

Observation of Atmospheric Greenhouse Gases by Commercial Aircraft

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A new research project has started in 2003 to develop Continuous CO₂ Measurement Equipment (CME) and Automatic Air Sampling Equipment (ASE) for commercial aircraft. CMEs are installed on five aircrafts and fly to South East Asia, East Asia, Europe, North America, Pacific and Australia. Routine air sampling by ASE will be done twice a month between Japan and Australia. The Supplemental Type Certificate (STC) to install CME and ASE were issued by US Federal Aviation Administration (FAA) and Japan Civil Aviation Bureau (JCAB) in October, 2005 and the first observation flight by 747-400 was done just after that. From November 2005 to January 2007, we have conducted more than 800 flights for CME observation. In the meeting, we show vertical and horizontal distributions of CO₂ observed in this study.