(911)OA#1-A1 // 2025-Sep-1 00:00
REI JOHNSON

TARGET: *(911) Agamemnon*
RELATED RESEARCH: Agamemnon Transit Description (EN)
OBSERVATORY: *Altinak Remote Observatory*
TELESCOPE INSTRUMENT: *Alnitak A1 / PlaneWave CDK550 f/6.8*

PLANNED DATE/TIME: *2025-Sep-1 00:00 UTC / 02:00 LOC (UTC+2) to 00:15 UTC*
CELESTIAL TARGET COORDINATES:
RA: *10 52 50.62*
DEC: *+05 13 38.4*

HORIZONS SYSTEM OBSERVER TABLE:

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JPL/HORIZONS                 911 Agamemnon (A919 FB)         2025-Jun-25 09:07:08
Rec #:     911 (+COV) Soln.date: 2025-Apr-11_18:08:27   # obs: 5277 (1919-2025)

IAU76/J2000 helio. ecliptic osc. elements (au, days, deg., period=Julian yrs):

  EPOCH=  2458111.5 ! 2017-Dec-24.00 (TDB)         Residual RMS= .17285
   EC= .0656521794319234   QR= 4.930001460737525   TP= 2459725.7441205662
   OM= 338.006511643181    W=  80.94208073471049   IN= 21.76320802137339
   A= 5.276409225999072    MA= 228.7299711745442   ADIST= 5.622816991260619
   PER= 12.12037           N= .08131981200000001   ANGMOM= .039428722
   DAN= 5.19992            DDN= 5.30853            L= 58.266288
   B= 21.478244            MOID= 4.02096987        TP= 2022-May-26.2441205662

Asteroid physical parameters (km, seconds, rotational period in hours):
   GM= n.a.                RAD= 65.519             ROTPER= 6.592
   H= 7.88                 G= .150                 B-V= .760
                           ALBEDO= .072            STYP= D

ASTEROID comments:
1: soln ref.= JPL#127, OCC=0
2: source=ORB
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 Date__(UT)__HR:MN     R.A._____(ICRF)_____DEC  R.A.__(a-apparent)__DEC    APmag   S-brt            delta      deldot     S-O-T /r     S-T-O  Sky_motion  Sky_mot_PA
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$$SOE
 2025-Sep-01 00:00     10 52 50.62 +05 13 38.4  10 54 09.46 +05 05 34.4   15.671   7.679  6.35043514420000   2.3606077    4.4154 /T    0.8357   0.5462934   118.65215
54.140471        0.936    8.749
 2025-Sep-01 01:00     10 52 52.55 +05 13 22.7  10 54 11.38 +05 05 18.6   15.670   7.678  6.35049062076918   2.2502057    4.3868 /T    0.8303   0.5462097   118.64559
$$EOE
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Computations by ...

    Solar System Dynamics Group, Horizons On-Line Ephemeris System
    4800 Oak Grove Drive, Jet Propulsion Laboratory
    Pasadena, CA  91109   USA

    General site: https://ssd.jpl.nasa.gov/
    Mailing list: https://ssd.jpl.nasa.gov/email_list.html
    System news: https://ssd.jpl.nasa.gov/horizons/news.html
    User Guide: https://ssd.jpl.nasa.gov/horizons/manual.html
    Connect     : browser        https://ssd.jpl.nasa.gov/horizons/app.html#/x
                  API            https://ssd-api.jpl.nasa.gov/doc/horizons.html
                  command-line   telnet ssd.jpl.nasa.gov 6775
                  e-mail/batch   https://ssd.jpl.nasa.gov/ftp/ssd/horizons_batch.txt
                  scripts        https://ssd.jpl.nasa.gov/ftp/ssd/SCRIPTS
    Author: Jon.D.Giorgini@jpl.nasa.gov
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PLANNED EXEC DATE: 2025-Sep-1 at 00:00 UTC (LOC 02:00 UTC+2)
REAL EXEC DATE: XXXX-XXX-XX at XX:XX UTC (LOC XX:XX UTC+2)

Satellite Evidence Through Orbit Offset

With observations done through Alnitak Remote Observatory systems, it may be possible to find more evidence that points toward the existence of this satellite. The mathematics of this offset would have to be congruent with the following estimations:

$$\mathbf{D_{min} = 800\ kg/m^3}$$
$$\mathbf{D_{max} = 2700\ kg/m^3}$$

$$\mathbf{V_{best} = 65{,}449.8\ m^3}$$
$$\mathbf{V_{min} = 14{,}137.2\ m^3}$$
$$\mathbf{V_{max} = 523{,}599\ m^3}$$

$$\mathbf{M_{best} = 52{,}359{,}840\ kg}$$
$$\mathbf{M_{min} = 11{,}309{,}760\ kg}$$
$$\mathbf{M_{max} = 1{,}413{,}717{,}300\ kg}$$

The M_{best} value is the best guess based on a sensitive estimate of Patroclus and Monetius, two large asteroids with similar albedo to Agamemnon. This number is then multiplied by the best guess for the volume of the body, assuming it is spherical. These same calculations are applied to the minimum and maximum. Note that the minimum value used the 800 kg/m^3 value as the lowest accepted density value of the Trojan asteroids. This would place the gravitational anomaly caused by these asteroids at: