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In-situ comparison of eight different sensor technologies to measure $p\mathbf{CO}_2$ and $p\mathbf{H}$ on a cabled observatory

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An adequate understanding of aquatic carbonate systems require high quality in-situ measurements with sufficient temporal and spatial resolution. Within the frames of the ongoing $FixO_3$ project and as a pre-study for a deep water fixed observatory deployment 8 different technologies to measure pCO_2 and pH were compared in-situ using the Koljoefjord cabled observatory (https://www.youtube.com/watch?v=0M9Z8BWzrkA) as the backbone. This presentation will discuss obtained results taking into account challenges imposed by fouling and the difficulty to collect representative reference samples in this and less dynamic environments.