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# Minor Planet Center



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## MPEC 2013-M09 : 2011 BT15

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M.P.E.C. 2013-M09

Issued 2013 June 17, 22:26 UT

The Minor Planet Electronic Circulars contain information on unusual minor planets and routine data on comets. They are published on behalf of Commission 20 of the International Astronomical Union by the Minor Planet Center, Smithsonian Astrophysical Observatory, Cambridge, MA 02138, U.S.A.

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ISSN 1523-6714

2011 BT15

Revision to [MPEC 2011-B43](#)

### Additional Observations:

K11B15T	]	C2013	06	10.39391	20	22	44.76	-18	40	58.9
K11B15T	]	C2013	06	10.40511	20	22	44.77	-18	40	59.5
K11B15T	]	C2013	06	10.43104	20	22	44.81	-18	41	01.4
K11B15T	]	C2013	06	10.44209	20	22	44.82	-18	41	02.0
K11B15T	]	C2013	06	10.45302	20	22	44.84	-18	41	02.8
K11B15T	]	C2013	06	16.33581	20	22	30.00	-18	51	29.0
K11B15T	]	C2013	06	16.38635	20	22	29.08	-18	51	37.2
K11B15T	]	C2013	06	16.41508	20	22	28.56	-18	51	41.4

22.2	RoEM009695
22.4	RoEM009695
22.2	RoEM009695
22.3	RoEM009695
22.2	RoEM009695
22.1	RoEM009695
22.2	RoEM009695
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K11B15T Jc2013 06 16.43954 20 22 28.10 -18 51 45.1

22.0 RoEM009695

K11B15T Jc2013 06 16.46133 20 22 27.72 -18 51 48.4

22.0 RoEM009695

## Observer details:

[695 Kitt Peak](#). Observers M. Trueblood, N. Kutsop, D. Bell, R. Crawford.

Measurer D. Bell. 2.1-m f/7.7 Ritchey-Chretien + CCD.

## First and last observations above in comparison with prediction:

Residuals in seconds of arc (or two decimals in degrees), reference and Delta-T  
130610 695 0.15+ 0.03+ 130616 695 0.16+ 0.03+ MP0194133 -0.14 day

## Orbital elements:

2011 BT15

[PHA](#), Earth [MOID](#) = 0.0009 AU

Epoch 2013 Apr. 18.0 TT = JDT 2456400.5

MPC

M 213.54426

(2000.0)

P

Q

n 0.66757735 Peri. 308.46479 +0.58313700 -0.81189580

a 1.2965870 Node 105.84143 +0.75406918 +0.52820627

e 0.3036993 Incl. 1.65979 +0.30221005 +0.24864299

P 1.48 H 21.8 G 0.15 U 3

## Residuals in seconds of arc

110124 F51 0.1- 0.5- 110205 291 0.4+ 0.3+ 110301 291 0.7- 0.8-

110124 F51 0.2+ 0.4- 110206 291 (4.0- 0.7-) 110301 291 0.5+ 0.6-

110124 F51 0.2- 0.5- 110206 291 0.9- 0.4- 110301 291 1.3- 0.6-

110125 F65 0.1+ 0.0 110206 291 (1.9- 0.1-) 110301 H01 0.3- 0.2+

110126 291 0.2+ 0.4- 110207 291 (1.9+ 1.6-) 110301 H01 0.2- 0.1+

110126 291 0.1- 0.3+ 110207 291 0.1+ 1.4- 110301 H01 0.2- 0.1+

110126 291 1.3+ 0.0 110207 291 0.7- 0.3+ 110301 H01 0.2- 0.1+

110126 291 1.2+ 0.1+ 110208 291 0.9- 0.5+ 110303 695 0.2- 0.2+

110126 F65 (1.6+ 1.3+) 110208 291 1.1+ 0.2+ 110303 695 0.5- 0.1+

110126 F65 (1.7+ 1.1+) 110208 291 0.4+ 0.0 110303 695 0.0 0.1+

110126 F65 0.1+ 0.3- 110220 H21 1.2- 0.2+ 110304 291 1.0+ 0.0

110127 291 (1.7+ 0.2+) 110220 H21 0.1- 0.6- 110304 291 0.5+ 1.0+

110127 291 0.6+ 0.1+ 110220 H21 0.8+ 1.5- 110304 291 0.1+ 0.1+

110128 695 0.1- 0.1- 110222 291 1.4+ 0.0 110304 291 0.3+ 0.2+

110128 695 0.2- 0.1+ 110222 291 (2.0+ 0.1+) 110306 291 0.2+ 0.4-

110128 695 0.0 0.1+ 110222 291 0.3- 0.0 110306 291 (1.6- 0.5+)

110128 695 0.2- 0.1- 110223 291 0.3- 0.1- 130610 695 0.1+ 0.1+

110128 291 (2.6- 0.9-) 110223 291 0.6- 0.3- 130610 695 0.0 0.3+

110128 291 0.3- 0.2- 110225 291 0.5- 0.7+ 130610 695 0.0 0.2+

110129 291 0.7+ 0.2+ 110225 291 0.3+ 0.5- 130610 695 0.0 0.3+

110129 291 0.5- 0.2+ 110226 F65 0.2- 0.3+ 130610 695 0.0 0.2+

110129 291 0.6- 0.4- 110226 F65 0.4- 0.2- 130616 695 0.2+ 0.3+

110131 568 0.2- 0.1+ 110226 F65 0.3- 0.1- 130616 695 0.2- 0.2+

110131 568 0.0 0.2+ 110226 F65 0.2+ 1.3- 130616 695 0.2- 0.4+

110131 568 0.0 0.1+ 110226 F65 0.2+ 0.1+ 130616 695 0.3- 0.3+

110205 291 (2.9- 0.2+) 110226 F65 1.4+ 0.3- 130616 695 0.0 0.2+

110205 291 0.8+ 0.5+ 110226 F65 0.0 0.1+

## Ephemeris:

2011 BT15

a,e,i = 1.30, 0.30, 2

q = 0.9028

Date TT R. A. (2000) Decl. Delta r Elong. Phase V

2013 05 18 20 08 37.8 -19 03 39 0.8519 1.5895 116.8 34.6 23.9

```

...
2013 06 02    20 20 07.9 -18 39 01    0.6985  1.5486  128.5   30.8   23.3
...
2013 06 10    20 22 41.6 -18 40 24    0.6232  1.5240  135.6   27.8   22.9
...
2013 06 16    20 22 33.4 -18 50 29    0.5706  1.5044  141.4   24.9   22.6
2013 06 17    20 22 20.6 -18 53 00    0.5622  1.5010  142.4   24.4   22.6
2013 06 18    20 22 04.4 -18 55 47    0.5539  1.4976  143.4   23.9   22.5
...
2013 06 24    20 19 11.4 -19 18 03    0.5066  1.4766  149.9   20.2   22.2
...
2013 07 02    20 11 39.1 -20 03 21    0.4505  1.4471  159.4   14.3   21.7
...
2013 07 17    19 45 20.1 -22 10 26    0.3710  1.3872  179.1    0.7   20.5

```

A. U. Tomatic

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