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Lunar astronauts get neighbourhood watch

14 June 2009 by [David Shiga](#)
Magazine issue [2712](#). [Subscribe](#) and get 4 free issues.
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Update at 17:40 GMT on 15 June: The LRO launch has been postponed until Thursday to allow the [space shuttle Endeavour](#) to attempt a liftoff on Wednesday. The shuttle was originally supposed to launch on Saturday, but could not due to a leak discovered while it was being fuelled. LRO's launch could take place at 2112 GMT on Thursday from Florida's Cape Canaveral Air Force Station.

REASSURING news for would-be lunar astronauts: a scouting probe due to launch next week will make upcoming trips to the moon that little bit safer.

Killer space radiation and meteorite impacts are just a few of the pleasures that await astronauts venturing onto the lunar surface as part of NASA's return to the moon, planned for the 2020s.

To map out these deadly delights and pinpoint resources like water-ice and metals in lunar rock and soil, NASA plans to launch its [Lunar Reconnaissance Orbiter](#) (LRO) on 17 June. It will hit orbit four days later.

The probe will carry pieces of plastic designed to simulate the density and chemical proportions of human skin and muscle, as part of an experiment called [CRaTER](#) (Cosmic Ray Telescope for the Effects of Radiation). The LRO's particle detectors will measure how this plastic interacts with cosmic rays - a form of space radiation made up of particles such as protons that can lead to [cancer](#) by damaging [DNA](#).

LRO's cameras will scan the lunar surface for potential landing sites (see diagram). It will also be on the lookout for new impact craters in areas previously only imaged with a resolution of 1 to 2 metres by the Apollo spacecraft four decades ago. This should help to gauge the risk of future impacts; moon bases with holes smashed into their roofs can be dangerously draughty.



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The new probe will launch next week, and will scout out safe sites for future missions to the moon (Image: NASA)

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Solar eclipse will be longest for more than a century

18:49 21 July 2009
On Wednesday, the moon will pass in front of the

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Reassuring

Thu Jun 11 19:53:07 BST 2009 by **Eric Kvaalen**

How does knowing how many meteors hit the moon make going there safer?

Rather than "reassuring" the astronauts, maybe we should re-insure them.

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Reassuring

Sun Jun 14 10:54:52 BST 2009 by **Gareth**

It's called calculated risk.

By gauging the frequency of impacts we can assess the necessary protective measures required on a moonbase that would be needed over a given length of time.

Or one could say "if I build a moonbase with X cm of armoured roofing, what is the likelihood of it being penetrated by a meteorite in, say, 12 months, given the impact rate for different sized meteorites. And therefore does the armour need to be thickened or thinned as maybe appropriate."

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The Asteroid Proof Wall.

Sun Jun 14 16:16:42 BST 2009 by **dd2020**

I believe , we have technology that make bullet proof glass , and we can



sun, producing a total solar eclipse that will last longer than any other until

2132

Video special: Key events that took Apollo to the moon

13:36 21 July 2009

From Kennedy's space aspirations to the first death in space, **Roger Highfield** explores key events in the run up to the moon landing

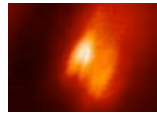
Space probe to sport 'transforming' hardware



12:10 21 July 2009

A test satellite planned for 2012 will sport a flight computer with electronics that can be completely reconfigured in space

Jupiter sports new 'bruise' from impact



23:36 20 July 2009

A new black spot about as big as the Earth has been found on Jupiter – astronomers say it was caused by an impact, not by one of the planet's famous storms

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even make the asteroid proof wall to protect the moon base or other space structure for human.

The asteroid proof wall made of two layers,

First layer is the outer protective wall, that can be replace when broken down by the hit of the asteroids. So the material to do this wall is to be something very stiff and resistant.

The second layer work as the sheild of cosmic ray and pressurized wall that keep air from getting away.

I hope you may understand my point.

DD2020

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Explanation

Sun Jun 14 16:32:22 BST 2009 by **dd2020**

Let me explain more on my "outer protective wall".

The structure of this wall should be like grid dome with small pieces of stiff and resistant protective tile.

sample image

<http://megadome.com/Images/dome1&2.jpg>

DD2020

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Explanation

Sun Jun 14 18:48:39 BST 2009 by **CSM Engineer**

I think the engineers at NASA have done a little of their homework on protective surfaces and have reasons why they feel our best defences could use a little risk assessment.

Everything must be given an estimated usable life and knowing the impact risks of the working environment is critical in making this judgement.

Though I like your idea, i'm gonna give them the benefit of the doubt. Besides, NASA may have a difficult time selling the notion of protective tiles following the Columbia disaster.

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Explanation

Mon Jun 15 01:27:17 BST 2009 by **Kade**

I gotta say, i lol'ed really hard at this post. Thanks for making my

day :)

Epcot on the moon!

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