

Robust Estimation of CO₂ fluxes from Temperate Asia

N. K. Indira¹, P. S. Swathi¹, M. Ramonet², P. J. Rayner², D. Jagadeesha³, B. C. Bhatt⁴,
M. Delmote², P. Bousquet² and V. K. Gaur¹
¹C-MMACS, NAL Belur Campus, Bangalore, India
²LSCE, Gif-sur-Yvette, France
³ISRO, Bangalore, India
⁴IIA, Bangalore, India

The sources and sinks of CO₂ from Asia are poorly constrained due to lack of continuous measurements of CO₂ in the region. We have been operating a continuous CO₂ monitoring station at Hanle, Ladakh since August 2005 which is to the standards prescribed by WMO. We have performed a synthesis inversion through Bayesian inversion using this data in addition to the data from other stations available in the Global View data set. The forward model in this synthesis inversion is MOZART with T42 resolution and we have used the TransCom protocol to generate the basis functions. We show that the inclusion of Hanle station in the inversions reduces considerably the a posteriori uncertainties of the CO₂ fluxes for Temperate Asia.