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Sensitivity analysis for a spectral deconvolution approach for interpretation of ocean colour remote sensing in Case 2 waters

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Interpretation of ocean colour remote sensing data in Case 2 waters is particularly challenging due to the wide dynamic range of constituent concentrations, variability in relative concentrations of constituents and variability of specific inherent optical properties (SIOPs) for any given constituent. Spectral deconvolution offers a physics-based approach to extracting constituent information from remote sensing signals and also presents an opportunity to analyse sensitivity to measurement uncertainties and variability in SIOPs. Results from an initial sensitivity study for a new spectral deconvolution approach are presented here and offer a new insight into the impact of measurement uncertainties in IOP measurements on both forward modelling and spectral deconvolution algorithm performance.