

PHYSICS COLLOQUIUM

SEARCH FOR LIFE BEYOND OUR SOLAR SYSTEM

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ARE WE ALONE? IS THERE LIFE BEYOND THE SOLAR SYSTEM? THESE QUESTIONS THAT ARISE FROM OUR BASIC CURIOSITY ABOUT THE UNIVERSE ARE PROFOUND FROM A SCIENTIFIC AND PHILOSOPHICAL CONTEXT. THE DISCOVERY OF PLANETS BEYOND OUR SOLAR SYSTEM OR EXOPLANETS IN THE MID 1990S SAW THE EMERGENCE OF NEW SURVEYS AND METHODS OF DISCOVERY TO SEARCH FOR DISTANT WORLDS. OVER THE PAST DECADE, VARIOUS NASA MISSIONS HAVE ENABLED THE DISCOVERY OF MANY THOUSANDS OF EXOPLANETS AND HELPED TO EXPLORE THE COMPOSITION OF THEIR ATMOSPHERES. AMONG THE THOUSANDS OF EXOPLANETS WITH A WIDE RANGE OF PROPERTIES AND ORBITS AROUND DIFFERENT TYPES OF HOST STARS, HOW MANY OF THEM HAVE THE CONDITIONS TO HARBOR LIFE? IN THIS TALK, I WILL PROVIDE AN OVERVIEW OF EXOPLANETS AND HIGHLIGHT HOW NASA'S FUTURE FLAGSHIP MISSION KNOWN AS THE HABITABLE WORLDS OBSERVATORY (HWO) WILL SEARCH FOR BIOSIGNATURES FROM HABITABLE ZONE PLANETS. NASA ASTROPHYSICS OFFERS IMMENSE OPPORTUNITIES FOR DISCOVERY AND EXPLORATION OF THE UNIVERSE AND OUR COSMIC ORIGINS. I WILL END THE TALK BY PROVIDING INFORMATION ON THE VARIOUS PATHWAYS FOR STUDENTS AND TEACHERS TO ENGAGE AND CONTRIBUTE TO NASA'S PROGRAMS.

Taylor Hall 111 AT 11:00AM

Thursday, February 20th