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# Investigating the binary fraction among candidate hybrid A/F-type variable stars detected by Kepler

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## Abstract

Some 40 Kepler candidate  $\delta$ Scuti– $\gamma$ Dor hybrid stars are recurrently being monitored in radial velocity in order to distinguish high accuracy Kepler photometry. The physical cause for the detected low frequencies in slightly evolved or unevolved oscillation type stars ( $\delta$ Scuti stars) can be generally explained in three ways: 1) the star is an undetected binary or multiple system, 2) the star is a pulsator (i.e. a genuine  $\delta$ Scuti– $\gamma$ Dor hybrid), or 3) the star's atmosphere displays an asymmetric intensity distribution. In the first two cases, the observation of the lines spectra, these observations also provide the atmospheric properties of each component. As a final result, we will be able to determine the period spectroscopic binary and multiple systems in the selected sample.

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