21.469 ± 0.064	i	22.896 ± 0.081
58052.072512	21.500 ± 0.066	i	22.927 ± 0.083
58052.073292	21.615 ± 0.070	i	23.042 ± 0.086
58052.074082	21.704 ± 0.077	i	23.131 ± 0.091
58052.074871	21.693 ± 0.074	i	23.119 ± 0.089
58052.075641	21.645 ± 0.070	i	23.071 ± 0.086
58052.147631	22.391 ± 0.286	i	23.803 ± 0.290
58052.149951	22.452 ± 0.282	i	23.863 ± 0.287
58052.152331	22.561 ± 0.315	i	23.972 ± 0.319
58052.154830	23.176 ± 0.583	i	24.586 ± 0.585

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MJD	m	Filter	H(r')
58052.157140	23.199 ± 0.603	i	24.609 ± 0.605
58053.100980	23.485 ± 0.243	i	24.707 ± 0.248
58053.106020	23.272 ± 0.234	i	24.493 ± 0.239
58051.077699	22.450 ± 0.359	z	24.186 ± 0.362
58051.084488	22.578 ± 0.449	z	24.313 ± 0.451
58051.091037	22.958 ± 0.557	z	24.691 ± 0.559
58051.095087	22.935 ± 0.534	z	24.667 ± 0.536
58051.098846	23.480 ± 0.971	z	25.212 ± 0.972
58052.086530	21.273 ± 0.091	z	22.797 ± 0.103
58052.091029	21.426 ± 0.106	z	22.949 ± 0.117
58052.094949	21.724 ± 0.140	z	23.246 ± 0.148
58052.099258	21.604 ± 0.136	z	23.125 ± 0.145
58052.162189	23.431 ± 1.587	z	24.940 ± 1.588
58052.168069	23.107 ± 0.919	z	24.614 ± 0.920
58052.172938	22.169 ± 0.316	z	23.675 ± 0.320
58052.177137	22.519 ± 0.451	z	24.025 ± 0.454
58052.179177	22.249 ± 0.334	z	23.754 ± 0.338
58053.117228	22.516 ± 0.220	z	23.835 ± 0.225
58053.121167	21.813 ± 0.167	z	23.131 ± 0.174
58053.125097	22.064 ± 0.171	z	23.382 ± 0.178
58053.129056	21.742 ± 0.115	z	23.059 ± 0.125
58053.133006	21.593 ± 0.130	z	22.909 ± 0.139
58053.136935	21.544 ± 0.104	z	22.859 ± 0.115
58053.140845	21.701 ± 0.122	z	23.016 ± 0.132
58053.144764	21.424 ± 0.119	z	22.738 ± 0.129
58053.148284	21.677 ± 0.152	z	22.990 ± 0.160
58053.235522	24.739 ± 0.590	w	25.432 ± 0.592
58053.236812	24.230 ± 0.369	w	24.923 ± 0.372
58053.238101	25.023 ± 0.758	w	25.715 ± 0.760
58053.239391	23.679 ± 0.221	w	24.371 ± 0.227
58053.240681	23.834 ± 0.253	w	24.526 ± 0.257
58053.241971	23.678 ± 0.220	w	24.370 ± 0.226
58053.243271	24.561 ± 0.493	w	25.252 ± 0.495
58053.244561	23.641 ± 0.210	w	24.332 ± 0.216
58053.245850	23.465 ± 0.180	w	24.156 ± 0.187
58053.247140	23.867 ± 0.256	w	24.558 ± 0.260
58053.248430	23.970 ± 0.284	w	24.660 ± 0.289
58053.249720	23.821 ± 0.249	w	24.511 ± 0.254
58053.251010	23.754 ± 0.237	w	24.444 ± 0.242
58053.252299	23.714 ± 0.226	w	24.404 ± 0.231
58053.253589	23.198 ± 0.140	w	23.887 ± 0.149
58053.254879	23.543 ± 0.194	w	24.232 ± 0.200
58053.256169	23.455 ± 0.180	w	24.144 ± 0.187
58053.257459	23.423 ± 0.168	w	24.112 ± 0.175
58053.258749	22.956 ± 0.111	w	23.644 ± 0.122
58053.260038	23.163 ± 0.136	w	23.851 ± 0.145
58053.261478	22.966 ± 0.115	w	23.654 ± 0.125
58053.268987	23.262 ± 0.074	w	23.948 ± 0.089
58053.270917	23.047 ± 0.122	w	23.733 ± 0.132
58053.272207	22.833 ± 0.101	w	23.519 ± 0.112
58053.273497	22.838 ± 0.100	w	23.523 ± 0.112
58053.274786	22.733 ± 0.090	w	23.418 ± 0.103
58053.276076	22.623 ± 0.083	w	23.308 ± 0.097
58053.277366	22.491 ± 0.073	w	23.176 ± 0.089
58053.278656	22.514 ± 0.075	w	23.198 ± 0.090
58053.279956	22.540 ± 0.077	w	23.224 ± 0.091
58053.281245	22.338 ± 0.063	w	23.022 ± 0.081
58053.282535	22.369 ± 0.064	w	23.053 ± 0.081
58053.283825	22.245 ± 0.057	w	22.928 ± 0.076
58053.285115	22.258 ± 0.058	w	22.941 ± 0.076
58053.286405	22.222 ± 0.057	w	22.905 ± 0.076
58053.288824	22.059 ± 0.028	w	22.742 ± 0.057
58053.291394	22.126 ± 0.029	w	22.808 ± 0.058
58053.293954	22.154 ± 0.029	w	22.836 ± 0.058
58053.296523	22.093 ± 0.028	w	22.774 ± 0.058

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MJD	m	Filter	H(r')
58053.299083	22.100 ± 0.029	w	22.781 ± 0.058
58053.301643	22.125 ± 0.032	w	22.805 ± 0.059
58053.304212	22.071 ± 0.030	w	22.751 ± 0.058
58053.306772	22.100 ± 0.032	w	22.779 ± 0.059
58053.309332	22.145 ± 0.034	w	22.824 ± 0.061
58053.311901	22.141 ± 0.033	w	22.819 ± 0.060
58053.314461	21.996 ± 0.028	w	22.674 ± 0.057
58053.317021	22.090 ± 0.030	w	22.767 ± 0.059
58053.319590	22.163 ± 0.032	w	22.840 ± 0.059
58053.322150	22.164 ± 0.026	w	22.840 ± 0.057
58053.324710	22.261 ± 0.035	w	22.937 ± 0.061
58053.327299	22.162 ± 0.032	w	22.837 ± 0.059
58053.329869	22.316 ± 0.037	w	22.991 ± 0.062
58053.332428	22.342 ± 0.037	w	23.016 ± 0.062
58053.334988	22.443 ± 0.042	w	23.117 ± 0.065
58053.337558	22.419 ± 0.040	w	23.092 ± 0.064
58053.340117	22.552 ± 0.046	w	23.225 ± 0.068
58053.342677	22.503 ± 0.044	w	23.175 ± 0.066
58053.345247	22.520 ± 0.044	w	23.192 ± 0.067
58053.347806	22.468 ± 0.050	w	23.139 ± 0.070
58053.350376	22.846 ± 0.059	w	23.517 ± 0.077
58053.352936	22.845 ± 0.060	w	23.515 ± 0.078
58053.355495	22.820 ± 0.059	w	23.490 ± 0.077
58053.358195	22.912 ± 0.063	w	23.581 ± 0.080
58053.360755	22.951 ± 0.064	w	23.620 ± 0.081
58053.363324	23.148 ± 0.079	w	23.816 ± 0.093
58053.365884	23.324 ± 0.093	w	23.992 ± 0.106
58053.368653	23.616 ± 0.118	w	24.283 ± 0.128
58053.371213	23.720 ± 0.133	w	24.387 ± 0.142
58053.373783	23.801 ± 0.151	w	24.467 ± 0.159
58053.376342	23.926 ± 0.162	w	24.592 ± 0.170
58053.378902	23.979 ± 0.174	w	24.644 ± 0.181
58053.381472	24.706 ± 0.337	w	25.371 ± 0.340
58053.384031	24.389 ± 0.253	w	25.053 ± 0.258
58053.386591	24.590 ± 0.300	w	25.254 ± 0.304
58053.389171	23.556 ± 0.124	w	24.219 ± 0.134
58053.397000	23.440 ± 0.102	w	24.102 ± 0.114
58053.399559	23.636 ± 0.127	w	24.297 ± 0.136
58053.402129	23.706 ± 0.127	w	24.367 ± 0.137
58053.404689	23.575 ± 0.106	w	24.235 ± 0.118
58053.407248	23.436 ± 0.095	w	24.096 ± 0.107
58053.409818	23.339 ± 0.086	w	23.998 ± 0.099
58053.412377	23.209 ± 0.076	w	23.868 ± 0.091
58053.414937	23.295 ± 0.079	w	23.953 ± 0.094
58053.417627	23.032 ± 0.065	w	23.690 ± 0.082
58053.420186	22.689 ± 0.048	w	23.346 ± 0.069
58053.422746	22.669 ± 0.045	w	23.326 ± 0.068
58053.425346	22.442 ± 0.041	w	23.098 ± 0.065
58053.427915	22.442 ± 0.038	w	23.098 ± 0.063
58053.430475	22.453 ± 0.038	w	23.108 ± 0.063
58053.433045	22.512 ± 0.038	w	23.167 ± 0.063
58053.435604	22.380 ± 0.038	w	23.035 ± 0.063
58053.438164	22.352 ± 0.034	w	23.006 ± 0.061
58053.443303	22.108 ± 0.028	w	22.761 ± 0.057
58053.445863	21.976 ± 0.025	w	22.629 ± 0.056
58053.448563	21.886 ± 0.024	w	22.538 ± 0.056
58053.451172	21.794 ± 0.023	w	22.446 ± 0.055
58053.453772	21.843 ± 0.023	w	22.494 ± 0.055
58053.456331	21.755 ± 0.021	w	22.406 ± 0.054
Bannister et al. (2017), Gemini			
58055.258015	22.770 ± 0.035	r	23.287 ± 0.035
58055.262644	22.690 ± 0.033	r	23.206 ± 0.033
58055.322216	22.090 ± 0.019	r	22.596 ± 0.019
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Table 1 – continued from previous page			
MJD	m	Filter	H(r')
58055.268434	23.225 ± 0.073	g	23.290 ± 0.079
58055.272783	23.135 ± 0.067	g	23.199 ± 0.073
58055.318217	22.515 ± 0.035	g	22.571 ± 0.046
Bannister et al. (2017) WHT			
58055.827787	22.469 ± 0.086	r	22.888 ± 0.086
58055.845793	22.831 ± 0.105	r	23.247 ± 0.105
58055.877676	23.401 ± 0.178	r	23.812 ± 0.178
Jewitt et al. (2017)			
58052.002661	21.540 ± 0.100	R	22.841 ± 0.100
58052.004061	21.380 ± 0.100	R	22.681 ± 0.100
58052.006161	21.580 ± 0.100	R	22.881 ± 0.100
58052.007461	21.340 ± 0.100	R	22.640 ± 0.100
58052.009560	21.420 ± 0.100	R	22.720 ± 0.100
58052.010960	21.210 ± 0.100	R	22.510 ± 0.100
58052.013060	21.390 ± 0.100	R	22.689 ± 0.100
58052.014460	21.240 ± 0.100	R	22.539 ± 0.100
58052.016560	21.170 ± 0.100	R	22.468 ± 0.100
58052.017959	21.220 ± 0.100	R	22.518 ± 0.100
58052.022759	21.180 ± 0.100	R	22.477 ± 0.100
58052.024858	21.170 ± 0.100	R	22.467 ± 0.100
58054.093274	22.190 ± 0.140	R	23.085 ± 0.140
58054.097274	22.400 ± 0.160	R	23.294 ± 0.160
58054.101173	22.300 ± 0.140	R	23.194 ± 0.140
58054.105073	22.560 ± 0.170	R	23.453 ± 0.170
58054.108972	22.600 ± 0.170	R	23.492 ± 0.170
58054.112872	23.070 ± 0.270	R	23.961 ± 0.270
58054.116771	22.810 ± 0.220	R	23.701 ± 0.220
58054.120670	23.430 ± 0.370	R	24.320 ± 0.370
58054.144067	23.630 ± 0.410	R	24.516 ± 0.410
58054.190961	22.930 ± 0.230	R	23.807 ± 0.230
58054.198760	23.050 ± 0.280	R	23.926 ± 0.280
58054.206559	22.460 ± 0.150	R	23.334 ± 0.150
58054.210458	22.730 ± 0.190	R	23.603 ± 0.190
58054.214358	22.110 ± 0.110	R	22.983 ± 0.110
58054.218257	22.190 ± 0.120	R	23.062 ± 0.120
58054.265151	22.690 ± 0.220	R	23.553 ± 0.220
58054.269050	22.680 ± 0.190	R	23.543 ± 0.190
58054.272950	22.900 ± 0.240	R	23.762 ± 0.240
58054.288647	24.010 ± 0.590	R	24.869 ± 0.590
58055.970818	22.150 ± 0.150	R	22.715 ± 0.150
58056.088902	22.490 ± 0.150	R	23.035 ± 0.150
58056.095101	22.200 ± 0.150	R	22.744 ± 0.150
58051.997062	22.070 ± 0.070	V	22.922 ± 0.086
58051.999162	21.750 ± 0.100	V	22.602 ± 0.112
58052.000562	22.180 ± 0.100	V	23.032 ± 0.112
58052.026258	21.750 ± 0.100	V	22.596 ± 0.112
58052.028358	21.690 ± 0.100	V	22.536 ± 0.112
58052.029758	21.680 ± 0.100	V	22.526 ± 0.112
58051.977665	23.530 ± 0.120	B	23.686 ± 0.139
58051.979765	23.100 ± 0.120	B	23.256 ± 0.139
58051.981164	23.250 ± 0.120	B	23.406 ± 0.139
58051.992263	23.080 ± 0.120	B	23.233 ± 0.139
58051.993563	22.860 ± 0.120	B	23.013 ± 0.139
58051.994962	22.950 ± 0.120	B	23.103 ± 0.139
58052.032457	22.630 ± 0.120	B	22.775 ± 0.139
58052.033857	22.460 ± 0.120	B	22.605 ± 0.139
58052.035257	22.710 ± 0.120	B	22.855 ± 0.139
Bolin et al. (2018)			
58055.234145	23.185 ± 0.256	r	23.705 ± 0.256
58055.263574	22.755 ± 0.157	r	23.271 ± 0.157
Continued on next page			

Table 1 – continued from previous page

MJD	m	Filter	H(r')
58055.286520	22.242 ± 0.087	r	22.754 ± 0.087
58055.298269	22.490 ± 0.130	r	23.000 ± 0.130
58055.309335	22.345 ± 0.148	r	22.853 ± 0.148
58055.320750	22.182 ± 0.081	r	22.688 ± 0.081
58055.332291	22.309 ± 0.083	r	22.813 ± 0.083
58055.343306	22.416 ± 0.087	r	22.918 ± 0.087
58055.354832	23.119 ± 0.238	r	23.619 ± 0.238
Knight et al. (2017)			
58056.181290	22.892 ^{+0.169} _{-0.201}	r	23.252 ^{+0.169} _{-0.201}
58056.185081	23.300 ^{+0.223} _{-0.280}	r	23.659 ^{+0.223} _{-0.280}
58056.188830	23.171 ^{+0.205} _{-0.252}	r	23.530 ^{+0.205} _{-0.252}
58056.193455	23.292 ^{+0.216} _{-0.270}	r	23.650 ^{+0.216} _{-0.270}
58056.197204	23.421 ^{+0.235} _{-0.300}	r	23.778 ^{+0.235} _{-0.300}
58056.200954	23.427 ^{+0.236} _{-0.303}	r	23.784 ^{+0.236} _{-0.303}
58056.206036	23.431 ^{+0.236} _{-0.303}	r	23.787 ^{+0.236} _{-0.303}
58056.209786	23.417 ^{+0.239} _{-0.308}	r	23.772 ^{+0.239} _{-0.308}
58056.213535	23.796 ^{+0.312} _{-0.440}	r	24.150 ^{+0.312} _{-0.440}
58056.217368	24.071 ^{+0.386} _{-0.604}	r	24.425 ^{+0.386} _{-0.604}
58056.221076	23.923 ^{+0.352} _{-0.524}	r	24.276 ^{+0.352} _{-0.524}
58056.224825	24.175 ^{+0.420} _{-0.695}	r	24.528 ^{+0.420} _{-0.695}
58056.228908	24.482 ^{+0.527} _{-1.065}	r	24.834 ^{+0.527} _{-1.065}
58056.232658	24.153 ^{+0.421} _{-0.697}	r	24.504 ^{+0.421} _{-0.697}
58056.236407	24.387 ^{+0.492} _{-0.926}	r	24.738 ^{+0.492} _{-0.926}
58056.240698	23.873 ^{+0.348} _{-0.515}	r	24.223 ^{+0.348} _{-0.515}
58056.244448	24.135 ^{+0.416} _{-0.684}	r	24.484 ^{+0.416} _{-0.684}
58056.248197	23.806 ^{+0.330} _{-0.477}	r	24.155 ^{+0.330} _{-0.477}
58056.252155	23.552 ^{+0.283} _{-0.384}	r	23.900 ^{+0.283} _{-0.384}
58056.255904	23.687 ^{+0.303} _{-0.422}	r	24.034 ^{+0.303} _{-0.422}
58056.259654	23.620 ^{+0.294} _{-0.405}	r	23.967 ^{+0.294} _{-0.405}
58056.263737	22.903 ^{+0.181} _{-0.217}	r	23.249 ^{+0.181} _{-0.217}
58056.267486	23.091 ^{+0.208} _{-0.257}	r	23.437 ^{+0.208} _{-0.257}
58056.271236	23.233 ^{+0.230} _{-0.292}	r	23.578 ^{+0.230} _{-0.292}
58056.275152	22.988 ^{+0.195} _{-0.239}	r	23.332 ^{+0.195} _{-0.239}
58056.278901	23.230 ^{+0.230} _{-0.292}	r	23.574 ^{+0.230} _{-0.292}
58056.282651	22.690 ^{+0.159} _{-0.187}	r	23.033 ^{+0.159} _{-0.187}
58056.286442	23.180 ^{+0.222} _{-0.279}	r	23.522 ^{+0.222} _{-0.279}
58056.290191	22.749 ^{+0.168} _{-0.199}	r	23.091 ^{+0.168} _{-0.199}
58056.293941	22.840 ^{+0.179} _{-0.214}	r	23.181 ^{+0.179} _{-0.214}