

Board 3000: Using an unmanned aerial system to characterize low altitude ozone gradient measurements in a northern Wisconsin forest

 Monday, 9 December 2019

 15:40 - 20:00

 Poster Hall (Moscone South)

Swirl Topics

Science Communication - SWIRL

Abstract

Ozone deposition measurements in forested environments are of interest to constrain background processes in models as well as better identify ozone exposure to the ecosystem. Ozone deposition in forested environments can arise through stomatal conductance in plants and dry deposition to soils. As a part of the CHEESEHEAD 19 field campaign, ozone measurements were obtained at two different heights (120 m and 30 m) on a tall tower. In comparison to those measurements, a hexacopter UAS was flown with a small, lightweight ozone monitor and meteorological sensor measuring temperature and humidity. The hexacopter was hovered at certain altitudes to determine ozone concentration gradients. The vertical gradients observed will be discussed in context of tower ozone concentration measurements and other meteorological parameters

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