

EARTH OBSERVATION SYMPOSIUM (B1)  
Monitoring Change in the Arctic (6)

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NEW SATELLITE CONSTELLATIONS AND COMMERCIALIZATION PROSPECTS OF THE  
ARCTIC**Abstract**

The Arctic is an ever changing environment that due to already existent and impending climate change will be subject to further alteration. Due to global climate change the front of the ice will bestow many new opportunities for commercial companies to arise and assessing these commercial possibilities is vital for the development of a sustainable and environment-friendly commercial structure.

This paper will provide a comprehensive and holistic approach to determining the possible application of space capabilities to monitoring and using the assets of the Arctic in the new environmental conditions.

First of all, a study of the different possible applications of Earth Observation satellite data will be made. An example of this would be the creation of a coordinated system of glacier monitoring for the new maritime routes that will require the compilation of data from different types of satellites, including infrared and GNSS. Furthermore, a precise navigation tracking system where ships could be traced and salvaged in case of emergency will be examined. Then the attractiveness, the cost, and the feasibility of launching a new satellite constellation for the use of providing broadband communication for the Arctic will be assessed. Finally the analysis of the potential of existing commercial structures is going to be proposed.