Geophysical Research Abstracts
Vol. 19, EGU2017-8691, 2017
EGU General Assembly 2017

Using Spacecraft in Climate and Natural Disasters Registration

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Since the beginning of the space age it become possible the global monitoring of the planet Earth's state. Since the second half of the 20th century there are observations of the atmosphere's state and the Earth's climate have been held by a spacecraft. Also become possible large-scale monitoring of climate change. An attempt was made to define the role of infrasound in the interaction between a space weather, climate and biosphere of the Earth using spacecraft sensors recording.
Many countries are involving in the detection of earthquakes, predicting volcanic eruptions and floods and also the monitoring of irregular solar activity. Understanding this leads to the conclusion that international cooperation for the protection of humanity is not only a political priority in the international arena, but also a question of the quality of living standards of any state.
Commonly known following monitoring systems: Disaster Monitoring Constellation (DMC), FUEGO program (Spain), Sentinel-Asia program (Japan) and International aerospace system for monitoring of global phenomena (, Russia).
The Disaster Monitoring Constellation for International Imaging (DMCii) consists of a number of remote sensing satellites constructed by Surrey Satellite Technology Ltd (SSTL) and operated for the Algerian, Nigerian, Turkish, British and Chinese governments by DMC International Imaging.
The DMC has monitored the effects and aftermath of the Indian Ocean Tsunami (December 2004), Hurricane Katrina (August 2005), and many other floods, fires and disasters.
The individual DMC satellites are:
1. First generation satellites (AlSAT-1 – Algeria, BilSAT – Turkey, NigeriaSAT-1 – Nigeria, UK-DMC – United Kingdom);
2. Second generation satellites (Beijing – China, UK-DMC 2 – United Kingdom, Deimos-1 – Spanish commercial, NigeriaSAT-2 and NigeriaSAT-X).
The sun-synchronous orbits of these satellites are coordinated so that the satellites follow each other around an orbital plane, ascending north over the Equator at 10:15 am local time (and 10:30 am local time for Beijing-1).
Some of these satellites also include other imaging payloads and experimental payloads: onboard hardware-based image compression (on BilSAT), a GPS reflectometry experiment and onboard Internet router (on the UK-DMC satellite). The DMC satellites are notable for communicating with their ground stations using the Internet Protocol for payload data transfer and command and control, so extending the Internet into space, and allowing experiments with the Interplanetary Internet to be carried out. Many of the technologies used in the design of the DMC satellites, including Internet Protocol use, were tested in space beforehand on SSTL's earlier UoSAT-12 satellite.
Currently, there is a great need to establish combining space and ground-based observation systems that will accurately capture key climate variables on a scale from regional to global and stable functioning for decades to determine climate variability and trends.
With the help of modern computer systems were calculated moving of infrasonic waves in the atmosphere. This data can be used to predict the weather.