

Radial Velocity Precision with the TripleSpec Spectrograph in the Near-Infrared

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Presented are calculations of the photon-limited Doppler sensitivity of the TripleSpec Externally Dispersed Interferometer (TEDI) near-infrared instrument designed for the Palomar 200" Hale Telescope for a series of low-mass stellar models. Also, the effects of telluric model uncertainty are considered for a particular stellar model. This spectrograph uses an interferometer before the dispersing element to boost resolution and reject systematic noise. Explanations of the calculations, including interpreting the EDI signal, are given along with the results.