



CO₂ DIAL activities conducted at IPSL and ESA to study biosphere-atmosphere processes and climate change issues

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Since 2002, the Institut-Pierre-Simon-Laplace (IPSL) is involved in several projects addressing CO₂ monitoring by Lidar for basic environmental science and spaceborne applications. The activity started with the development of a 2- μ m CO₂ heterodyne DIAL project. The first instrumental activity gave rise to two new programs to develop a transportable and an airborne CO₂ DIAL. In 2006, "A-SCOPE" a proposal aiming at a spaceborne CO₂ mission has been submitted to the European Space Agency (ESA) in response to a Call for Ideas in the framework of the Earth Explorer Mission program. A-SCOPE has been selected with 5 other missions for phase "0" study and preliminary feasibility assessments by 2 European industrial consortia. A-SCOPE and the 5 other potential missions will be presented in Lisbon and discussed by the Users Community during a meeting on 20-21 January 2009. The various steps will be presented at the conference to show explicitly the building phase of knowledge and expertise in innovative instrumentation that are requested to contribute to both basic environmental science and a new potential mission like "A-SCOPE".