

UDC 811.111+525

INFLUENCE OF SOLAR ACTIVITY ON THE EARTH

© Samadov M.A., Salmanova O.B.

e-mail: mahdi9911@mail.ru

Samara National Research University, Samara, Russian Federation

Some aspects of the Sun structure, nature of its activity, relations of solar activity with its large-scale structures and with its internal parts are waiting to be solved. Starting investigators are able to contribute to research of these issues providing high quality observations for astronomers. It is not suggested only individual pictures and spectra. To comprehend theoretically, obvious and complete data on real processes on the Sun are required. To my mind, starting investigators can provide research on evolution of active areas of the Sun. It is a very wide field of action both for personal researches observing and sketching sunspots and for teams of researches carrying out various investigations.

Another focus is everyday observation of the Sun according to some permanent programs. These programs can include determination of Wolf numbers, coordinates and square of all groups and the main sunspots. Squares of follicles, solar bursts, and solar prominences are also to be researched.

If there is a wide range of such data, it is possible to investigate various aspects of physics of the Sun, and influence of the Sun on the Earth.

Wolf numbers are used as a measure of solar activity. Wolf number is in proportion to total sum of sunspots f and increased tenfold number of their groups g :

$$W = k (f + 10g).$$

Coefficient of proportionality k depends on the power of the instrument used. Wolf numbers are usually averaged on months or years.

Starting investigation of solar-terrestrial physics it is necessary to realize that we deal with, at least, three objects – the Sun, the Earth, and the interplanetary medium. This fact essentially complicates the task and requires some more knowledge.

In other words, solving tasks dealing with Sun - Earth relations requires a good grounding in some spheres beyond purely observations of the Sun.

Far from all research teams are to solve scientific tasks. Some of them acquaint people with modern science; demonstrate the Sun, stars, foster interest in learning the world.

Each item involved is to be considered fully including internal and external aspects, relations, their interaction and trends.

Social world is an endless web of relations and interactions – nothing remains motionless and invariable submitting to objective laws in their development. Unfavorable in physiological relations solar factors worsen all negative moments of people vital activity – intensify depression, increase expression of objectionable emotions, intensify unhealthy irritability and negative reactions.

References

1. Степанян Н.Н. Наблюдаем Солнце. М.: Наука, 1992. - 128 с
2. Кононович Э.В., Мороз В.И. Общий курс астрономии. 2-е изд., испр. -М.: Едиториал УРСС, 2004. - 544 с.
3. Голованов Л. В. Созвучье полное в природе. — М.: Мысль, 1977. — 175 с.