

[EJ] Evening Poster | A (Atmospheric and Hydrospheric Sciences) | A-AS Atmospheric Sciences, Meteorology & Atmospheric Environment

[A-AS06]Atmospheric Chemistry

convener:Yoko Iwamoto(Graduate School of Biosphere Science, Hiroshima University), Tomoki Nakayama(Graduate School of Fisheries and Environmental Sciences, Nagasaki University), Sakae Toyoda(東京工業大学物質理工学院, 共同), Nawo Eguchi(Kyushu University)

Wed. May 23, 2018 5:15 PM - 6:30 PM Poster Hall (International Exhibition Hall7, Makuhari Messe)

This session provides a forum for the presentation of the broad spectrum of tropospheric and stratospheric chemistry, including various research topics (e.g., dynamical processes, air quality and climate), approaches (modeling, field measurements, remote sensing, and laboratory studies), and species (gas and aerosol). This session also provides an opportunity for discussing possible future collaboration with other research fields relevant to atmospheric chemistry.

[AAS06-P19]SAVER-Net project: international collaboration to construct Ozone/UV and aerosol observation network

*Akira Mizuno¹, Nobuo Sugimoto², Hirofumi Ohyama², Yoashitaka Jin², Takafumi Sugita², Hideharu Akiyoshi², Tomoo Nagahama¹, Taku Nakajima², Tomoaki Nishizawa², Atsushi Shimizu², Elian Walfram³, Pablo Ristori³, Eduardo Quel³, Jacobo Salvador³, Albane Balbero⁴, Sebastian Papandrea⁴, Lucas Bali³, Hernan Ciminari⁴, Felix Zamorano⁵, Boris Balja⁵, Solangera Sanchez⁶, Luis Lazcano⁶ (1.Institute for Space-Earth Environmental Research, Nagoya University, 2.National Institute for Environmental Studies, 3.CEILAP, 4.National Meteorological Service Argentina, 5.University of Magallanes, 6.National Meteorological Service Chile)

Keywords:ozone, UV, aerosol

SAVER-Net (South American Environmental Risk Management Network) is a trilateral international collaboration among Japan, Chile, and Argentina supported under the JST-JIICA SATREPS program. The major aim of the project is establishing observation network of UV/ozone and aerosols over Chile and Argentina where was a blank area of measurement stations on a global scale. The project was finished this year after 5 years of implementation. Thirty-six pre-existent and newly installed UV radiometers distributed over Chile and Argentina were connected on-line. All UV observational data were compiled into a common information platform called GeoUV and risk information/alert is released to the registered users. Ozone monitoring capability at the southern end of the South American continent, i.e. at Rio Gallegos in Argentina and Punta Arenas in Chile, was consolidated to make a comprehensive study of ozone hole. A Differential Absorption Lidar (DIAL), a millimeter-wave spectrometer, Brewer spectrophotometer, and ozone sonde were used for the continuous monitoring, and detailed vertical profiles around the edge of ozone hole from the ground to the mesosphere were obtained and analyzed through several campaign observations. For the aerosol measurements, 9 lidar stations including 2 high spectral resolution lidars were constructed to observe volcanic ash, mineral dust, forest fire smoke, and anthropogenic air pollution. We detected volcanic ashes from Calbuco eruption in 2015 and several Patagonian dust events, and those events are studied through comparison with a transport model, FALL3D. All the observed data both of UV/ozone and aerosols are archived at the data center in Buenos Aires and shared with mirror servers in Japan and Chile. We will continue measurements with the network after the project period and provide the data to relevant international communities.

In the presentation, we will report the major results during these five years and discuss the future prospect and potential of expansion of this collaboration.