



A Planet Beyond Neptune?

LSST will discover a significant number of unusual or extreme distant Solar System objects, such as members of the inner Oort cloud (i.e. Sedna-like objects) and other Kuiper belt objects that are detached from strong interaction with Neptune. These objects may point the way to the discovery of additional planets in our Solar System.

LSST will produce a large sample of objects with perihelia or closest approach out to several hundred AU. Studying the distribution of extreme outer Solar System body orbits (in particular including any clustering in the argument of perihelion) will test models predicting the existence of a planetary-mass object beyond Neptune, a proposed Planet 9 (Trujillo & Sheppard 2014; Batygin & Brown 2016; Brown & Batygin 2016; Sheppard & Trujillo 2016; Brown 2017).

Depending on the proposed Planet 9's on-sky location and brightness, it may be possible for LSST to directly detect it (Batygin & Brown 2016; Brown & Batygin 2016; Sheppard & Trujillo 2016; Brown 2017, Trilling et al. 2018).

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See more at www.lsstssc.org

Credit: Caltech AMT (https://mediaassets.caltech.edu/evidence_of_ninth_planet)

