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MPEC 2015-Y40 : 2015 YB1

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M.P.E.C. 2015-Y40

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2015 YB1

Observations:

K15Y01B*	C2015	12	17.36820	08	01	00.55	+08	32	00.0	18.9	VqEY040703
K15Y01B	C2015	12	17.37271	08	01	01.70	+08	32	38.0	18.7	VqEY040703
K15Y01B	C2015	12	17.37723	08	01	02.90	+08	33	15.4	18.6	VqEY040703
K15Y01B	C2015	12	17.38174	08	01	04.06	+08	33	52.7	19.0	VqEY040703
K15Y01B	C2015	12	17.49071	08	01	32.17	+08	49	06.9	18.9	VqEY040703
K15Y01B	C2015	12	17.49306	08	01	32.82	+08	49	26.5	18.6	VqEY040703
K15Y01B	C2015	12	17.49541	08	01	33.43	+08	49	47.0	18.9	VqEY040703
K15Y01B	C2015	12	17.72554	08	02	40.25	+09	22	35.8	19.5	RoEY040300
K15Y01B	C2015	12	17.72855	08	02	41.07	+09	23	02.0	19.2	RoEY040300
K15Y01B	C2015	12	17.73155	08	02	41.90	+09	23	28.3	19.2	RoEY040300
K15Y01B	C2015	12	17.73455	08	02	42.69	+09	23	54.5	19.3	RoEY040300
K15Y01B	C2015	12	17.73755	08	02	43.49	+09	24	20.0	19.3	RoEY040300
K15Y01B	KC2015	12	17.90655	08	03	34.91	+09	48	49.2	18.7	tEY040104
K15Y01B	KC2015	12	17.91024	08	03	35.95	+09	49	21.9	18.8	tEY040104
K15Y01B	KC2015	12	17.91411	08	03	37.05	+09	49	56.4	18.5	tEY040104
K15Y01B	KC2015	12	17.93723808	03	43.57	+09	53	20.2	18.7	tEY040B04	
K15Y01B	KC2015	12	17.94112608	03	44.71	+09	53	54.9	18.8	tEY040B04	
K15Y01B	KC2015	12	17.94974608	03	47.11	+09	55	12.1	18.8	tEY040B04	
K15Y01B	KC2015	12	17.99194	08	03	59.01	+10	01	22.1	19.0	VqEY040Z99
K15Y01B	KC2015	12	17.99637	08	04	00.25	+10	02	02.2	19.0	VqEY040Z99
K15Y01B	KC2015	12	18.00080	08	04	01.59	+10	02	41.6	19.0	VqEY040Z99
K15Y01B	C2015	12	18.34054	08	05	43.60	+10	54	33.4	18.6	VqEY040I52
K15Y01B	C2015	12	18.34281	08	05	44.25	+10	54	54.8	18.8	VqEY040I52
K15Y01B	C2015	12	18.34714	08	05	45.49	+10	55	34.4	18.2	VqEY040I52
K15Y01B	C2015	12	18.37940	08	05	54.73	+11	00	35.5	18.7	VqEY040I52
K15Y01B	C2015	12	18.38167	08	05	55.38	+11	00	56.7	18.6	VqEY040I52
K15Y01B	C2015	12	18.38353	08	05	55.92	+11	01	14.4	18.8	VqEY040I52
K15Y01B	C2015	12	18.38437	08	05	56.17	+11	01	21.9	18.7	VqEY040I52
K15Y01B	C2015	12	18.44063	08	06	12.29	+11	10	10.3	20.1	RuEY040926
K15Y01B	C2015	12	18.44315	08	06	13.06	+11	10	33.1	19.3	RuEY040926
K15Y01B	C2015	12	18.44566	08	06	13.75	+11	10	55.8	19.4	RuEY040926
K15Y01B	C2015	12	18.50455	08	06	30.94	+11	20	09.3	19.3	RuEY040926
K15Y01B	C2015	12	18.50707	08	06	31.65	+11	20	32.9	19.3	RuEY040926
K15Y01B	C2015	12	18.50964	08	06	32.49	+11	20	56.9	19.4	RuEY040926
K15Y01B	C2015	12	18.52560	08	06	37.13	+11	23	26.6	19.4	RuEY040926
K15Y01B	C2015	12	18.52817	08	06	37.92	+11	23	51.7	19.4	RuEY040926
K15Y01B	C2015	12	18.53075	08	06	38.67	+11	24	17.0	19.5	RuEY040926
K15Y01B	C2015	12	18.82205	08	08	11.91	+12	10	59.4	18.4	RoEY040300
K15Y01B	C2015	12	18.82505	08	08	12.81	+12	11	28.4	18.5	RoEY040300
K15Y01B	C2015	12	18.82805	08	08	13.70	+12	11	57.5	18.5	RoEY040300
K15Y01B	KC2015	12	18.98672	08	09	09.47	+12	37	55.2	18.6	VqEY040I93
K15Y01B	KC2015	12	18.99220	08	09	11.20	+12	38	50.0	18.6	VqEY040I93
K15Y01B	KC2015	12	18.99785	08	09	12.98	+12	39	46.7	18.3	VqEY040I93
K15Y01B	KC2015	12	19.29537	08	10	52.56	+13	30	09.7	18.0	RqEY040H36

K15Y01B	C2015	12	19.29953	08	10	54.81	+13	30	56.7	18.1	VqEY040I52
K15Y01B	KC2015	12	19.30002	08	10	54.05	+13	30	57.3	18.1	RqEY040H36
K15Y01B	C2015	12	19.30146	08	10	55.44	+13	31	16.6	18.2	VqEY040I52
K15Y01B	KC2015	12	19.30488	08	10	55.61	+13	31	47.8	18.3	RqEY040H36
K15Y01B	C2015	12	19.30662	08	10	57.10	+13	32	09.9	18.2	VqEY040I52
K15Y01B	C2015	12	19.30842	08	10	57.74	+13	32	29.5		qEY040I52
K15Y01B	JC2015	12	19.36451	08	11	15.91	+13	42	11.9	18.0	RoEY040695
K15Y01B	JC2015	12	19.36547	08	11	16.22	+13	42	21.8	18.0	RoEY040695
K15Y01B	JC2015	12	19.36747	08	11	16.86	+13	42	42.7	18.0	RoEY040695
K15Y01B	KC2015	12	19.38046	08	11	19.48	+13	44	53.9	17.9	RuEY040850
K15Y01B	KC2015	12	19.39625	08	11	24.61	+13	47	38.0	18.0	RuEY040850
K15Y01B	KC2015	12	19.42896	08	11	35.33	+13	53	18.2	18.1	RuEY040850
K15Y01B	IC2015	12	19.43215	08	11	36.69	+13	53	44.4		tEY040754
K15Y01B	KC2015	12	19.43694	08	11	38.29	+13	54	34.4	18.7	tEY040754
K15Y01B	KC2015	12	19.44159	08	11	39.84	+13	55	22.8	18.6	tEY040754
K15Y01B	KC2015	12	19.44717	08	11	41.36	+13	56	27.7	18.3	RuEY040850

Observer details:

- 104 San Marcello Pistoiese. Observer P. Bacci. Measurers P. Bacci, L. Tesi, G. Fagioli. 0.60-m f/4 reflector + CCD.
- 300 Bisei Spaceguard Center--BATTERS. Observers K. Nishiyama, S. Okumura, T. Fujiwara. 1.0-m f/3.0 reflector + CCD.
- 695 Kitt Peak. Observers L. Lebofsky, M. Trueblood, R. Crawford. Measurer R. Crawford. 2.3-m f/3.0 Ritchey-Chretien + CCD.
- 703 Catalina Sky Survey. Observers G. J. Leonard, R. G. Matheny. Measurers E. J. Christensen, D. C. Fuls, A. R. Gibbs, A. D. Grauer, J. A. Johnson, R. A. Kowalski, S. M. Larson, G. J. Leonard, R. G. Matheny, R. L. Seaman, F. C. Shelly. 0.68-m Schmidt + CCD.
- 754 Yerkes Observatory, Williams Bay. Observer V. L. Hoette. Measurers V. L. Hoette, A. W. Puckett, R. L. Sanchez, T. R. Linder. 1.02-m f/8.04 Cassegrain reflector + CCD.
- 850 Cordell-Lorenz Observatory, Sewanee. Observer D. T. Durig. 0.3-m f/2.5 Schmidt-Cassegrain + CCD.
- 926 Tenagra II Observatory. Observers M. Schwartz, P. R. Holvorcem. Measurer M. Schwartz. 0.41-m f/3.75 astrograph + CCD.
- B04 OAVdA, Saint-Barthelemy. Observers A. Carbognani, P. Pellissier. 0.81-m f/7.9 reflector + CCD.
- H36 Sandlot Observatory, Scranton. Observer G. Hug. 0.56-m reflector + CCD.
- I52 Steward Observatory, Mt. Lemmon Station. Observer R. A. Kowalski. Measurers E. J. Christensen, D. C. Fuls, A. R. Gibbs, A. D. Grauer, J. A. Johnson, R. A. Kowalski, S. M. Larson, G. J. Leonard, R. G. Matheny, R. L. Seaman, F. C. Shelly. 1.0-m reflector + CCD.
- I93 St Pardon de Conques. Observer F. Losse. 0.40-m f/3.7 reflector + CCD.
- Z99 Clixby Observatory, Cleethorpes. Observer A. Mickleburgh. 0.36-m f/8 Schmidt-Cassegrain + CCD.

Orbital elements:

2015 YB1					Earth MOID = 0.0902 AU
Epoch 2016 Jan. 13.0 TT = JDT 2457400.5					MPC
M 343.22090		(2000.0)	P	Q	
n 0.51918416	Peri.	65.53716	-0.81732453	-0.32254993	
a 1.5331633	Node	92.57126	+0.17360226	-0.92797325	
e 0.4086900	Incl.	28.54925	+0.54940229	-0.18662046	
P 1.90	H 21.4	G 0.15	U 8		

Residuals in seconds of arc

151217 703	0.3-	0.5-	151218 Z99	1.0+	0.1-	151218 I93	0.0	0.2-
151217 703	0.4-	0.1-	151218 I52	0.1-	0.3-	151218 I93	0.0	0.2-
151217 703	0.2+	0.4-	151218 I52	0.1-	0.0	151218 I93	0.0	0.0
151217 703	0.3+	0.8-	151218 I52	0.2-	0.7-	151219 H36	0.0	0.5+
151217 703	0.4-	0.3-	151218 I52	0.3-	0.2-	151219 I52	0.1-	0.1-
151217 703	0.1+	0.5-	151218 I52	0.3-	0.1-	151219 H36	0.2-	0.1+
151217 703	0.1+	0.2+	151218 I52	0.2-	0.2+	151219 I52	0.1-	0.2-
151217 300	0.2+	0.3+	151218 I52	0.0	0.1-	151219 H36	0.3-	0.3+
151217 300	0.5+	0.4+	151218 926	0.8-	1.3+	151219 I52	0.3-	0.3-
151217 300	0.9+	0.7+	151218 926	0.2-	0.5+	151219 I52	0.5+	0.6+
151217 300	0.8+	0.8+	151218 926	0.7-	0.3-	151219 695	0.2+	0.2+
151217 300	0.8+	0.3+	151218 926	0.3-	0.1+	151219 695	0.2+	0.1+
151217 104	0.0	0.1+	151218 926	0.7-	0.0	151219 695	0.1+	0.2+
151217 104	0.0	0.0	151218 926	0.5+	0.2-	151219 850	0.0	0.2-
151217 104	0.1+	0.2+	151218 926	0.7-	0.9-	151219 850	0.0	0.1-
151217 B04	0.4-	0.1-	151218 926	0.3-	0.0	151219 850	0.3+	0.1-
151217 B04	0.2+	0.0	151218 926	0.6-	1.0+	151219 754	0.2+	0.4-
151217 B04	0.2-	0.3+	151218 300	0.3+	0.2+	151219 754	0.4+	0.3-
151217 Z99	0.0	0.3-	151218 300	0.1+	0.0	151219 754	0.5+	0.4-
151217 Z99	0.3-	0.2+	151218 300	0.4-	0.2-	151219 850	0.6+	0.3-

Ephemeris:

2015 YB1			a,e,i = 1.53, 0.41, 29			q = 0.9066		
Date	TT	R. A. (2000)	Decl.	Delta	r	Elong.	Phase	V
2015 11 19		06 59 34.1	-12 25 12	0.4631	1.2870	120.5	41.4	21.9
...								
2015 12 04		07 23 11.8	-07 54 07	0.2923	1.1941	129.8	39.4	20.7
...								
2015 12 12		07 41 34.7	-00 50 40	0.2083	1.1456	136.9	36.0	19.8
...								
2015 12 18		08 03 59.7	+10 03 08	0.1528	1.1103	143.3	32.0	18.9
2015 12 19		08 09 11.7	+12 40 34	0.1447	1.1045	144.2	31.4	18.8
2015 12 20		08 15 02.4	+15 36 11	0.1371	1.0988	144.9	31.0	18.6
...								
2015 12 26		09 14 36.5	+40 07 27	0.1055	1.0653	139.0	37.3	18.2
...								
2016 01 03		13 38 01.2	+66 47 32	0.1195	1.0237	106.5	67.1	19.2
...								
2016 01 18		17 46 58.5	+50 46 43	0.2374	0.9587	77.0	89.0	21.3