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## A search for pulsating B-type variable stars in the southern open clusters NGC 6204 and Hogg 22

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### Abstract content <br> &nbsp; (Max 300 words)

NGC 6204 and Hogg 22 are two southern open clusters located within 6 arc minutes of one another in the constellation of Ara. This close angular proximity made it possible to observe these two clusters simultaneously. The cluster Hogg 22 contains one known Beta Cephei star, discovered in the ASAS data. The likelihood of finding more of these interesting pulsating stars lead to the observation of these two clusters. Software was developed to analyze cluster data, do photometry on all the stars in the field and extracting variable stars. A total of 3180 stars were extracted from the region which include field stars and cluster stars. From the 220 brightest stars that were analyzed, 186 showed variability, where the Lomb-Scargle transform was used to extract periods ranging from less than 2 hours to more than 30 days. An explanation of the steps followed in the data analysis will be given together with examples of light curves extracted from the data.

### Apply to be<br> consider for a student <br> &nbsp; award (Yes / No)?

Yes

### Level for award<br>&nbsp;(Hons, MSc, <br> &nbsp; PhD)?

MSc

### Main supervisor (name and email)<br>and his / her institution

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### Would you like to <br> submit a short paper <br> for the Conference <br> Proceedings (Yes / No)?

No

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