Basic unit.

View of collected satellites antennas.

Engineering training “Create a digital satellite meteorology laboratory ourselves”

Basic Unit.

General description.

Engineering training “Create a digital satellite meteorology laboratory ourselves”

As part of the training, teams of participants (5-6 persons) should assemble satellite information receiving stations (from 1 till 5 depending on the wishes of the participants) on the basis of satellite antenna “Lenticularis”. Participants also should configure them and receive real-time data from passing weather satellites at the stations. In the case of successful assembly and tuning of the stations, teams should receive several images of the Earth from space with the possibility of their subsequent thematic processing. If the event lasts longer than one day, one part of the data reception can take place during working hours, another part – in the stand-alone operation of the stations at night.

The training is aimed at high school students and adults who are fond of technical creativity, in particular, programming, electronics and design, as well as astronomy and physics. The training is aimed at popularizing of space technologies, radio electronics, technologies for receiving and processing Earth images from space, satellite meteorology and weather forecasting technologies.

If several stations are planned to be assembled, then competitions between teams are possible on the quality of the received signal, which directly depends on the assembly and tuning. The quality of the received data and the success of the reception are evaluated by an expert jury. The competition regulations and the protocol for evaluating the received images have been developed.

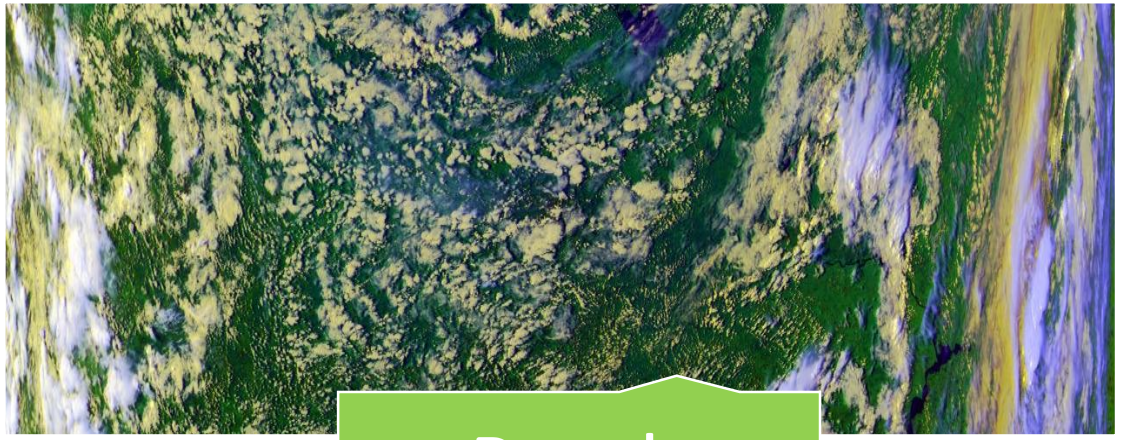
Basic unit.

Work stages.

Assembly

Receiving

Engineering training “Create a digital satellite meteorology laboratory ourselves”



Result

Basic unit.

An example of a geoportal interface of a satellite meteorology laboratory

Engineering training "Create a digital satellite meteorology laboratory ourselves"

Basic unit.

VC

METEOR-M 2	2019-06-25 02:04:56	02:05:48	75.1
METOP-A	2019-06-25 02:31:51	02:33:05	83.2
METEOR-M 2	2019-06-25 13:21:32	13:22:38	79.6
METOP-A	2019-06-25 13:48:09	13:49:27	88.4
FENGYUN 3B	2019-06-26 21:02:39	21:03:53	84.1
NOAA-19	2019-06-26 22:27:22	22:28:38	82.3
NOAA-18	2019-06-27 02:16:48	02:17:18	71.5
FENGYUN 3B	2019-06-27 08:21:31	08:22:51	87.4
NOAA-19	2019-06-27 09:48:13	09:49:03	74.6
METOP-B	2019-06-27 14:21:25	14:22:07	73.3
NOAA-19	2019-06-27 22:15:51	22:16:53	77.0
NOAA-18	2019-06-28 02:04:42	02:06:00	87.7
METOP-B	2019-06-28 02:44:24	02:45:06	73.2
FENGYUN 3C	2019-06-28 02:55:07	02:56:19	81.8
NOAA-19	2019-06-28 09:36:21	09:37:37	84.4
NOAA-18	2019-06-28 13:25:20	13:26:38	85.3
FENGYUN 3C	2019-06-28 14:14:07	14:15:19	81.9
FENGYUN 3C	2019-06-29 02:40:21	02:40:47	71.2
NOAA-18	2019-06-29 13:13:52	13:14:40	74.0
FENGYUN 3C	2019-06-29 13:59:21	13:59:51	71.5
METEOR-M 2	2019-06-30 02:05:43	02:06:25	73.2
METOP-A	2019-06-30 02:28:26	02:29:42	89.0
METEOR-M 2	2019-06-30 13:22:17	13:23:17	77.7
METOP-A	2019-06-30 13:44:46	13:46:00	85.8
METEOR-M 2	2019-07-01 01:46:01	01:46:25	71.1
METOP-B	2019-07-02 03:01:33	03:02:25	75.5
METOP-B	2019-07-02 14:17:46	14:18:52	79.5
FENGYUN 3B	2019-07-02 21:11:57	21:13:05	80.1

Receiving of satellite images from satellites according to their schedule of passing on "Lenticularis" antenna .