Abstract Submitted
for the TSF16 Meeting of
The American Physical Society

Identifying Binary Brown Dwarf Systems Using Model Point Spread Functions KYLE MATT, DENISE STEPHENS, Brigham Young Univeristy — A Brown Dwarf (BD) is a celestial object that is not massive enough to undergo hydrogen fusion in its core. BDs can form in pairs called binaries. Due to the great distances between Earth and these BDs, they act as point sources of light and the angular separation between binary BDs can be small enough to appear as a single, unresolved object in images. Due to limitations in modern technology, it is not currently possible to resolve some of these objects into separate light sources. Stephens and Noll (2006) developed a method that used model point spread functions (PSFs) to identify binary Trans-Neptunian Objects, we will use this method to identify binary BD systems in the Hubble Space Telescope archive. This method works by comparing model PSFs of single and binary sources to the observed PSFs. We describe the method, its challenges and possible uses in this poster.

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Date submitted: 23 Sep 2016 Electronic form version 1.4