for a compact payload on an Unmanned Aerial Vehicle (UAV). This deployment strategy increases the feasibility of accessing remote locations while reducing the cost of survey operations. Initial deployments of this novel imaging system will take place in Scotland and in the Arctic region of Svalbard during the coming field season, and will test the equipment in increasingly extreme environments.

Keywords: remote sensing, Arctic, macro, technology, FTIR, optics, imaging, UAV, airborne

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Experiences and potentiality of a continuous microplastic sampler: performance onboard opportunity vessels to increase oceanic sampling efforts.

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Broad scale monitoring efforts and microplastic sampling in open ocean waters are required to understand distribution, abundance and fate of these particles in the environment. For surface seawaters, towing a neuston net is the most common sampling method; however, the deploy- ment of this infrastructure is not always possible when at sea. The underway water system of Research Vessels (RVs) has been tried for this purpose. However, method validation and recovery checks have not been thoroughly applied, and standardization is essential to ensure the intercomparability of the data reported in the different sampling efforts worldwide. This preliminary study pursues to demonstrate the potential of a continuous microplastic sam- pler as an effective method to sample microplastics in subsurface oceanic waters, allowing con- stant sampling without interfering the regular activity of the vessel in which it is set up. This is an important step that increases the chances for ocean monitoring on microplastic pollution with the use of a wider array of opportunity platforms, such as recreational vessels.

To fulfil the main aim of the study, the continuous microplastic sampler was tested and im- proved along different research campaigns onboard research and recreational vessels in the NE Atlantic. Performed method validation proved the effectiveness for microplastic research com-

paring the samples taken through the intake system of the RVs and samples filtered from the Rosetta. Likewise, the abundance and distribution of microplastics found were also consistent with available literature data. Further trials are required to test the effectiveness and significant difference among the abun- dance and type of microplastic particles collected using different methods. Ongoing research is being carried out in collaboration with the Sailing Living Lab Project to test additional envi- ronmental and sampling factors, and improve the design of the continuous microplastic sampler for its optimal performance.

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Keywords: marine plastic pollution, seawater sampling, continuous monitoring, small, microplas- tics, method validation, opportunity vessels.

Microplastics in European Fleur de Sel and Sea Salts – a qualitative and mass-quantitative geographic comparison

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By now microplastics (MP) are almost ubiquitous. Since particle related data are highly relevant for ecotoxicological studies, their high variability in shapes and sizes make data compar- ison difficult and often speculative. Thermo analytical methods combined with GCMS provide polymer specific analysis of preconcentrated complex environmental samples as well as quali- tative and mass-quantitative data, independent of shape or size of MP. This complementary approach enables a more general study of distribution and fate of MPs including modelling. Further improved Py-GCMS [1] allows MP analysis in environmental samples on a ppb level and below. Here results for marine salts from different regions are presented. Marine salts are popular. Es- pecially Fleur de Sel (FdS) is regarded as a pearl in haute cuisine. As almost natural products obtained from sea water marine salts should reflect their local environment and consequently its MP load to a representative extent. Easy available they are an ideal tool for MP studies on a supra-regional scale.

12 FdS and 5 sea salts from European Atlantic and Mediterranean coasts were investigated for 9 environmental relevant polymers. PP, PE and PET were the most dominant MP types in the samples, followed by PS and PVC and infrequent by PC, PUR, PMMA and PA-6. While the mean of sea salts was 37 ig MP/kg (± 18 ig) that of FdS was 10fold as high with 386 ig MP/kg (± 242 ig) excluding an outlier of almost 2000 ig/kg. This discrepancy is directly related to the unique production process of FdS. The different regions will be compared regarding their plastic composition and quantities.