

# OCEAN OPTICS XXIV

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Wednesday, October 10

Poster Session 3

16:00–18:00

## Poster 55

### INTER-COMPARISON OF VECTOR RADIATIVE TRANSFER CODES FOR ROUGH OCEAN SURFACE

An increasing number of polarimetric sensors are emerging during recent years, vector radiative transfer code is crucial for the forward modeling, atmospheric correction, and bio-optical inversion algorithm development. Most open source vector radiative transfer codes are well validated for the atmosphere, however, ocean color remote sensing not only requires information about atmosphere, but also the interaction on and below the ocean surface, e.g., ocean color routine atmospheric correction algorithm relies on high accuracy vector radiative transfer code for either flat or rough ocean surface. In this study, we present intercomparison results of three open source vector radiative transfer codes (the SORD [Korkin, et al., 2017], SCIATRAN [Rozanov, et al., 2017; Rozanov, et al., 2014], and 6SV [Kotchenova, et al., 2008; Kotchenova and Vermote, 2007; Kotchenova, et al., 2006]). The relative differences between the three models and Natraj's tabulated values [Natraj, et al., 2009] are generally within 1% for pure Rayleigh cases. The results have shown a good agreement between SORD and SCIATRAN, while 6SV has a relatively larger discrepancy for rough ocean surface.

**Keping Du**, Beijing Normal University, [kpdu@bnu.edu.cn](mailto:kpdu@bnu.edu.cn)

Zhongping Lee, University of Massachusetts Boston, [ZhongPing.Lee@umb.edu](mailto:ZhongPing.Lee@umb.edu)