

Report of the first Underwater Vision Profiler workshop, held as hybrid event on the 15th and 16th September 2022

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On September 15th and 16th 2022, the first Underwater Vision Profiler (UVP) user meeting took place at the Laboratoire d'Océanographie de Villefranche, supported by "Imaging/Imaging the Atlantic - A Pelagic Imaging Network Approach. I/ITAPINA is a networking activity, implemented under the umbrella of the [AA-MARINET](https://www.aa-marinet.net) Joint Pilot Action and supported by the All-Atlantic Ocean Research Alliance. I/ITAPINA aims to build the All-Atlantic Pelagic imaging community and to develop a framework for operational marine ecosystem monitoring with pelagic imaging techniques. The I/ITAPINA Joint Pilot Action is led by Dr. Rainer Kiko (LOV, France), Dr. Rubens M. Lopes (University of Sao Paulo, Brazil) and Dr. Margaux Noyon (Nelson Mandela University, South Africa). The UVP users are a group of scientists that collaborate in different ways to use the UVP at local to global scales. Due to the high level of automation reached for UVP deployments, parts of the UVP user community are heading towards distributed and operational imaging. The first UVP user meeting was held to further consolidate the user group, to identify and possibly solve problems with instrument deployment and data processing and to further develop operational capacities towards a distributed network. The user meeting was conducted as a hybrid event, and Dr. Rainer Kiko, Dr. Margaux Noyon and 29 further UVP users and stakeholders - including representatives from the manufacturing company attended in person, whereas Prof. Rubens M. Lopes and 30 UVP users joined online. The workshop started at 9:00 CET on both days and ended at 18:00 CET on the 15th September and on 16:00 CET on the 16th September 2022. The program and recordings of all presentations and discussions of the workshop are available online at <https://www.aa-mari.net/itapina-events/first-underwater-vision-profiler-user-meeting/>.

Rainer Kiko, the I/ITAPINA lead, presented the goals of the user meeting at the beginning of the first day, followed by a presentation from Sofia Cordeiro and Florence Coroner about the AANCHOR and AA-MARINET projects. Thereafter partners from around the world - from South Africa, China, Germany, the UK, France and the USA had the opportunity to present ongoing imaging activities in their respective countries and from past or future expeditions, covering existing infrastructures, data sources and needs, as well as scientific results.

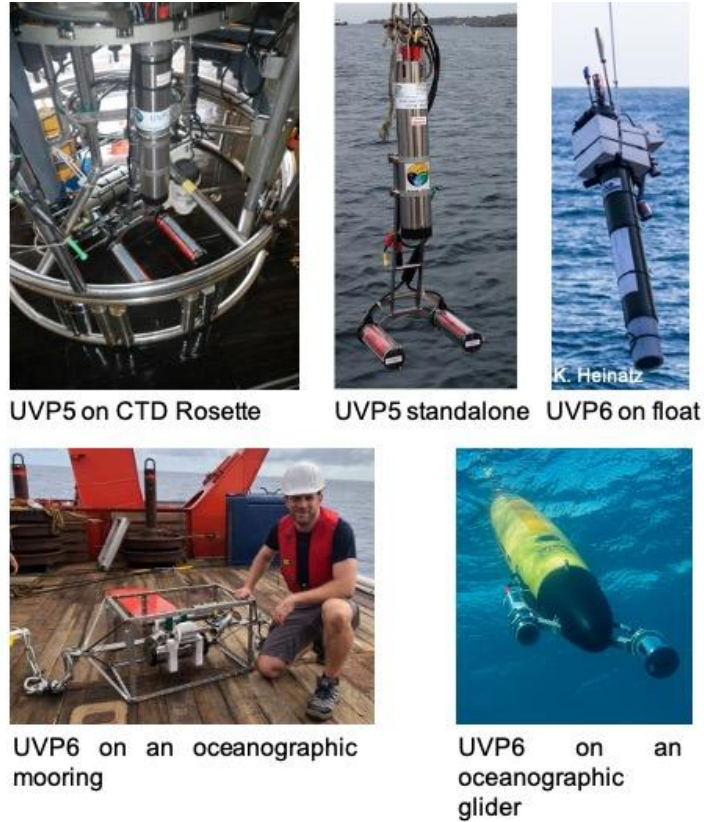


Fig. 1: The Underwater Vision Profiler 5 and 6 on different deployment vectors.

The second day started with a presentation by Jerome Coindat about the past and future of Hydroptic, the company that builds the UVPs. The further meeting focused on image classification approaches for UVP data and classification tools such as ECOTAXA, MorphoCut & MorphoCluster and Real Time classification approaches were presented. Thereafter, the development and use of global UVP datasets for pelagic imaging and the plans to develop a Pelagic Size Structure database were discussed. During the final discussion, activities to move forward towards operational imaging with the UVP were discussed.



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