

Training in Astronomy for Physics Students

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Abstract. In this paper, we describe what we have done with regard to astronomy training for physics students. More and more students are interested in astronomy, they spend their summer holidays and spare time in observations and studying the observation data. Some students are familiar with using the telescope for observations, dealing with absorption line features achieved from the observations. Astronomy was selected as the key subject in Guangzhou city and Guangdong province, the laboratory for astronomy science and technology was selected as the key laboratory of Guangzhou city and that for the education department of Guangdong Province. We also provide a master degree programme for astronomy.

Key words. Astronomy: observation—physics: students—laboratory—key subject.

1. Introduction

Guangzhou is one of the astronomical cradles in the mainland of China (Chen & Jian-Sheng 2003). A brief introduction of astronomical history in Guangdong was introduced in our previous work (Fan *et al.* 2011) and the details are shown in our recent book (Fan *et al.* 2012).

2. Astronomy experiment and research work

In 2009, a 30-cm optical telescope, for education and popular science, was mounted in the science laboratory building. It is open to all students from primary school to universities, and to the citizens of Guangzhou city. The students can use the telescope for observations and some experiments for their thesis and innovation competitions. Some undergraduates received awards issued by the National Astronomical Observatory of China for their interesting research work in astronomy. Some students have chosen to do their MSc programme in astrophysics, and astronomy.

We have a group of physics students who are interested in astronomy, they are provided with the facilities and offices. We also spend our spare time and the summer and winter holidays to train their skills to deal with the observational data, analyse the results, write a scientific paper, and present an oral talk. The students can do observations when they have time, they can do research during the spare time and in holidays, they can also discuss scientific problems and give talks in the seminar room. All the students interested in astronomy are encouraged to participate in the professional meetings in astronomy, and present their research work (see Huang *et al.* 2011).

The importance of astronomy has also developed very fast, it was selected as one of the key subjects in both Guangdong province and Guangzhou city in 2012. A Pearl Scholar professor position was established for astronomy in 2009. Since 2003, we have provided MSc programme in astrophysics, and now we are providing MSc programme in astronomy. We will provide astronomy courses to undergraduate students, we have also set up a laboratory for astronomy.

3. Popular astronomy education

We, astronomy staff give popular science talks for undergraduate students, middle school students, primary school students, and citizens. Some news papers and TV stations have also done interviews with our staff regarding special astronomical phenomena. We also help to organize competitions on astronomy and involve students from all over Guangdong province. The undergraduate students can make some contribution for the competition. We have also trained some middle school students to attend the international competitions in astronomy and astrophysics in which the students have won gold, silver and bronze medals.

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