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JASON-1 absolute calibration results from the eastern Mediterranean GAVDOS project

E. C. Pavlis (1) and S. P. Mertikas (2)

(1) Joint Center for Earth Systems Technology, UMBC and NASA Goddard/698, Greenbelt, MD 20771, USA, E-mail: epavlis@umbc.edu/Fax: +1-410-455-5868, (2) Technical University of Crete (TUC), Chania, Crete, Greece

The Gavdos permanent absolute calibration facility, initially established with joint EU, NASA, and Swiss Federal Government funding in 2002, while fully operational at the moment, it is also being expanded to a regional absolute sea level monitoring and altimeter calibration facility applicable to many missions, in the Eastern Mediterranean. The main site is still at Karave, located under a crossing point of the Jason-1 ground-tracks (passes 018 and 109), and adjacent to an ENVISAT pass, on the isle of Gavdos, about 50 km to the south of the main island of Crete, Greece. The project is now continuing under the OSTM program with funding from NASA and the Greek government. The current plans include the relocation of the Gavdos "Karave" facility to the final and originally intended location, on a new pier (finally constructed!), a move that will improve vastly the protection of the facility from heavy winter storms and minimize the need for maintenance. The Karave GPS receiver operated continuously throughout the past years, the tide gauges however were placed in storage to avoid damage during the construction period, and they have been redeployed as of last fall. The facility now has "off the wall" electric power at all times, and it will be upgraded to include an ISDN line and a computer, so that we will be able to download all of the data, including GPS observations, on a hourly/daily basis. This is expected to happen in early 2007. We have already selected the location for the establishment of an identical setup at a site on the main island of Crete, at Kastelli, near the TUC site (60 km west of TUC), on a TUC-owned area and situated exactly under the descending Jason-1 pass 018. We have selected a radar gauge as well as a backup system of similar type for the new location. Once tested and calibrated, we plan to replace the Karave system with one of these since they are much less demanding in terms of

maintenance, always a concern during the winter months. This gives us access to a second site and use of the altimeter measurements made to the north of Crete, in the Aegean Sea. It will thus allow the collection of additional information on the circulation and currents of the area between the Cape Maleas and Western Crete (e.g. Cretan cyclone). The project is now producing results on the basis of the new GDRs and extending our efforts to include the ENVISAT and GFO missions. We are also planning to repeat the co-location at the TUC facility site with the French Transportable Laser Ranging System (FTLRS) that established an initial link of the entire GAVDOS network of sites with the ITRF2000 frame, in order to update the link to the global TRF. This is contingent on FTLRS' availability, which in turn is tied to its deployment in Australia and the launch of JASON-2.