

## Small geostationary satellite expected by tropospheric chemistry

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Satellite observations are recognized as useful approach for global measurement of chemical components significant for atmospheric chemistry. In the case for stratospheric ozone and its decrease, various satellite observations largely contributed to quantitative understanding of ozone decrease and its mechanisms. In the case for the climate change and large-scale atmospheric pollution, which are regarded as one of most significant environmental problems, ozone and other chemical species in the troposphere play key roles. Recent satellite sensors begin to observe these tropospheric species. Although satellite observation of tropospheric species has some difficulties, such as interference by clouds and water vapor, it has possibilities for expanding conventional one-dimensional direct observations and numerical model calculations. Because smaller-scale transport processes, such as cumulous convection, are significant in the troposphere, high time/spatial resolution is required for the observation. A low-cost small geostationary satellite can satisfy the requirements. Such geostationary satellites are expected by international science community.