Lead Author e-mail: *shark05@inbox.ru*

Title: *Recent changes of glaciers on Franz Josef Land from remote sensing data*

Sokolov Igor[1]
[1]***Institute of Geography RAS, research engineer***

For the recent years the global reduction of glaciers increases, as in the highlands as well as in the polar regions. One of the largest glaciated areas of the Russian Arctic - Franz Josef Land - is the most fragmented archipelago with lots of glaciers reaching the sea. According to the Glacier Inventory of the USSR (1965-1982), the glaciated area on the archipelago is 13,735 ± 14 km^2 or 85% of the entire area. However, current estimates of glaciers mass balance and monitoring of their changes indicates reduction of glaciation.

The aim of this research consists of determination the current states of glaciers on Franz Josef Land archipelago and to obtain a set of morphometric parameters. For modern outlines detection of the glaciers were chosen Hall Island, Wilczek Island and Graham Bell Island. These islands were chosen because of their different types of glaciers and because of the current data of satellite images ASTER, TM, ETM+ on board Terra and Landsat. Monitoring of glacier areas using remote sensing data, such as ASTER with a spatial resolution to 15 m, obtained within the framework of international project GLIMS (Global Land Ice Measurements from Space), and other different types of sensors allows to make the databases of the glaciers on required regions.

There were used different approaches such as interpretation of satellite images, mapping new outlines of the glaciers and their comparison with outlines from the Glacier Inventory of the USSR and mapping of ice-catchment basins on these islands. As the preliminary results, there were made new outlines of ice divides and new numeration of glaciers.