

Curiosity On Mars: 'Spring Break' Over: Commanding Resumes

Hi, I'm Rick Welch, tactical operations mission manager and this is your Curiosity rover report.

As many of you know, Curiosity was in a period called solar conjunction. During this time, Mars and Earth are on opposite sides of the sun. It can be hard to communicate between the rover and Earth during this time. And so we did a minimum set of science and we all took a well-deserved spring break.

Our first activity after solar conjunction, was update Curiosity's software. We developed that software here on Earth and tested it out in our test bed to make sure it worked right. We then sent it up to the rover.

This new software has capabilities to allow Curiosity to navigate on her own – something we call autonomous navigation, or “autonav.”

Up until now, Curiosity has just used basic driving, or what we call blind driving, where the rover planners here on Earth do most of the planning for her. The autonav capability will really help Curiosity select safe routes and make better progress each day.

Another update was for additional onboard safety checks for the ChemCam instrument. ChemCam's telescopic eye can be sensitive to the sun. It's therefore important that we never point directly at the sun for a long period of time with the ChemCam. We've updated the onboard software to calculate where the sun is and make sure that the ChemCam doesn't get pointed in the wrong direction.

Plans for upcoming activities include getting calibration images from the navigation cameras at the top of Curiosity's mast. We switched to the B side computer before solar conjunction and this meant we also switched to using a different set of navigation cameras. The calibration images will help ensure that the cameras are working properly before we drive to a new location.

And we may be drilling again soon. Scientists and engineers have been hard at work looking for new targets for where we could drill. One such target is just a few meters west from the rover and could be a potential second drill site. We're planning a short drive or bump into this position hopefully by the end of this week so we'll be ready for our second drilling campaign.

This has been your Curiosity rover report. Please check back for more updates.