

**CRYOGENIC WHOLE AIR SAMPLING IN THE STRATOSPHERE OVER
THE ANTARCTIC: PROBLEMS AND COUNTERMEASURES (ABSTRACT)**

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A stratospheric air sampling project is planned over Syowa Station, Antarctica, in the 39th Japanese Antarctic Research Expedition, 1997. It will be carried out in cooperation with the Institute of Space and Astronautical Science (ISAS) Scientific Ballooning Section. The sampling system is based on the cryogenic whole air sampler which has been used since 1985 at Sanriku Balloon Center of ISAS. The sampling system and its operation are improved for Antarctic use; it includes a shorter sampling-time system, a payload positioning system, a recovery-on-land (ice) system, simplified launching and recovery operation systems, etc. A smaller and simplified sampling system will also be developed and introduced. It will require a few stuffs for launching operation and payload preparation at Syowa Station.

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