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## Phase functions of oil-in-water emulsions

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### Keywords

ocean optics, phase function, oil, suspension

### Abstract

This paper presents the modelling of optical phase function (PF) of water polluted by dispersed oil. The shapes of PFs for various oil droplet size distributions and for two optically extremely different oil types are shown for various wavelengths from 350 to 750 nm. It is proved that changes of optical properties of oil (the complex refractive index) play minor role in PF shaping towards the impact of wavelength and size distribution. Water with oil emulsion has a PF significantly different from that of natural ocean water or harbour turbid water.



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