Mars Curiosity About to Really Shake Things Up

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WASHINGTON (AP) — Mars Curiosity is about to take its first sip of the red planet's sand. But only after NASA's rover [1] plays bartender to make sure the dry dust is shaken, not stirred.

The rover's scoop will dig into the sand Saturday. Then the action starts. The end of the rover's 220-pound arm will shake "at a nice tooth-rattling vibration level" for eight hours, like a Martian martini mixer gone mad, said mission sampling chief Daniel Limonadi said.

"It kind of looks and feels like if you open the hood of your car with the engine running," Limonadi said, making engine noises in a Thursday NASA telephone press conference.

That heavy shaking will vibrate the fine dust grains through the rover chemical testing system to cleanse it of unwanted residual Earth grease. That's important for the sensitive scientific instruments that are the keystone to the $2.5 billion mission that launched last year.

The rover landed in August and has traveled three-tenths of a mile, taking pictures and analyzing the Martian air.

For the next week or two, Curiosity will scoop, shake and dump sand out three times, like a robotic version of cleaning its mouth out with mouthwash, Limonadi said. The fourth time, the rover will slowly pour "a half a baby aspirin pill of material" into the mobile lab to start a complex chemical analysis, he said.

There's nothing that seems special about the sand that will be tested and that's why NASA picked it out. It's good to start with "boring safe Martian sand dune," Limonadi said.

The car-sized rover has a complex chemical lab, a scoop and a drill to look for the basic ingredients of life, including carbon-based compounds, nitrogen, phosphorus, sulfur and oxygen.

This will be the first time the chemistry lab will be used. In about a month, after going to a newer more interesting location, the rover will start drilling into the ground for samples.

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