
APXS
Alpha Particle X-Ray Spectrometer
MAHLI
Mars Hand Lens Imager

1
00:00:00,000 --> 00:00:04,000
(Music)

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00:00:04,000 --> 00:00:09,000
Hi, I'm Aileen Yingst. I'm the deputy principal investigator for the Mars Hand Lens Imager

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00:00:09,000 --> 00:00:12,000
and this is your Curiosity rover report.

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00:00:12,000 --> 00:00:16,000
For the past several months, Curiosity has been exploring an area known as Pahrump Hills.

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Up until now, we've been using a linear approach. We always go forward. We don't go back.

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This allows us to cover the most territory in the least amount of time.

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00:00:26,000 --> 00:00:29,000
That's not how a typical geologist would do it on Earth.

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00:00:29,000 --> 00:00:34,000
On Earth, we'd use a walkabout. That is, we'd walk the site first to get a better idea

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00:00:34,000 --> 00:00:39,000
of what it looks like and use that information to pick the best places for us to do our science.

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That's what we've done at Pahrump Hills.

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Curiosity is our robotic avatar on Mars, and as such, she uses her instruments in

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00:00:47,000 --> 00:00:52,000
much the same way we would use our eyes and our hands during a walkabout.

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She has her cameras on the mast that allow us to get an idea of the area around us.

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00:00:56,000 --> 00:01:00,000
We can use that information to pick a good site for contact science.

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00:01:00,000 --> 00:01:05,000
Once we have that, we can use the MAHLI and the APXS to decide if that site is a

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good site to take a sample, which we can then put into our on-board laboratory.

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This more traditional approach has really allowed my camera, the MAHLI, to shine.

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And I mean that literally because MAHLI has her own light source.

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Two banks of LEDs allow us to illuminate a target in any way and from any angle

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00:01:22,000 --> 00:01:27,000
we choose including letting us take images at night.

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00:01:27,000 --> 00:01:29,000
This outcrop called 'Pink Cliffs',

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which is an area of interest for us because it has blade shaped crystals in it.

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00:01:32,000 --> 00:01:37,000
These might've formed when water came through and left behind the chemicals for these crystals to

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00:01:37,000 --> 00:01:42,000
form and grow. MAHLI is the perfect instrument for us to get a great look at these features.

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The walkabout at this point is now a tool in our toolbox