PHOTOMOD Digital Photogrammetric Station (DPS) Practical Application for the Kanopus-V Space Vehicle (SV) Camera Records Processing

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On July 22nd, at 10:41 AM the Soyuz Russian missile placed into orbit the Russian Kanopus space vehicle, concurrently with it they also launched the first Belorussian satellite Belka. Both the Earth Remote Sensing (ERS) satellites were constructed in Moscow at the "VNII of Electromechanics" Corporation. Beginning with the twin satellites launching into the orbit Russia and Belorussia created a space grouping which will work in one space system.

The Kanopus-V SV is a space complex for the technogenic and natural extraordinary situations on-line monitoring. The main tasks assigned to the Kanopus-V SV are:

• Technogenic and natural extraordinary situations monitoring.

• Mapping.

• Seats of forest fires, large pollutant emissions into the environment detection.

• Anomalous events registration in order to analyze the possibility of earthquake prediction.

• Agricultural activities, water and littoral resources monitoring.

• Land tenure.

• Earth surface preset areas highly on-line surveillance

The work's aim is the PHOTOMOD DPS application for the Kanopus-V SV camera records processing.

In the course of the works we complete the following tasks:

- evaluation of the orthophotoplan, constructed on the base of the Kanopus-V SV true accuracy.

The Kanopus SV is described in the presentation:

- SV primary tasks;
- SV technical characteristics;
- onboard equipment technical characteristics;

The presentation also describes the Kanopus-V SV images processing based on the PHOTOMOD DPS technology:

- project development;
- change points automated measurement;
- control survey points entry and measurement;
- unit outer orientation;
- digital terrain model (DTM) importing;
- orthophotoplans construction;
- orthophotoplans accuracy evaluation.

The conclusions on the received orthophotoplans accuracy. Recommendations on the Kanopus-V SV images usage for the cartographic purposes.