

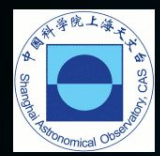
4th Shaw-IAU workshop on Astronomy for Education

A hands-on project for high school students to explore the colorful stars

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— Background —



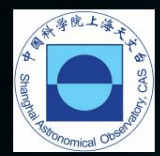
Cooperation between Shanghai Astronomical Observatory (SHAO) and high schools in Shanghai metropolis
→ provides a practical platform for high school students who are interested in astronomy to practice astronomical investigations.



Various programs have been developed to help high school students understand cutting-edge astronomical achievements and how researchers conduct their scientific work.



Practices in various fields of astronomy would greatly stimulate student's curiosity and expand their horizon.



— Methodology —

Combine lectures and practice



**General
introduction**

how astronomers conduct scientific researches and arouse student's interests in astronomy.

2

**Teaching
course**

For various research groups:
Introduce astronomical background knowledge and practical skills. Students select topics according to their own interests.

Each project provides personalized teaching and practical topics of varying levels for students. Students started the practice on their own.



**Hands-on
practice**



**Lecturing
and report**

Students made periodical reports in different stages (proposal, middle stage and task completion).
• Students summarize a final report.

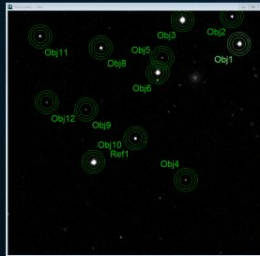
— Our stellar color program —



1. Combine monochromatic images into pseudo-color image
2. Visually classify star by color in pseudo-color image

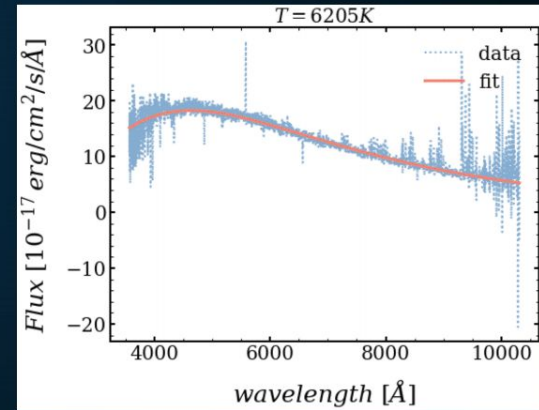


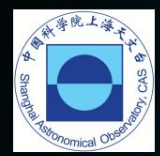
3. Perform aperture photometry to measure magnitude of stars, and obtain colour index
4. Compare visual color and colour index



Advanced exploration

Calculate approximate temperature of target star by fitting blackbody spectrum





— Summary —

- various projects have been developed to help high school students understand frontier astronomical achievements and the ways researchers conduct their work.
- attempt to deepen students' understanding of the star colors
- cultivate their ability of astronomical-data retrieval
- enhance their public speech and report writing ability.