About the teaching materials of experience study of astronomical telescope operation and planet observation

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Introduction

It aims at that conduct observation and an experiment on natural things and phenomenon, and observation experiment skill masters, and supporting scientific view and view through consideration of an experimental result in the science field of the junior high school government guidelines for teaching. The microscope is used for observation of a microbe in the field of the living thing. However, in the case of astronomical field, even if an astronomical telescope is seldom used for observation of a heavenly body but it is used for it, a juvenile student does not operate it directly. It becomes skill acquisition of the astronomical observation by an astronomical telescope to observe a planet using an astronomical telescope, and it is considered that it can support astronomical knowledge and an astronomical view.

Astronomical telescope operation and planet observation

An astronomical telescope is a machine for observing and observing a heavenly body. The performance of an astronomical telescope changes with the calibers of a convex lens or a concave mirror, focal lengths, and magnifications which are used. There is an equatorial telescope in the mount of an astronomical telescope, and the position of a heavenly body is expressed by circumstances and celestial declination. Therefore, in order to observe a dark heavenly body, a heavenly body is introduced into the view of an astronomical telescope by uniting the position, circumstances, and celestial declination of a heavenly body for the direction of an astronomical telescope.

In observation of the planet which uses an astronomical telescope, an apparent size, the situation on the surface of a planet. In government-guidelines-for-teaching description, the photograph of the planet photoed by the picture and the large-sized astronomical telescope of the satellite is used for planetary study as data. However, there is a difference by a planet actually observable using an astronomical telescope.

Experience study of astronomical telescope operation and planet observation

In order to actually carry out astronomical observation, night uses an astronomical telescope fundamentally, but By experience which looks into . astronomical telescope which can perform operation experience of an astronomical telescope also in the daytime, or is operated . which can be understood about the performance and the structure of an astronomical telescope Observation experience of . planet which can be performed daytime also again if it is planetary observation experience A planetary photograph is printed so that the ratio of . size which are the experience activities which observe a planetary photograph with an astronomical telescope may become fixed. If the place which has arranged . photograph which an apparent size arranges in the distance which becomes equal to the actual condition can be given as a substitute of celestial declination and circumstances, an astronomical telescope can be operated correctly and an astronomical telescope can be turned to a planetary position By comparing with the astronomical telescope with which the distance from the earth of . planet which can observe a planet now differs from . caliber which can be felt about an apparent size and a focal length, or changing magnification It can learn that how where a planetary photograph appears is different, and that how for it to be visible with the performance of an astronomical telescope changes a lot.

Questionnaire result

According to the . questionnaire result of having performed operation experience of an astronomical telescope, and planetary observation experience for the citizen who participated in the astronomical observation meeting in the night currently performed at the university, it is answered among 135 participants that about 70 percent of 94 persons had pleasant operation experience of the astronomical telescope.