

Determine the Sun's Rotation Period using D.I.Y Sunspotter and Smartphone

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This is an astronomy education program for rotation period of the Sun using a sunspotter of one's own making made by the easy manageable materials and generic smart phone as a detector. Students had immediate chances to understand the principle of the telescope and optical system. Tries to make better product appears during making it. For example, they reduced the number of reflectors to decrease loss of light and changed outer shape of it to make easy for storage. D.I.Y. sunspotter is free to adjust to altazimuth mount and marked the azimuth and altitude to determine viewing direction. The images taken with smartphones were processed by using Pixlr/editor(free web-based image processing program). Rotation period of sun was calculated by using the basic formula. In addition, its accuracy was confirmed by comparison result from the SOHO satellite data. Learning by manufacturing the sunspotter is increased to understanding the principles of solar observation and to concentrate on the project following the scientist's practical study.