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SMCAS General Meeting and Presentation on Friday November 2, 2018

Michael Medford

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The Hunt for Planet Nine

Friday, November 2, 2018, <u>College of San Mateo</u>, <u>Building 36</u> SMCAS General meeting at 7:00 p.m. ISC Room, room 110 Presentation at 8:00 p.m. <u>Planetarium</u> Free and open to the public, free parking (lots 5 or 6).

Scientists have proposed that there is a giant planet lurking beyond Pluto, a Neptune-size world orbiting the sun about 20 times the distance of Neptune's orbit, but so massive that it may have



tipped the entire solar system a few degrees sideways. A race is on to discover this as yet unseen Planet Nine using classical astronomy and new computational techniques. In this presentation, Michael Medford will discuss why scientists believe that Planet Nine exists, how the search is being conducted, what has been learned so far in the quest to answer the question of whether Planet Nine exists or not.

This is a distant view from Planet Nine back towards the sun. The object is thought to be gaseous, similar to Uranus and Neptune. Hypothetical lightning lights up the night side. Image Credit: Caltech/R. Hurt (IPAC)

Michael is currently a fourth year graduate student pursuing a PhD in Astrophysics at the University of California Berkeley. After spending several years pursuing a career as a physics teacher and actor he came back to graduate school to develop a deeper understanding of the intricate workings of the Universe. The joy he feels in developing that understanding is only made stronger by sharing that enthusiasm as a science communicator. His research centers around exploring the very edges of our knowledge of what the universe contains. He is trying to find black holes in the Milky Way and actively hunting for the mysterious Planet Nine. Details of this work and previous lines of research can be read about here. He leverages large-scale computational techniques to transform seemingly insolvable problems into useful science. He works out of the **Computational Cosmology Center** at the Lawrence Berkeley National Laboratory with Peter Nugent, and in the UC Berkeley Astronomy Department with Jessica Lu.

