



## Global lake surface water temperatures from ATSR

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The ATSR Reprocessing for Climate - Lake (ARC-Lake) project applies optimal estimation (OE) retrievals and probabilistic cloud screening methods to provide lake surface water temperature (LSWT) estimates from the series of (Advanced) Along-Track Scanning Radiometers. This methodology is generic (i.e. applicable to all lakes) as variations in physical properties such as elevation, salinity, and atmospheric conditions are accounted for through the forward modelling of observed radiances.

In the initial phases of ARC-Lake, LSWTs were obtained for 258 of Earth's largest lakes. In the final phase of the project, the dataset is extended by applying the OE methodology to smaller lakes, providing LSWT data from 1991 to 2012 for approximately 1000 lakes. In this presentation we will provide an overview of the ARC-Lake project, its publically available data products and some applications of these products.