



A view from space on natural and anthropogenic methane over peatland of Western Siberia

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Methane horizontal distribution and its seasonal variation over a western Siberian pristine peatland area (60–67°N; 60–90°E) were retrieved from Atmospheric Infrared Sounder (AIRS) data 2004–2006 using original inverse algorithms. The maximum methane columnar amount of 0.63 mol/m² occurred during summer, indicating the enhanced release of methane from wetland. A minimum columnar value of 0.54 mol/m² occurred during winter, reflecting both background level and anthropogenic emissions, mainly comprising gas leaks from high-pressure gas-transport pipelines and oil-gas flares, as identified from satellite images. The difference between the summer seasonal average of 0.61 mol/m² and the winter value of 0.57 mol/m² indicates that the net contribution of the peatland is 0.04 mol/m².