

Diversified approach in astronomical education 7. With Solar Observations

Kentaro Yaji[1]

[1] Kawabe Cosmic Park

<http://www.cosmo.kawabe.or.jp/people/yaji/>

The sun is the familiar star for us. And the sun is the important star on practice of astronomical education because we can observe the sun easily in the daytime. In particular, the periods from 2000 through 2001, which were the solar maximum, were good chance to practice education with the active sun. Solar telescopes in public astronomical facilities play much roles in astronomical education with solar observations.

At present in Japan, solar telescopes are operated in more than fifty astronomical educational facilities, such as public observatories and science museums. This shows high interest in solar observations among the patrons of such facilities. Though solar observations generally meant sunspot observations in white light historically, most of these institutions have the capability of observing the sun in H alpha, so active chromospheric phenomena such as solar flares and prominences are often presented to the public there.

The staff in most of the facilities don't know well how best to observe the sun and how to understand solar phenomena. We started two efforts in order to support their solar observations. One is the administration of the Solar Telescope Mailing List (solnet ML). The other is the arrangement of the Solar Telescope Workshops.

We started the Solar Telescope Mailing List (solnet ML) in January 1998. The purpose of this mailing list is to facilitate exchanges of information on solar phenomena and solar observations. The detailed contents of the mailing list are prompt reports of solar phenomena, instruments of solar telescopes, educational techniques and solar articles in newspaper and magazines. At least one hundred solar observers attend to this mailing list and the members are composed of public observatory museum staff, amateur astronomers, professional researchers, and school teachers.

Solar Telescope workshops were held in 1999 and 2000. They provide a chance for staff in public observational facilities to study basics of observational methods, educational techniques using solar observations, and to show their observational results on solar active phenomena. In the workshops, professional solar researchers presented reviews entitled, 'Today's Solar Physics', 'Space Weather', 'The 23rd Maximum Report', and 'Hardware of Solar Telescopes'. These reviews were good chances to give the attendees of the workshops new knowledge on solar physics.

Solar Telescope Mailing List and Solar Telescope workshops, these two practices played a role in linking public observers with professional solar researchers.

We introduce the solar observation satellite 'Yohkoh' as astronomical education which are relevant to solar observations. 'Yohkoh' were observing the sun in X-ray for ten years since 1991. We are promoting to make Yohkoh data teaching materials.

In this review, we present effect which the practices, Solar Telescope Mailing List and Solar Telescope workshops, gave. In addition, we comment educational use of images observed with Yohkoh.