



Making the most of exoplanet searches

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Thanks to 20 years of dedicated searches for exoplanets, we now know of the existence of thousands of exoplanets. The search to detect these planets has required observations of hundreds of thousands of stars; future missions like TESS and WFIRST will target millions of stars. What happens to the stars that we don't detect planets around? Imaging and transit search missions have also allowed advances in stellar and galactic astronomy well beyond the core mission requirements. In this seminar, I will discuss some of the lagniappe science results enabled by previous and future exoplanet searches which significantly add to their legacies. Specifically, I will discuss efforts to search for long-term brightness variations of stars in the Kepler field caused by stellar magnetic cycles. I also will discuss how observations of transiting brown dwarfs can help us understand the atmospheres of field brown dwarfs. I will conclude with a look to the future, describing how the WFIRST microlensing mission will continue the transiting planet revolution.

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PHYSICS