**Abstract Title**

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| The SACH4 project: Source Attribution of CH4 using satellite observations, isotopic measurements and GEOS-Chem simulations. |

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**Session**

Greenhouse gas observations and studies to quantify hot spots and local/urban emissions

**Abstract**

The SACH4 project’s main objective is to improve our current understanding of the balance between the sources and sinks that shape the CH4 distribution. We use BIRA-IASB IASI CH4 satellite observations together with GEOS-Chem tagged simulations to examine the contribution from different source regions to the total budget of CH4. In addition, we investigate the possibility of retrieving the isotopic concentrations of CH4 from ground-based FTIR measurements, to give additional information about the sources and reaction pathways.

For this symposium we will present

first results of the comparison between IASI upper tropospheric CH4 and GEOS-Chem tagged simulations on a global scale. These results will be complemented by ground-based FTIR measurements of CH4 and CH3D. This study will allow us to quantify source region contributions to regional and global CH4 concentrations and quantify unidentified source regions.