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Opportunities of Airborne Laser Bathymetry for the Monitoring of the Sea Bed on the Baltic Sea Coast

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Abstract. Traditional ship-based bathymetric surveys based on echo sounding are expensive and time consuming. This paper presents a project with the aim of identifying the opportunities of airborne laser bathymetry for the monitoring of the sea bed at the German Baltic Sea coast. Such devices operate with laser signal in the green part of the visible spectrum which is capable to penetrate the water. The depth is determined from the two-way runtime between the water surface and reflections from the ground underneath. Several flight campaigns in representative test areas will be carried out in order to analyze the reachable depths, the accuracies of the acquired points, and the detection of obstacles depending on different water conditions (e.g. turbidity). We discuss some preliminary results of a pilot project and the first campaign of a study area close to the island of Poel, Germany.

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