Spectral classification of rapidly varying A-type Stars

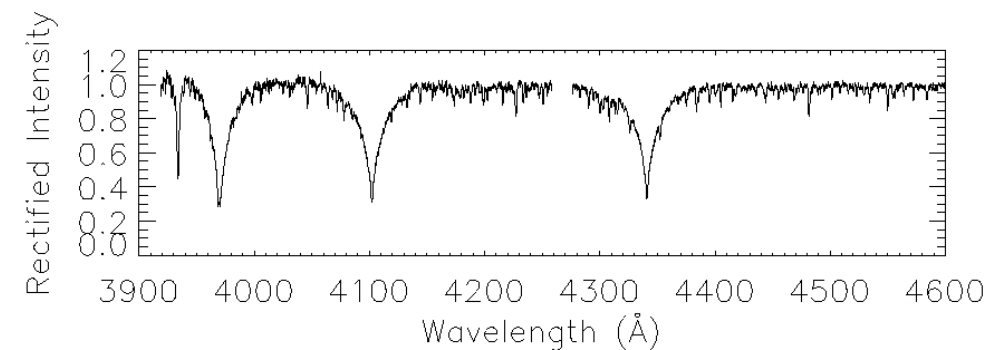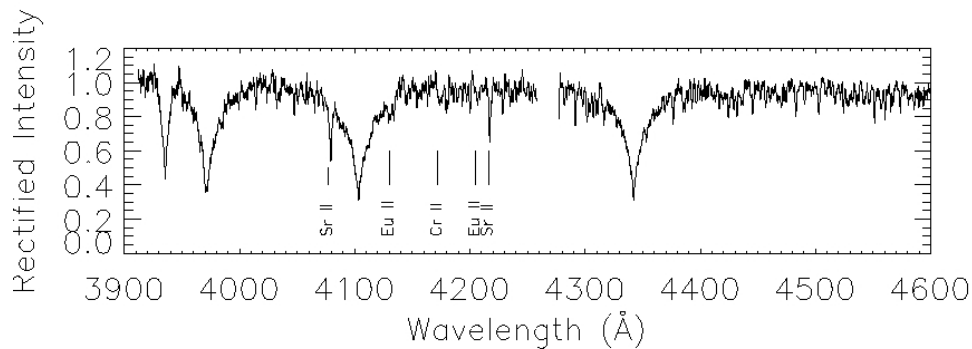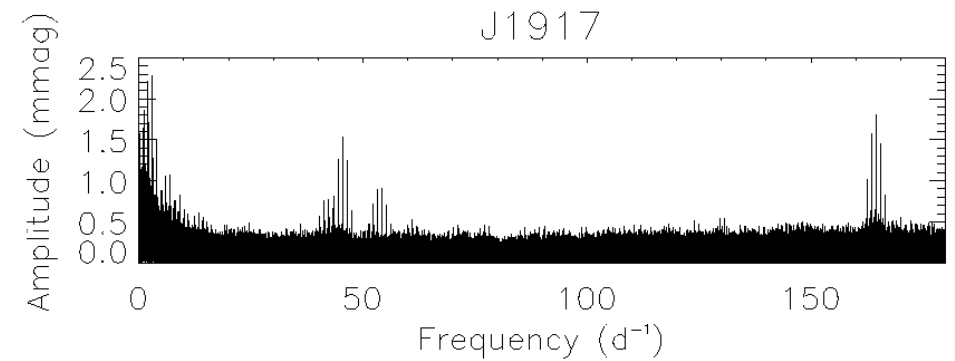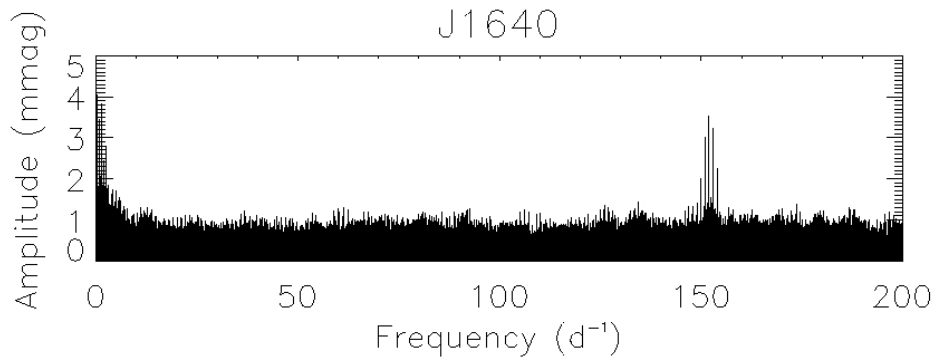2012-2-UKSC-001 & 2013-1-UKSC-002

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High-frequency A-type pulsators discovered using SuperWASP

Observations

Periodogram of SuperWASP data showing the pulsation, with the RSS spectrum identifying the star as an A8p SrEu star.

Periodogram of SuperWASP data showing multi-periodic pulsations, with the RSS spectrum showing weak Ca lines. We classifiy this star as an A7m star.

Results

- We observed many A-type stars with the RSS spectrograph to determine the nature of varying stars

    - 3 stars were classed a Ap, so are new rapidly oscillating Ap (roAp) stars

    - 4 stars were classed as metallic lined Am stars, adding to the known pulsating Am class

    - 7 were classified a 'normal' A-type pulsators, most likely young δ Scuti stars