Opportunity Continues To Characterize Crater

February 23 2007

Opportunity is healthy and is currently driving on the promontory "Cabo Corrientes" where its cameras imaged the north face of "Bahia Blanca" cliff walls. The rover is currently driving to another spot in order to image "Cape Desire." February 9th, 2007, was the first day of spring in the southern hemisphere of Mars.

Alpha particle X-ray spectrometer integrations were also performed to measure atmospheric Argon. The purpose of this experiment is to determine the atmospheric mixing processes and track their changes with time.

Opportunity drove about 20 meters (66 feet) between sols 1084 and 1087.

The theme of the names of the bays and capes of "Victoria Crater" come from the places visited by Magellan and his crew onboard the sailing ship Victoria during their circumnavigation of the world. Cape Corrientes is on the eastern coast of South America and was a useful landmark for Magellan's fleet. Bahia Blanca (White Bay) is a huge bay in Argentina. Magellan explored it looking for the Strait, but was not successful.

Sol-by-sol summary:

Each sol there is a panoramic camera tau at the beginning of the plan and before the afternoon Mars Odyssey pass. There is a miniature thermal

emission spectrometer elevation sky and ground observation during the Odyssey pass. There is also a mini- miniature thermal emission spectrometer sky and ground in the morning of each sol, just prior to handing over to the next sol's master sequence.

Sol 1084 (February 10, 2007): On this sol, the panoramic camera took a 13-filter image of the target "Santiago." The rover then stowed its arm and drove 27 meters (89 feet) out onto Cabo Corrientes. After the drive, images were taken with the navigation and hazard avoidance cameras. After the Odyssey pass, the rover completed a sunset tau and a nearly four-hour alpha particle X-ray spectrometer integration.

Sol 1085: During the morning of this sol, the rover monitored for dust on its panoramic camera mast assembly, or "neck" and "head." The navigation camera looked for clouds and the miniature thermal emission spectrometer conducted a 7-point sky and ground observation. The panoramic camera then imaged the sun at midday. The navigation camera then looked for clouds and another miniature thermal emission spectrometer 7-point sky and ground observation was conducted.

Sol 1086: On this sol, the rover's navigation camera looked for clouds and the miniature thermal emission spectrometer conducted a 7-point sky and ground observation and assessed the atmosphere. The panoramic camera took thumbnail images of the sky, the navigation camera looked for clouds again and the miniature thermal emission spectrometer conducted another 7-point sky and ground observation.

Sol 1087: The rover drove this sol, then took images with its navigation and panoramic cameras. The rover then conducted a tau measurement. The miniature thermal emission spectrometer was used during the afternoon Odyssey pass. The final commands of this sol involved the panoramic camera surveying the horizon and the miniature thermal emission spectrometer completing a mini observation of the sky and

ground.

Sol 1088: On this sol, the navigation camera looked for clouds, the miniature thermal emission spectrometer completed a 7-point sky and ground observation and the panoramic camera took a 13-filter image.

Sol 1089: The morning of this sol began with a mini-miniature thermal emission spectrometer sky and ground observation. A pre-drive navigation camera image was taken in support of the miniature thermal emission spectrometer. The rover then stowed its arm and drove about 15 meters (49 feet) to get into position to image the other side of Cape Desire. After the drive, the rover unstowed its arm and took post-drive navigation camera images and completed a post-drive tau measurement.

Sol 1090 (February 16, 2007): On this sol, the navigation camera looked for clouds and the miniature thermal emission spectrometer conducted a 7-point sky and ground observation. A pre-Odyssey tau measurement was also taken.

Odometry: As of sol 1087, Opportunity's total odometry is 10,077 meters (6.26 miles).