

Ocean Surface Topography Science Team Meeting (OSTST)

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**Corsica:
A 20-Yr Multi-Mission Absolute
Altimeter Calibration Site**

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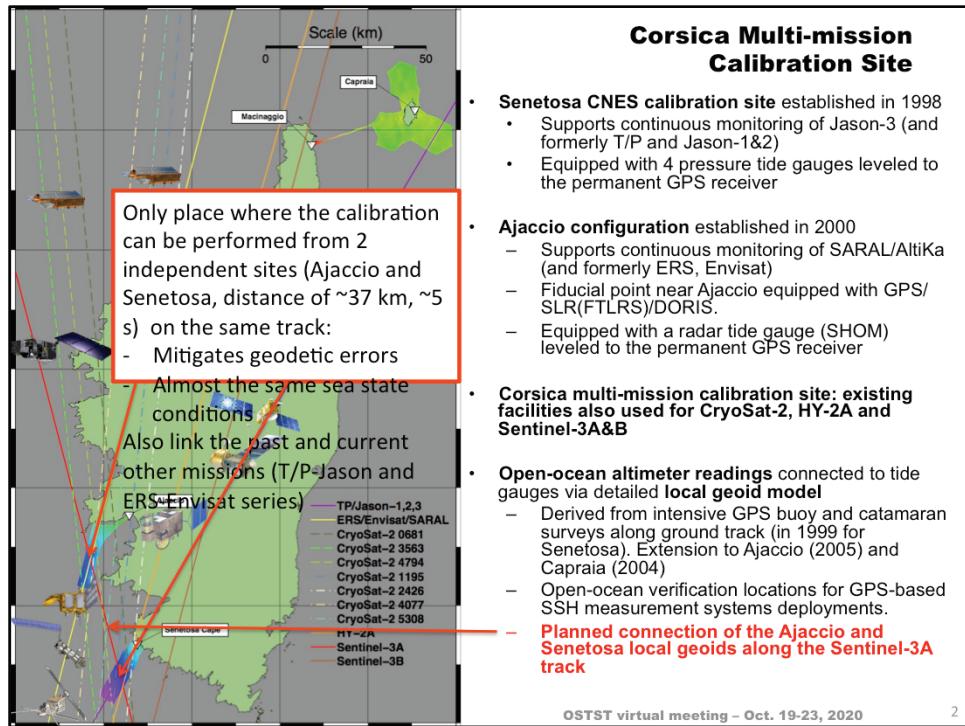
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I would like to first acknowledge my co-authors...



The Corsica experiment which makes a collective reference to the instrumentation and facilities located in the western part of the Mediterranean at Ajaccio-Aspretto, Senetosa, and on the island of Capraia (Italy), is used to maximize the capability of performing the absolute calibration of a range of altimeters (see Figure left for the respective sites and the satellites ground tracks). On the other hand, it implies preserving the coherence of the overall Corsica experiment in terms of geodesy despite the diversity of instruments, approaches and geophysical conditions in addition to the range of distances between the sites.

Since the development of the Ajaccio and Senetosa sites, absolute calibration were performed independently at each site depending of the overflying mission without any means of verifying the reliability of their respective geodetic datum (absolute sense). However, thanks to the configuration of Sentinel-3A repeat ground track and some CryoSat-2 passes, it has been possible to determine two distinct SSH biases at each site for each altimeter overflying both Senetosa and Ajaccio with a time delay of about five seconds (about 37 km). As a consequence, it allowed us to compare these biases and thus interconnect both datum. Moreover, because the SARAL/AltiKa mission was placed on a drifting orbit phase since July 2016, a similar interconnection between both Ajaccio and Senetosa datum has been achieved.

All recent results and history of the Corsica calibration site are available in this paper:

Bonnefond, P., Exertier, P., Laurain, O., Guinle, T., Féménias, P. (2019) Corsica: A 20-Yr Multi-Mission Absolute Altimeter Calibration Site, Advances in Space Research, Special Issue « 25 Years of Progress in Radar Altimetry », doi : <https://doi.org/10.1016/j.asr.2019.09.049>