

Trek to Mount Sharp Begins

Hi, I am Jeff Biesiadecki, a rover planner and flight software developer, and this is your Curiosity rover report.

After busily exploring the Glenelg region of Gale Crater, Curiosity is moving on. The rover is starting a 5 mile, or about an 8 kilometer trek southwest towards the foothills of Mt Sharp. Last fall, we found a great path into Glenelg. Now, we're going back the same way, so we can quickly be on our way.

Here is a view of our recent sol 327 drive. We're looking westward from above Glenelg, where you can see our inbound and outbound tracks.

And here is a look of that drive displayed on terrain meshes created from Curiosity's stereo navigation cameras. A terrain mesh is a 3-D representation of the ground.

This was a 40-meter long "directed drive". That's when we tell Curiosity to just drive towards the day's goal without stopping along the way to look for and avoid hazards. 40 meters is about as far as the NAVCAM terrain meshes can reach.

The orange lines show the path that the front wheels will take and the red marks show where individual arc and turn commands will be started.

The green box shows the "corral" given to Curiosity as part of her drive plan. She will not go outside it. The red and white marker shows the goal location.

Images and animations like these are how rover planners document and present our drives for the rest of the team each day. This directed-driving mode is how we'll start each of our drives to Mt. Sharp.

To extend our drives further, we'll use the autonomous navigation mode that was part of Curiosity's recent software update. It enables Curiosity to decide on her own when to periodically stop and image the terrain in front of her. She can then look out for large rocks and ditches

and drive around them. Using this mode, we hope to cover at least 100 meters per day.

Here's a map view of our upcoming drive. We expect to get one final good look at the tracks laid down last year. Curiosity should end this drive as seen in the orange path, just south of the older tracks. And meanwhile, Curiosity's odometer is close to reaching the 1 km mark! Just a couple more drives should do it.

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