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*Supplement of*

## **Sensitivity of liquid cloud optical thickness and effective radius retrievals to cloud bow and glory conditions using two SEVIRI imagers**

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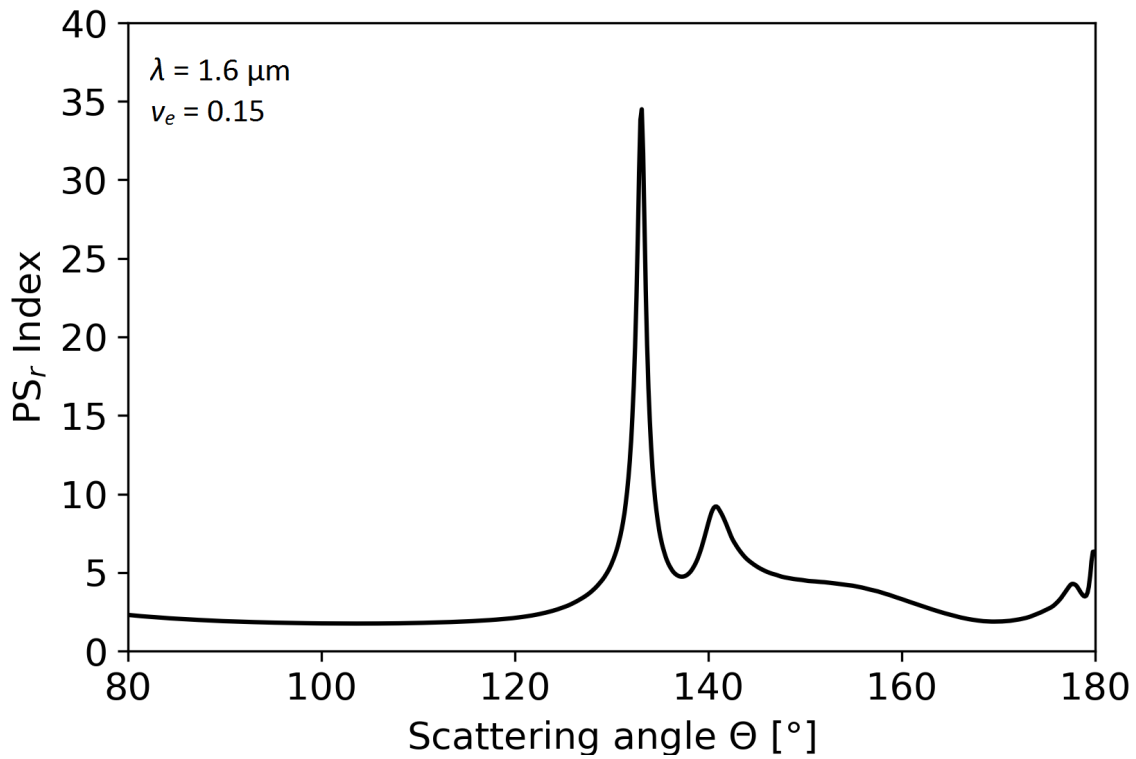


Figure S1: Separation index estimated from the scattering phase functions at 1.6  $\mu\text{m}$  wavelength, which correspond to the eight  $r_e$  values of the LUTs, assuming  $\nu_e = 0.15$  (see also Fig. 5c).

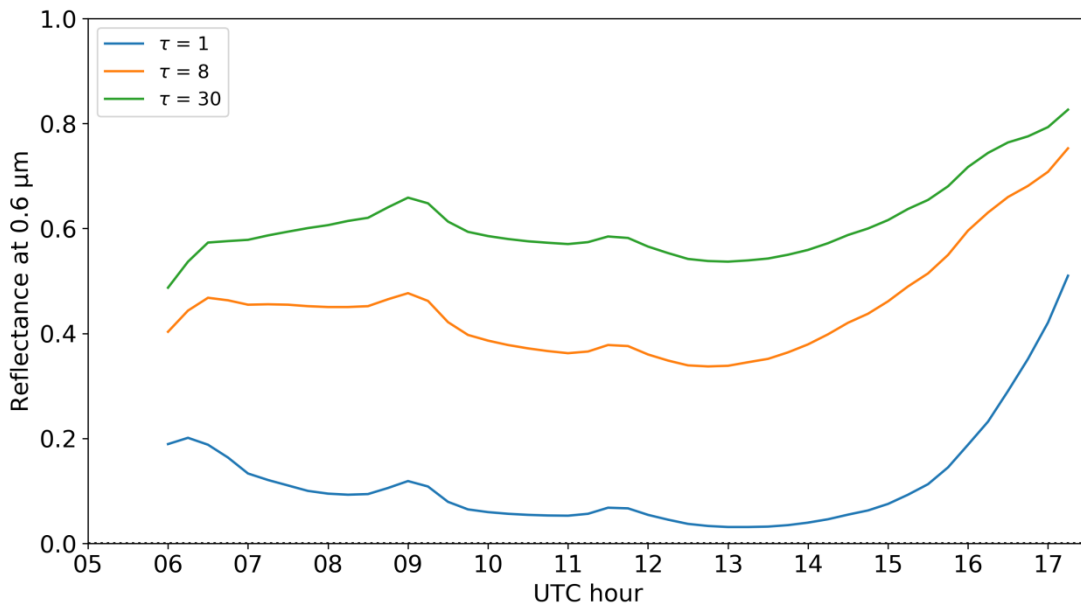


Figure S2: LUT reflectances at 0.6  $\mu\text{m}$  reproduced over the southeastern Atlantic study region with MSG-1 observation geometry for March 7, 2017,  $r_e$  values as originally retrieved and three  $\tau$  values, constant throughout the day.

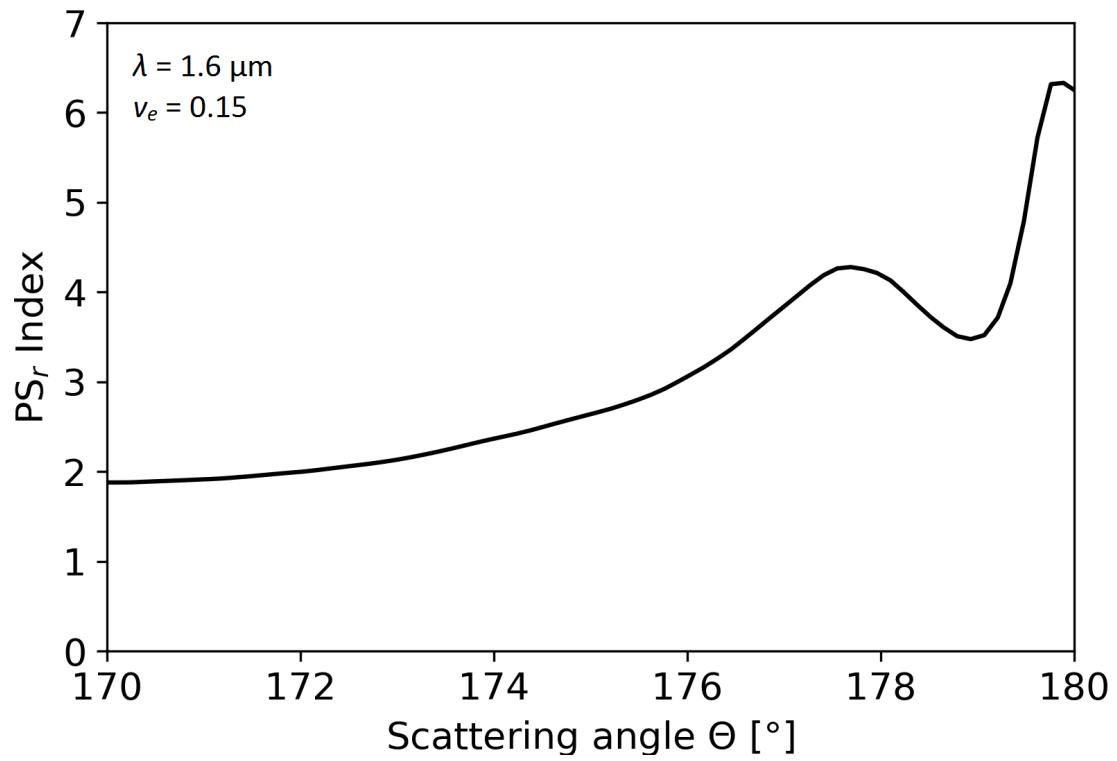


Figure S3: Separation index estimated from the scattering phase functions at 1.6  $\mu\text{m}$  wavelength, which correspond to the eight  $r_e$  values of the LUTs, assuming  $\nu_e = 0.15$ , for the scattering angle range 170° - 180° (see also Fig. 6a).

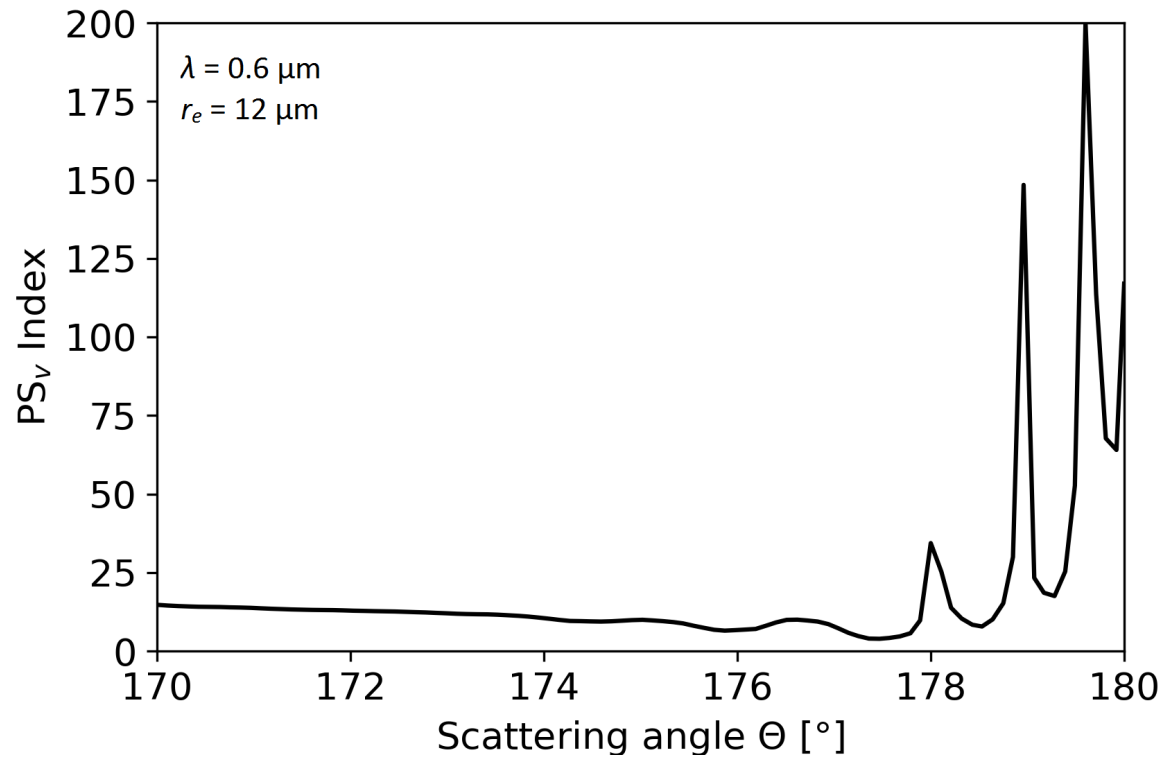


Figure S4: Separation index estimated from the scattering phase functions at 0.6 μm wavelength which correspond to the seven  $v_e$  values studied, assuming  $r_e = 12 \mu\text{m}$  (see also Fig. 6b).

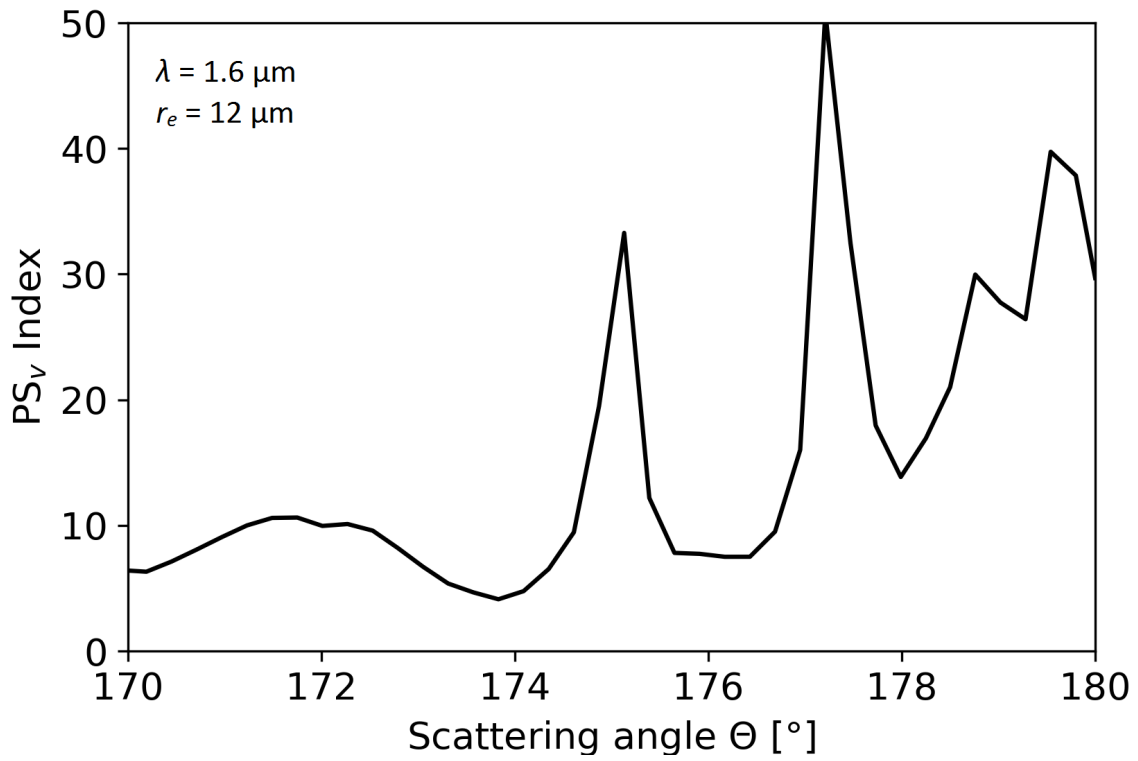


Figure S5: Separation index estimated from the scattering phase functions at 1.6 μm wavelength which correspond to the seven  $v_e$  values studied, assuming  $r_e = 12 \mu\text{m}$  (see also Fig. 6c).

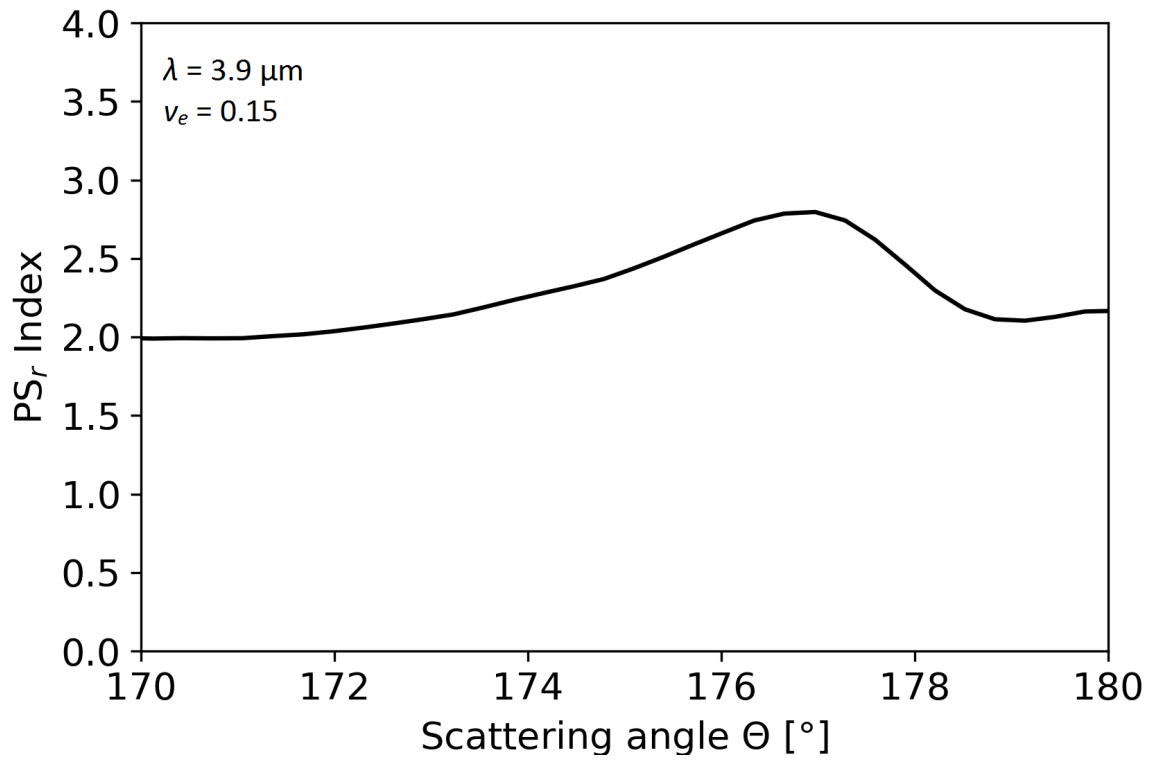


Figure S6: Separation index estimated from the scattering phase functions at 3.9  $\mu\text{m}$  wavelength which correspond to the eight  $r_e$  values of the LUTs, assuming  $\nu_e = 0.15$  (see also Fig. 11a).

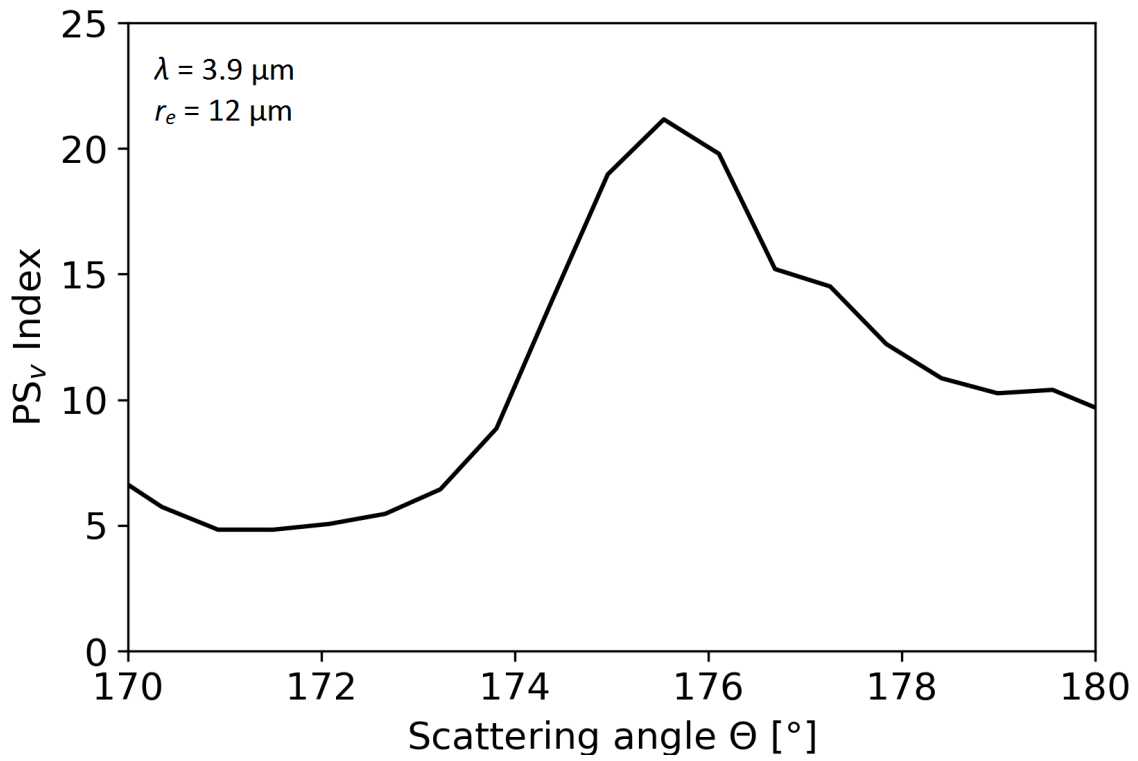


Figure S7: Separation index estimated from the scattering phase functions at 3.9 μm wavelength which correspond to the seven  $\nu_e$  values studied, assuming  $r_e = 12 \mu\text{m}$  (see also Fig. 11b).

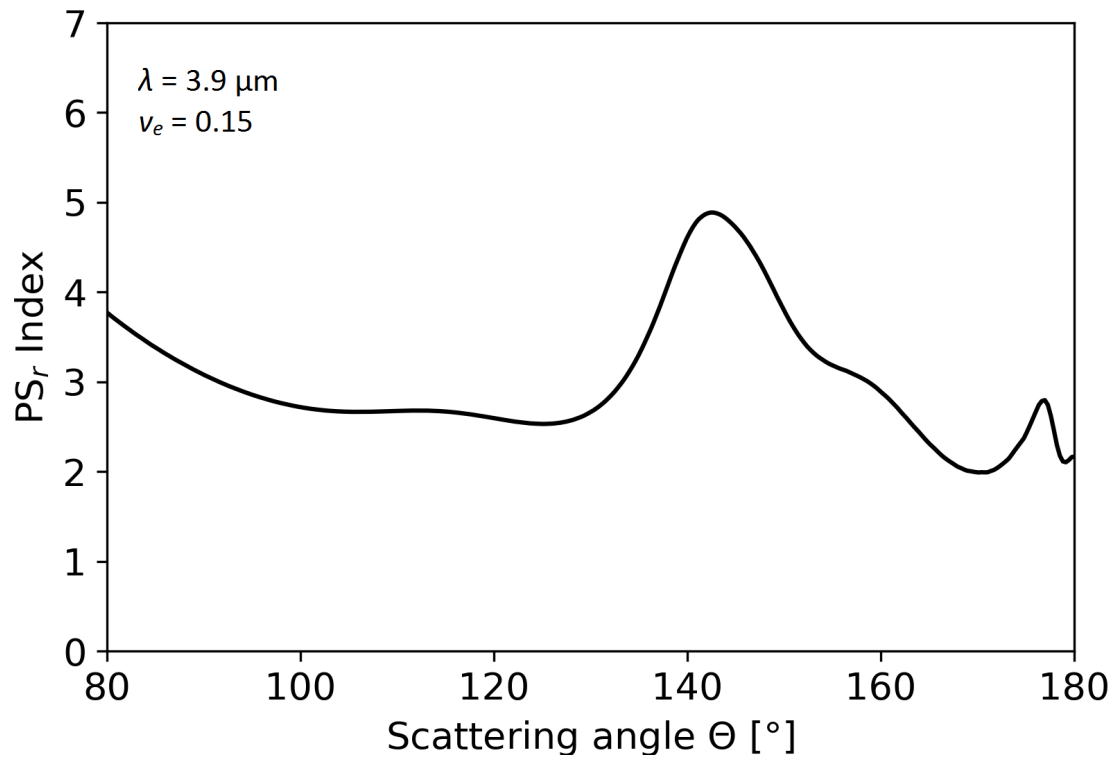


Figure S8: Separation index estimated from the scattering phase functions at 3.9  $\mu\text{m}$  wavelength which correspond to the eight  $r_e$  values of the LUTs, assuming  $\nu_e = 0.15$ , for the scattering angle range 80° - 180° (see also Fig. 11c).