

1.050 Improving our understanding air quality satellite measurements: an update from KORUS-AQ.

Presenting Author:

Barry Lefer, NASA, barry.lefer@nasa.gov

Co-Authors:

James Crawford, NASA

Jeong-Hoo Park, NIER

Jay Al-Saadi, NASA

Ji-Hyung Hong, NIER

Abstract:

The atmospheric composition constellation (ACC) of air quality measurement satellites is currently being developed. The ACC will have global coverage provided by the ESA sun-synchronous low earth orbit Sentinel-5 Precursor (TROPOMI) satellite. In addition, three geostationary satellites in the northern hemisphere will provide complementary hourly daytime measurements for much of Asia (NIER GEMS), North America (NASA TEMPO), and Europe (ESA Sentinel-4). As the ACC comes closer to existence the international atmospheric composition community needs to develop a coordinated plan to execute field campaigns and build up sufficient networks of ground-based insitu and remote sensing instruments designed to improve our understanding of what the space-borne air quality sensors are measuring. In addition we need to these air quality satellites how these air quality satellites can provide the various air quality stakeholders the value added data products they need to address their science and policy questions. This presentation will be a first look at the preliminary results from May-June 2016 KORUS-AQ field campaign in South Korea with the goal of describing any new insights related to the challenges of extracting surface concentrations of O_3 , NO_2 , HCHO, and $PM_{2.5}$ from column measurements of air quality as measured by UV/VIS spectroscopic sensors.