

LASER SPECTROSCOPY FOR STABLE-ISOTOPE ANALYSIS OF ATMOSPHERIC MOLECULES

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Stable-isotope analysis provides valuable constraints on the global budgets of many important atmospheric species (*e.g.* CO₂, CH₄, CO, and N₂O). High-resolution laser spectroscopy promises to substantially reduce the laborious sample pretreatments often required by isotope-ratio mass spectrometry (IRMS), the incumbent state-of-the-art, as well as being capable of readily resolving isotopic species of nearly equal masses (*e.g.* CH₃D and ¹³CH₄). However, achieving sensitivity levels similar to that of IRMS has been a daunting task. This talk will provide a brief review of the progress and accomplishment to date in the application of laser spectroscopy to atmospheric stable-isotope analysis.

Time required: 15 min

Session in which paper is recommended for presentation: 13