



Non-algal particles spatial-temporal distribution at global scale: a first estimation from satellite data

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Phytoplankton, heterotrophic bacteria and viruses contribute to the definition of the trophic regime of the oceans. While phytoplankton has been extensively studied from space, satellite studies of the autochthonous non-algal particles (NAP, i.e. bacteria and viruses) are relatively recent. Dedicated studies of the NAP distribution and dynamics can help to improve the understanding of marine ecosystem change, globally. Using the 18 years of Glob-Colour monthly satellite data, from the satellite particulate backscattering coefficient (bbp) the NAP global climatology was derived. High NAP values were found in productive regions like polar seas, the North Atlantic and the equatorial Pacific, as well as shelf regions affected by upwelling currents. In contrast, oligotrophic areas like the sub-tropical gyres displayed low NAP values. The annual and seasonal distribution as well as the temporal evolution will be discussed. In the future, improved understanding of the phytoplankton dynamics and physiology will benefit from accurate NAP calculations for different regions and seasons in relation to climate change studies.