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Located about 10 km off the coast of central California, the Harvest oil platform has hosted a dedicated altimeter calibration facility since the launch of TOPEX/POSEIDON (T/P) in 1992. Harvest is located in the path of the 10-d repeat ground track for the primary reference (Jason-class) altimeter missions, enabling the development of a continuous calibration record based on direct (overhead) passes of the platform. The experiment has produced a continuous, two-decade calibration time series spanning the T/P, Jason-1 and OSTM/Jason-2 missions and their combined climate record.

Over the past year, we have focused on the analysis of data from OSTM/Jason-2 overflights of the platform, the first of which occurred on July 13, 2008. At this writing, Jason-2 had passed over the platform 190 times, providing the basis for long-term monitoring of both bias and drift in the sea-surface height (SSH) measurements on the latest (D) version of Geophysical Data Records (GDR). Reflected in these GDR-D data are several important improvements that impact the bias at the decimeter level (Picot et al., 2012). Most noteworthy among them is a correction for an inconsistency (180.92 mm) in the interpretation of the altimeter antenna reference point (mechanical plane vs. aperture plane). In view of these improvements, the Harvest calibration record for Jason-2 depicts residual bias and drift of +12 ± 2 mm and +0 ± 2 mm yr-1 respectively (one standard error with N = 143). In consideration of systematic errors, such as uncertainty in the platform position and subsidence rate, neither estimate is considered statistically distinguishable from zero. We provide updates to these estimates based on the latest overflights, and also discuss any enhancements to the overall calibration record that bears on the interpretation of data from the legacy T/P and Jason-1 missions.

Finally, we describe preliminary results from the recently launched Indian/French SARAL mission, which carries a Ka-band altimeter (AltiKa). While this mission is on a different (35-d) repeat ground track, regional calibration methods (e.g., Cancet et al., 2013) can be used to relate the satellite geophysical record to the Harvest site.
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