

**Seminar on Physics and Chemistry
of the Atmosphere
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NITROSAT – targeting nitrogen pollution

Andreas Richter
(IUP)

Abstract

Nitrogen flows have largely increased through human activities and are now considered one of the Earth system's components, placing humanity in a high-risk zone. The NITROSAT mission was one of the four Earth Explorer 11 mission proposals. It targeted nitrogen pollution by proposing an instrument focusing on high spatial resolution observations of NO₂ and ammonia, the two most abundant reactive nitrogen compounds in the atmosphere. The advantage of an instrument having high spatial resolution and low noise is the ability to observe the plumes from individual sources of the two pollutants. As airborne measurements demonstrate, these data can be used for single overpass emission estimates.

The scientific background of the mission proposal, the instrument design, and some airborne demonstrations will be presented in the talk.