

Abstract Submitted
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Spectral Analysis of Brown Dwarf Binary Systems JOHN EBERHARD, Brigham Young University — I studied the spectra of brown dwarfs that were previously identified as possible binary systems and compared the spectral data to brown dwarf atmospheric models using a least squared analysis. I found the models that best fit the data for both a singular brown dwarf and for a binary system. I then compared the fits of the binary and singular models to see if the differences were statistically significant, meaning that I was 99% positive that the spectra were created by binary systems. Through this process I was able to confirm the presence of binary systems and also identify the properties of each brown dwarf studied, including its temperature, surface gravity, and amount of cloud cover.

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