

Best practices for conducting high resolution bathymetric lidar surveys from different platforms

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In this presentation we report on the results of tests and demo projects in the USA, China, Australia, New Zealand, and Europe with RIEGL's compact airborne laser bathymetry system VQ-840-G. We provide best-practice guidelines concerning the instrument parameters and flight configurations. The interplay of laser beam divergence, receiver field of view, flight altitude and scan settings are investigated. Furthermore, we evaluate the potential of postprocessing with different algorithms and waveform averaging. Within projects carried out by customers and partners on different platforms, waterbodies have been surveyed under a great variety of conditions. This puts us in the position to analyze not merely the depth performance but also the resolution and accuracy of subaqueous measurements.