

INVERSION OF METHANE TROPOMI DATA APPLIED TO METROPOLITAN REGION OF SÃO PAULO

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Abstract

Despite having numerous sources of methane emissions, the Metropolitan Region of São Paulo (MRSP), has a deficit in data related to emissions, especially in the identification of greenhouse gas sources in this region. Thus, the use of satellite data becomes a powerful tool to obtain estimates of methane emissions. The Sentinel 5-P satellite provides daily data on methane, so the application of an inverse method of these data makes it possible to estimate methane emissions from MRSP. We use Integrated Methane Inversion (IMI), this tool makes an inversion process that utilizes a highly sophisticated research-grade algorithm performing a straightforward inversion with a grid and default prior emission estimates. Inversions were performed, in the months of August, September, and October, due to the years of 2019, 2020, and 2021. This work presents the preliminary results of this study, which proved that IMI is a promising tool to obtain emission data of the MRSP.

Keywords: Methane; Emissions; Sentinel 5-P.

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