



# A Novel Multi Angle Polarimeter for Retrieval of Aerosol Properties from Orbit

Portia Bowman



Compact, Multi-Angle, Multi Spectral Polarimeter in development

Instrument Requirements for future ESA mission:

40 Views

6 Channels

<0.3% Degree of Linear  
Polarization (DOLP)  
Accuracy



# Low cost, Auxiliary instrument for Aerosol Retrieval

**Innovative Focal Plane technology**

15kg  
30W

**Suitable for a stand-alone mission or as a companion instrument**





# Why is this useful?

Multi-angle, multi spectral polarimetry is one of the best ways to characterise aerosol properties, including

- 📡 Aerosol optical thickness
- 📡 Size distribution
- 📡 Chemical composition
- 📡 Particle shape

Additionally, this instrument is key in reducing the errors in CO2 retrieval, which is particularly important for the high accuracy required in anthropogenic carbon missions.

