

Finding the Lowest Mass Exoplanets with Improved Radial Velocimetry: Progress Report 2015

2 Progress

2.1 Removing the Systematics Caused by Telluric Lines

1 Summary of Program and Original Plans

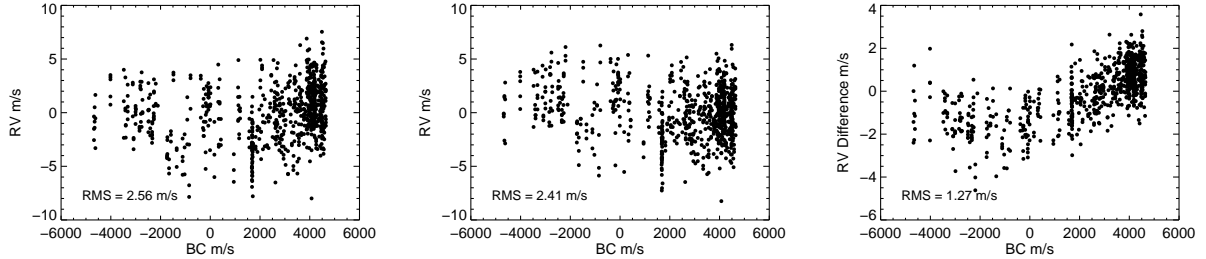


Figure 1: Measured precise radial velocities of a standard star observed with Keck/HIRES as a function of barycentric correction (i.e. Earth's radial velocity away from the target). Our preliminary treatment of telluric lines has removed over 1 m/s systematic noise (panel 3; note the change in scale on y-axis).

3 Future Plans

3.1 Improving the Wavelength-Dependent Statistical Weighting

2.2 Validating the Calibrator: the Iodine Atlas

2.3 Improving Data Reduction and Instrument Modeling