

6. Inter-laboratory calibration traceability for temperature, conductivity, pressure and dissolved oxygen

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Abstract: Sea-Bird Electronics is opening a service and calibration center in Kempten Germany in November of 2011. Best climate monitoring practices will require a guarantee of calibration continuity and accuracy between the remote site and the factory calibration facility, including traceability to primary standards held at the main facility. To achieve this, exemplar sensors of each type have been built and a calibration history started at Sea-Bird's main facility. These exemplars are shipped to the satellite calibration facility for a continuation of the calibration history and then returned to the main laboratory for calibration and drift evaluation. By critical evaluation of observed calibration errors and drift trajectories a laboratory validation can be made. Perpetuating this inter-laboratory assessment ensures accuracy irrespective of the location of the calibration. This is an expansion of efforts in inter-laboratory comparisons between Sea-Bird and other calibration laboratories for temperature and dissolved oxygen. Preliminary results will be discussed including a comparison of Sea-Bird's electrode and optical oxygen sensors.
