

**FURTHER IMPROVEMENT OF THE WAYS OF USING HIGH PRECISION
PHOTOGRAMMETRY MATERIALS IN UZBEKISTAN.****Bekmurodova Muyassar Yodgor qizi**intern-teacher *muyassarbekmurodova1998@gmail.com***Salimov Shahzod**

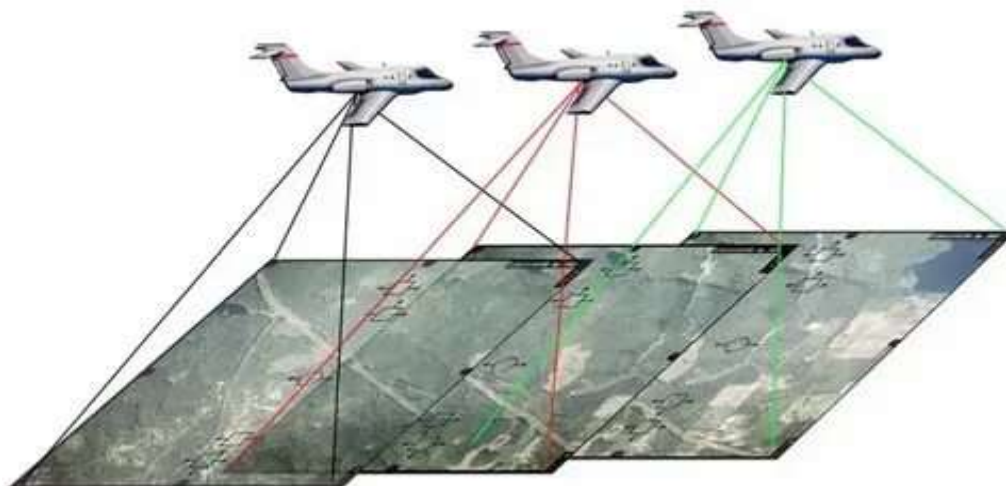
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Annotation: *This thesis discusses the measures that should be taken to further develop the use of aerial photogrammetry materials in Uzbekistan today. Today, when creating maps and plans of various contents, the most basic information is obtained from the results of high-resolution aerial photography.*

Key words: *aerial photography, aerophotography, photogrammetry, cartographic materials, flying machines, airplane, camera, drone.*

Enter. Today, we get the sources of cartographic resources that produce high-resolution maps and plans from aerial photographs. Aerial photography, aerial photography - the process of taking a photo of a place from above in an airplane and using these photos to make a plan and topographical development of the place. Aerial photography is also used to take some details of a place or photographs of structures and then map them, and these processes are called aerial photoreconnaissance. Sometimes the task of an aerial photograph is limited only to determining the boundaries of a place, and this process is an aerial photograph without a record. The information about the relief obtained as a result of topographic measurements is transferred to the maps obtained using an aerial survey, which is called a complex - combined aerial survey. It is also possible to create a map using an aerial camera, and as a result of photogrammetric measurements, the relief can be reduced to these maps. And this is photogrammetry. As a result of flying, taking photos and measuring the finished photos, a plan - a map of the place is created. The aerial surveyor is used in topographic mapping, geological and soil science research, forestry and earthworks, construction of road and hydrotechnical structures, military work, etc.



Aerial photography process.

Today, one of the processes that makes the work of representatives of almost all industries easier is aerial photography. Widespread use of aerial camera data will facilitate the work process of many industry representatives. The development of measures to further improve the processes of using photogrammetric materials in Uzbekistan is one of the main tasks facing the representatives of the field.

The quality of aerial photography depends on the optical characteristics of aerial cameras. Filming processes are mainly carried out with the help of flying machines and cameras. It is necessary to take into account the location of the aerial camera and the view of the place when choosing the aircraft. The level of accuracy and quality of the aerial photograph resulting from the shooting depends on the flight time and height of the aircraft, and the speed of the aircraft.

Aerial camera - an optical-mechanical device that takes pictures of the earth's surface with the help of various flying devices. Aerial cameras are divided into: 1) topographic and 2) non-topographic aerial cameras according to their main purpose. Topographic aerial camera - designed for taking pictures for cartographic measurement. Therefore, in the design of the topographic aerial camera, attention is paid to the optical characteristics of the lens and the reliable performance of aerial photography in difficult conditions. These are indicators such as: vibration, shaking, durability and temperature. An aerial camera consists of parts such as a cassette, an aerial camera mount, a control panel and a tool controller. The focal length of an aerial camera can determine the scale of aerial photography. Aerial cameras are divided into film and digital aerial cameras.



The process of installing a film camera on an airplane during aerial photography.

Digital cameras are very different from film cameras. Digital cameras create an image by converting the rays coming from the object being photographed into a number.



a digital camera mounted on an aircraft



implementation of the process of aerial photography

Digital cameras have many advantages over film cameras:

1. There is no cost for the film.
2. No long film scanning process.
3. Low cost and effective.
4. There is a possibility of operational control at any stage of the photo flight and development process.
5. It is possible to work in low light conditions.
6. Simultaneous recording in different spectral ranges.
7. There is no limit to the storage period of photos.
8. There is no internal orientation process.
9. Copying is not limited without reducing the quality of the photo.
10. No deformation during storage.

From the above advantages, we can see that the use of digital aerial photography today ensures high-quality, fast, easy and effective aerial photography.

Aerial photographs are used by representatives of many fields: topographic mapping, architecture, film production, engineering, manufacturing, quality control, police investigation,

cultural heritage and geology. Archaeologists use it to quickly develop plans of large or complex sites, and meteorologists use it to determine the wind speed of tornadoes when objective weather data is unavailable. In addition, the results of aerial surveying are widely used in the agricultural sector, which is considered the main part of the country's economy. Benefits such as simplifying the work of industry representatives, saving time and manpower, and reducing costs can also be realized using aerial photography materials includes

In conclusion, since the possibility of remote sensing of the earth's surface with modern aerial imaging devices and the collection of aerial photographs and other types of materials generated on it is high, we should consider the possibility of increasing the scope of use of this new innovative technology. It is no exaggeration to say that today's need for aerial camera materials is increasing day by day. Therefore, the use of new technologies, for example, the use of modern drones, digital cameras and multi-functional drones, will ensure that the aerial footage we produce is up-to-date, with a much lower error rate and a much higher quality. We can ensure the creation of materials. In addition, in the remote sensing of the earth's surface, the task of ensuring the implementation of the aerial surveying process and the innovative technologies used should be at the top of the list. In this regard, in the development of the industry, it is necessary to pay attention to the issues of introducing the use of the latest models of cameras and bringing such devices to our country. Because the quality and accuracy of images obtained from digital cameras help improve the results of today's aerial photography. And the results of aerial photography that we receive are of great importance in creating quality and accurate maps.

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