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# Using GRASP for polarimetric retrievals from AirMSPI and ground-based polarized nephelometer measurements

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In the past year we have made extensive use of the GRASP software package to ingest and perform retrievals from two very different types of sensors. First, we have used GRASP with multiangle, polarimetric measurements from the Airborne Multi-angle SpectroPolarimetric Imager (AirMSPI) instrument that flies on the NASA ER-2 research aircraft. We will describe the AirMSPI data acquisitions, particularly from the joint NASA/NOAA Fire Influence on Regional to Global Environments and Air Quality (FIREX-AQ) field campaign, which took place in the summer of 2019. The target of this investigation was airborne smoke from landscape fires. Second, in 2022 we installed an AirPhoton Multi-wavelength Polarimetric Polar (MPP100) nelphelometer as part of the suite of instruments sited at the Jet Propulsion Laboratory, in Pasadena, California. GRASP is used to provide retrievals of aerosols that are compared with coincident measurements from the site, including a GRIMM optical particle counter and an AERONET sunphotometer.

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