

Asteroid 2012 DA14 OBSERVATIONAL REPORT from Vagelis Tsamis

Last night, I had the opportunity to observe asteroid 2012 DA14 from Observatory C68, near Athens, Greece, using a Watec 902H2 camera on a T-40 SCT working at f/3.3. A "Live Webcast" was also successfully transmitted, via Ustream.

Here follows a report that I have sent to our national amateur astronomy forum:

<http://www.astrovox.gr/forum/viewtopic.php?p=202922#202922>

Here's a translation of my comments:

Bravo to all those who tried,
Hola! to those of us fortunate to see the asteroid!

Summary:

After quite a struggle, we managed to spot it at around midnight, at 51 degrees altitude, in Draco, at 9.5 mag. From there, things were very easy, as its motion was in the N-S direction. Its motion was extraordinary! It was moving like a bullet between the stars of the field, grandeur in its passing, brilliant and beautiful!

Details:

We had arrived at Observatory C68 in Pallini, near Athens, Greece at about 9.00pm local time. At 9.45pm, I was ready with the cameras, cables, laptop, telescope alignment, etc. Now "**Go detection!**" But alas! First, as it was low above the horizon, there was no way to see anything, because of the Athens light pollution. Moreover, there were still clouds in the sky of Pallini. But the worse was the familiar cloud of smoke and soot from the fireplaces. And the humidity! The situation whole situation was very difficult.

Eventually, the sky began to clear for good after 10.00-10.30pm local, so we set to work. Another confusion then arose as I had not printed or saved any charts! So I tried generating maps using *Heavens-Above*. Unfortunately, the *Heavens-Above* website was down or overloaded most of the time! Has anyone else noticed this? Also, I do not know how accurate these maps were.

At 23:45 local time (finally) I decided to do what's known and obvious: I got the coordinates from the Minor Planet Ephemeris Service, for 00:00 local (per 10 minutes). I determined the midnight position of the asteroid to be RA 12:38:33.6 / DEC +64:58:45. Nice! I moved the telescope to these coordinates, and checked the field in the finder-scope. I saw a asterism of 6-7 stars of similar brightness to the asteroid, near to the beautiful triangle of stars comprising 7 Draconis, 8 Draconis and 9 Draconis. I used a 35mm Celestron Ultima eyepiece and f/3.3 focal reducer which gave quite a large field in the 16-inch telescope. By then I am so tired and about to quit if I didn't managed to succeed this very last time. My colleague, Kyriaki Tigani goes to the eyepiece and starts observing, a few minutes before midnight. And that's it! I hear a voice: "**On the top right, top right, something is moving and goes away!!!!**". Kyriaki had just spotted it! I go and observe, nothing visible at top right. I take off the lens, attach the Watec 902 H2U camera, and start looking at the laptop screen. Nothing, of course. With the up arrow on the controller I move to north, and wow!!!, "**There it is! Fireball!**" Wonderful! I

send messages to Facebook and Astrovox and begin retransmission on Ustream:

<http://www.ustream.tv/channel/flyby-asteroid-2012-da14-from-athens>

Now, as for the broadcasting itself, I do not know how it came out, hopefully well, maybe to some it was slow, or bad, maybe for some it was good, etc. Any comments would be helpful! We, however, enjoyed the view at the monitor. It was crystal clear. The asteroid was alive and kicking, ranging in magnitude from 9.5 to 10.5. Simultaneously, stars up to 12th mag were clearly visible! I was transmitting high signal, high bandwidth / bit-rate = 1328 kbps at 30 fps, as the high-speed observatory network allowed me to. Now, I do not know if for some of you the reception was bad due to this reason, and if this was a mistake or not. Anyway, I got a message from an Italian saying "Congrats, very clear imaging". From the statistics, a total of ~ 800 users connected, with a maximum of 37 concurrent users. I would be grateful to receive your own technical comments!

Vagelis Tsamis