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AIAA Houston Section Astrodynamics technical committee

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The first draft of this archive is now copied from its author, Daniel R. Adamo, Astrodynamics Consultant. It is copied to our Section web page starting near the top of the page. The archive consists of 84 notes so far since 2008 from Mr. Adamo. We can go straight to the initial location of this AIAA version of the archive using this URL:

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ATIG: Astrodynamics Technical Integration Group

ATIG 18

The Red Baron Scenario In An Interplanetary Context

Even young readers without aeronautical interests will recall the dog fighting exploits of a certain heroic beagle in his self-imagined World War I flying ace persona, as portrayed by Charles Schultz in the comic strip *Peanuts*. More often than not, aerial combat would commence with Snoopy's archrival, The Red Baron, diving at him from out of the Sun's glare. Bullet holes would immediately riddle our hero's Sopwith Camel biplane, faithfully depicted by Schultz as a doghouse with Snoopy astride the ridgepole.

A similar scenario plays out all too often as humanity struggles to detect populations of small-sized near-Earth objects (NEOs). Although we've found nearly 90% of NEOs having diameters 1 km or more, the population with diameters less than 100 m is far more prolific and more than 95% of this population has yet to be detected. These diminutive NEOs are significant for two reasons. First, they encompass the minimum size thresholds capable of inflicting local to

Image credit: Snoopy by Charles M. Schulz. Flickr: The Google internet search app lists this image as free for non-commercial use.

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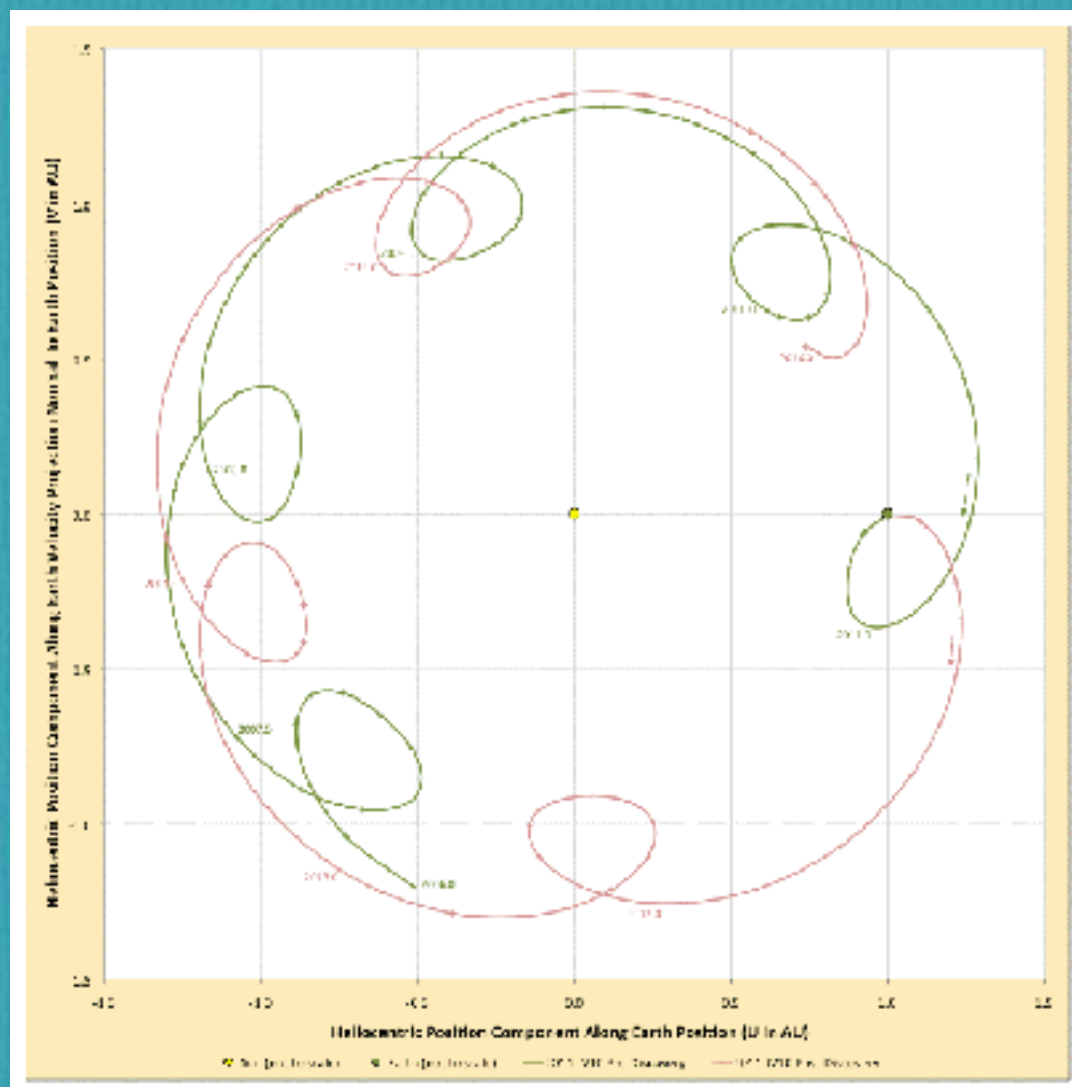


Figure 2. Heliocentric UV Plot of 2011 JV₁₅ Relative To The Earth/Sun Line

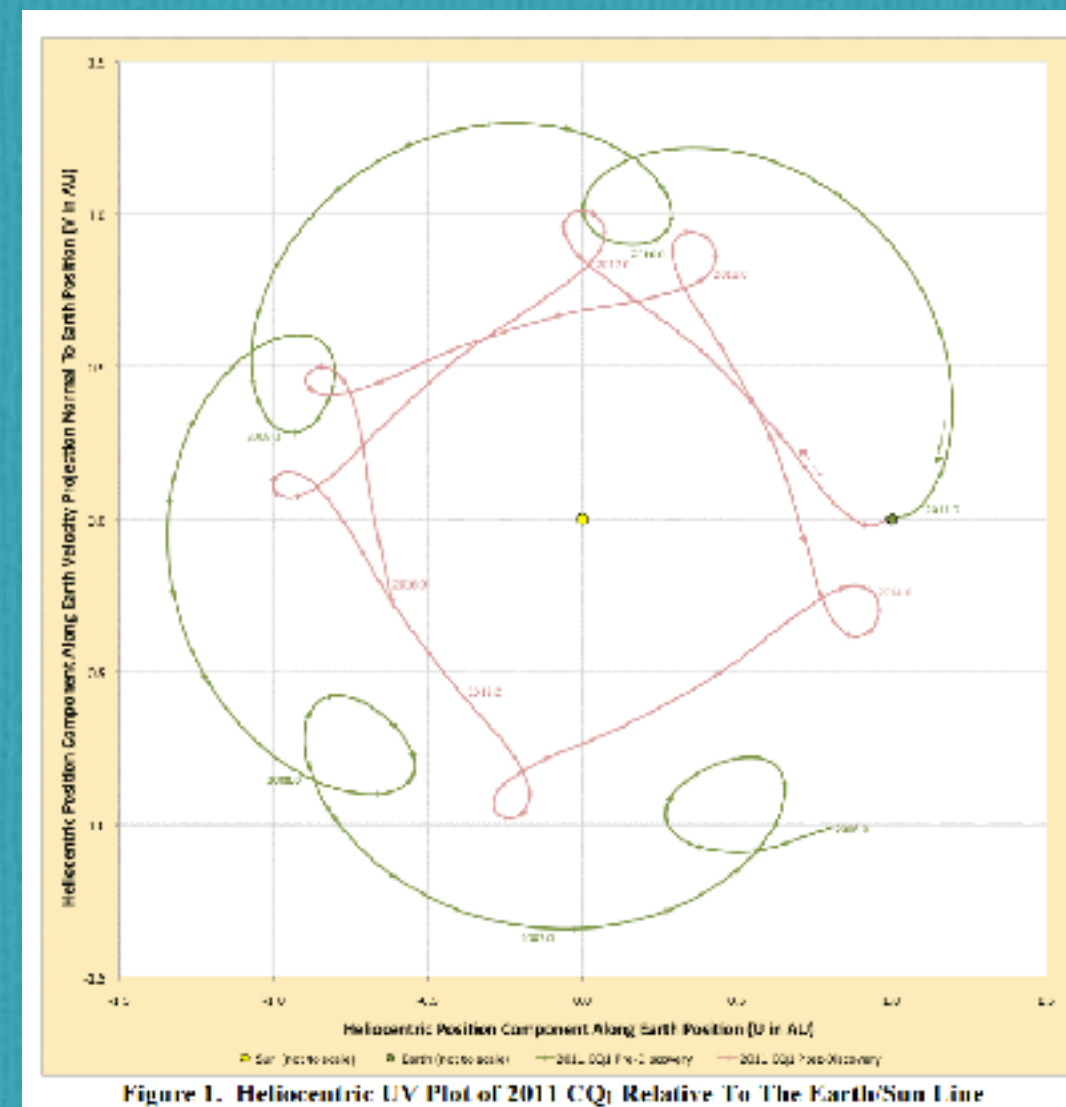


Figure 1. Heliocentric UV Plot of 2011 CQ₁ Relative To The Earth/Sun Line

