



Mark Trueblood <winer.obs@gmail.com>

MPEC Q25: 2009 QN5 [a=3.25,e=0.88,i=15.9,H=19.0] [22298-2009/12-R1]

MPEC mailing list <qmpc@cfa.harvard.edu>

Wed, Aug 19, 2009 at 5:04 AM

To: winer.obs@gmail.com

M.P.E.C. 2009-Q25

Issued 2009 Aug. 19, 10:26 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.

Prepared using the Tamkin Foundation Computer Network

MPC@CFA.HARVARD.EDU

URL <http://www.cfa.harvard.edu/iau/mpc.html> ISSN 1523-6714

2009 QN5

Observations:

K09Q05N*	C2009 08 18.36442 00 58 04.00 +16 40 31.4	19.8 V EQ025703
K09Q05N	C2009 08 18.37108 00 58 04.83 +16 40 53.8	19.3 V EQ025703
K09Q05N	C2009 08 18.37770 00 58 05.84 +16 41 13.2	20.3 V EQ025703
K09Q05N	C2009 08 18.38417 00 58 06.56 +16 41 34.0	20.2 V EQ025703
K09Q05N	C2009 08 18.41715 00 58 11.10 +16 43 18.7	19.8 V EQ025703
K09Q05N	C2009 08 18.42462 00 58 12.03 +16 43 43.6	19.8 V EQ025703
K09Q05N	C2009 08 18.43223 00 58 13.00 +16 44 08.5	19.9 V EQ025703
K09Q05N	C2009 08 18.43992 00 58 14.01 +16 44 32.2	19.9 V EQ025703
K09Q05N	C2009 08 18.47365 00 58 18.66 +16 46 20.8	19.2 V EQ025703
K09Q05N	C2009 08 18.47554 00 58 18.76 +16 46 26.6	20.2 V EQ025703
K09Q05N	C2009 08 18.47743 00 58 19.02 +16 46 32.3	19.5 V EQ025703
K09Q05N	C2009 08 18.47934 00 58 19.27 +16 46 38.8	19.6 V EQ025703
K09Q05N	C2009 08 18.92043 00 59 22.85 +17 10 29.7	19.1 R EQ025A79
K09Q05N	C2009 08 18.92885 00 59 23.99 +17 10 58.3	19.1 R EQ025A79
K09Q05N	C2009 08 18.93354 00 59 24.82 +17 11 13.6	19.7 V EQ025151
K09Q05N	C2009 08 18.93871 00 59 25.61 +17 11 30.7	19.5 R EQ025B04
K09Q05N	C2009 08 18.93934 00 59 25.64 +17 11 33.1	19.8 V EQ025151
K09Q05N	C2009 08 18.94655 00 59 26.73 +17 11 56.8	19.5 R EQ025B04
K09Q05N	C2009 08 18.95751 00 59 28.27 +17 12 33.3	19.7 R EQ025B04
K09Q05N	C2009 08 18.97695 00 59 30.92 +17 13 38.1	18.9 V EQ025198

K09Q05N	C2009	08	18.97811	00	59	31.11	+17	13	42.0	19.3	V	EQ025198
K09Q05N	C2009	08	18.98134	00	59	31.55	+17	13	52.4	18.9	V	EQ025198
K09Q05N	C2009	08	18.98241	00	59	31.69	+17	13	55.7	19.2	V	EQ025198
K09Q05N	C2009	08	19.08653	00	59	46.41	+17	19	42.6			EQ025J95
K09Q05N	C2009	08	19.09054	00	59	47.00	+17	19	56.0			EQ025J95
K09Q05N	C2009	08	19.09475	00	59	47.62	+17	20	10.4	19.3	R	EQ025J95
K09Q05N	C2009	08	19.17123	00	59	59.54	+17	24	26.3	19.4	R	EQ025H26
K09Q05N	C2009	08	19.17359	00	59	59.79	+17	24	34.0	19.1	R	EQ025H26
K09Q05N	C2009	08	19.17596	01	00	00.13	+17	24	41.7	19.3	R	EQ025H26
K09Q05N	JC2009	08	19.31023601	00		19.67	+17	32	20.9	19.9	C	EQ025695
K09Q05N	3C2009	08	19.31201	01	00	20.03	+17	32	25.3	18.3	R	EQ025673
K09Q05N	3C2009	08	19.31412	01	00	20.36	+17	32	32.4	18.6	R	EQ025673
K09Q05N	3C2009	08	19.31659	01	00	20.70	+17	32	40.4	18.4	R	EQ025673
K09Q05N	3C2009	08	19.31842	01	00	20.97	+17	32	47.0	17.4	R	EQ025673
K09Q05N	3C2009	08	19.32030	01	00	21.31	+17	32	55.4	18.5	R	EQ025673
K09Q05N	3C2009	08	19.32213	01	00	21.56	+17	33	01.0	17.3	R	EQ025673
K09Q05N	3C2009	08	19.32397	01	00	21.76	+17	33	05.3	18.4	R	EQ025673
K09Q05N	3C2009	08	19.32667	01	00	22.11	+17	33	14.6	18.7	R	EQ025673
K09Q05N	JC2009	08	19.36890501	00		28.05	+17	35	40.7	19.9	C	EQ025695
K09Q05N	JC2009	08	19.38464401	00		30.31	+17	36	33.9	19.7	C	EQ025695

Observer details:

- 151 Eschenberg Observatory, Winterthur. Observer M. Griesser. 0.40-m f/5.9 Hypergraph + CCD.
- 198 Wildberg. Observer R. Apitzsch. 0.35-m f/4.2 reflector + CCD.
- 673 Table Mountain Observatory, Wrightwood. Observers A. Springmann, P. Weissman. 0.60-m f/16 reflector.
- 695 Kitt Peak. Observers M. Trueblood, L. Lebofsky. Measurer R. Crawford. 2.1-m f/7.7 Ritchey-Chretien + CCD.
- 703 Catalina Sky Survey. Observer R. E. Hill. Measurers E. C. Beshore, A. Boattini, G. J. Garradd, A. R. Gibbs, A. D. Grauer, R. E. Hill, R. A. Kowalski, S. M. Larson, R. H. McNaught. 0.68-m Schmidt + CCD.
- A79 Zvezdno Obshtestvo Observatory, Plana. Observer F. Fratev. 0.35-m f/3.4 reflector + CCD.
- B04 OAVdA, Saint-Barthelemy. Observer A. Carbognani. 0.81-m f/7.9 reflector + CCD.
- H26 Doc Greiner Research Observatory, Janesville. Observer M. Mills. 0.4-m f/8 Schmidt-Cassegrain + CCD.
- J95 Great Shefford. Observer P. Birtwhistle. 0.40-m f/6.0 Schmidt-Cassegrain + CCD.

Orbital elements:

2009 QN5				Earth MOID = 0.1216 AU
Epoch 2009 June 18.0 TT = JDT 2455000.5				MPC
M 338.86236	(2000.0)	P	Q	
n 0.16859170	Peri. 135.02928	-0.27329136	-0.95215761	
a 3.2452284	Node 330.02894	+0.78754371	-0.13982743	

e 0.8814669 Incl. 15.89003 +0.55234657 -0.27174286

P 5.85 H 19.0 G 0.15 U 9

Residuals in seconds of arc

090818 703	0.0	0.5+	090818 151	0.1+	0.4+	090819 H26	0.0	0.4-
090818 703	0.8-	1.6+	090818 B04	0.5+	0.0	090819 695	1.1-	0.6+
090818 703	1.0+	0.2-	090818 151	0.1+	0.6+	090819 673	0.3-	0.0
090818 703	1.0-	0.1-	090818 B04	0.6+	0.0	090819 673	0.1+	0.1-
090818 703	1.2+	1.0-	090818 B04	0.5+	0.0	090819 673	0.2-	0.5-
090818 703	0.2+	0.0	090818 198	0.1-	0.6+	090819 673	0.0	0.2-
090818 703	0.4-	0.5+	090818 198	0.3+	0.6+	090819 673	1.0+	1.8+
090818 703	0.6-	0.4-	090818 198	0.1+	0.3+	090819 673	0.8+	1.1+
090818 703	1.6+	0.1+	090818 198	0.1-	0.0	090819 673	0.1-	0.8-
090818 703	0.6-	0.1-	090819 J95	0.3-	0.0	090819 673	0.6-	0.8-
090818 703	0.4-	0.5-	090819 J95	0.0	0.1-	090819 695	0.7-	0.1-
090818 703	0.5-	0.1-	090819 J95	0.4+	0.2+	090819 695	0.3-	0.7-
090818 A79	0.8-	1.9-	090819 H26	1.4+	0.2+			
090818 A79	1.4-	1.3-	090819 H26	0.1+	0.1-			

Ephemeris:

2009 QN5		a,e,i = 3.25, 0.88, 16		q = 0.3847					
Date	TT	R. A. (2000)	Decl.	Delta	r	Elong.	Phase	V	
2009 08 17		00 55.02	+15 31.2	0.524	1.381	124.9	37.0	19.8	
2009 08 22		01 07.58	+20 19.6	0.430	1.305	124.6	39.6	19.3	
2009 08 27		01 26.29	+27 16.9	0.344	1.227	121.9	44.4	18.8	
2009 09 01		01 59.58	+37 48.1	0.268	1.147	114.6	53.1	18.4	
2009 09 06		03 16.40	+52 46.8	0.214	1.065	99.8	68.8	18.2	
2009 09 11		06 35.91	+62 45.6	0.196	0.981	76.9	91.8	18.7	
2009 09 16		09 39.90	+52 08.9	0.225	0.895	54.9	113.2	19.9	

Timothy B. Spahr

(C) Copyright 2009 MPC

M.P.E.C. 2009-Q25