Lighting the dark: mapping aerosol transport at night from space

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In this presentation, I will highlight the progress and insights we've made to shed light on the aerosol transport at night. I will present the first results of retrieving aerosol optical depth over the land and over the ocean by using reflected moonlight measured by the Day-Night-Band (DNB) of Visible Infrared Imaging Radiometer Suite (VIIRS) aboard Suomi-NPP and JPSS-1.

The results highlight the emergent need and high promise of VIIRS for quantitative mapping of aerosol transport at night. In the end of the presentation, I will share some thoughts that the community can work together to further advance the nighttime quantitative low-light optical sensing of aerosols.