

Abstract Submitted
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Membership selection in the Alpha Persei Cluster LOU BAYA
OULD ROUIS, University of California, Los Angeles — The nearby Alpha Persei is a youthful cluster of stars, born roughly at the same time, and sharing similar chemical composition. As such, star clusters give essential information on stellar evolution. In order to study the members of the Alpha Persei cluster, we use the latest data release from the Gaia Satellite Mission which measures distances, positions, and motions of stars. With these data it has been possible to detect thousands of new Alpha Per candidates, an increase by a factor of 10 or more over pre-Gaia studies. We identify the likely membership of Alpha Persei stars within dynamical parameters such as the core and tidal radius of the cluster. We use additional photometric data from surveys at infrared wavelengths to assess the presence (or lack) of excess infrared emission that is characteristic of circumstellar dust related to planetary system formation.

Lou Baya Ould Rouis
University of California, Los Angeles

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