


### AGU Fall Meeting 2009

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#### **The Altai Mountains environmental disaster (Eastern Kazakhstan)**

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The space centre "Baikoniy" (Kazakhstan) has had substantial effects on the environment. During the past several decades as a result of the launching of carrier rockets, such as "Proton" that use as fuel the asymmetrical dimethylhydrazine (ASDH), more well-known as "heptyl", the unique mountain landscapes in Eastern Kazakhstan have been subjected to pollution. In 2004, RSE "Kazakh research Institute of Ecology and Climate" carried out the complex geochemical and radiation researches in East Kazakhstan that is an impact area of second stages of carrier rockets. Such detailed examinations of this area were conducted for the first time because the Eastern Kazakhstan Mountains are difficult for human access. The landscape-geochemical research over the natural landscapes covered the ridge, low, and middle mountains with fir forests.

The research results have shown the presence of heptyl in the samples of the soil, plants, and rivers' bottom sediments. The findings of the influence of space activity on environment of the Kazakhstan part of the Altai Mountains confirm and complement the Russian scientific research results over the territory of the neighbouring Altai Krai. Though the heptyl pollution in the investigated region is of a local nature and highly spatially inhomogeneous, nevertheless, this anthropogenic effect intensifying from year to year increases the load on the natural ecosystems. In particular, it strengthens the desertification process of mountain regions of East Kazakhstan.

#### **Contact Information**

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