



Listen to the lightning storms of Mars and the 'ice volcanoes' of Saturn's moon Titan: Scientists simulate sounds of solar system

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- Scientists use atmosphere data to simulate sounds of Mars, Venus and Saturn's moon Titan
- Storms sound radically different due to gases on each planet
- Sounds of weather including lightning on Mars and 'ice volcanoes' on Titan
- Dense gassy atmosphere on Venus would turn voice into a growl - and make people seem smaller

By **ROB WAUGH**

PUBLISHED: 17:08, 2 April 2012 | UPDATED: 12:05, 3 April 2012

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Mars has lightning storms, avalanches and even dust devils, just like Earth - but its thin atmosphere of carbon dioxide would mean they sounded very different.

A team from the University of Southampton used physics and mathematics to work out what the violent weather of our solar system might sound like - capturing the crashing sounds of lightning on Venus, whirlwinds on Mars and ice volcanoes on Saturn's largest moon, Titan.

Professor Tim Leighton, of the university's Institute for Sound and Vibration Research, said: 'We are confident of our calculations.'

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On Venus, the pitch of your voice would become much deeper. That is because the planet's dense atmosphere means that the vocal cords vibrate more slowly through this 'gassy soup'

They have also modelled the effects of different atmospheres, pressures and temperatures on the human voice on Mars, Venus and Titan, and found that on Venus humans would sound like bass Smurfs.

This ignores, of course, certain basic facts about Venus - that it's 480 degrees Celsius on the surface, for a start, and that the pressure is 96 times higher than Earth.

A real human would sound like a dead Smurf. But Leighton's team modelled the effects purely in terms of physics, working out the effects on the sound of a human voice.

'We have been rigorous in our use of physics taking into account atmospheres, pressure and fluid dynamics.

'On Venus, the pitch of your voice would become much deeper. That is because the planet's dense atmosphere means that the vocal cords vibrate more slowly through this 'gassy soup'.

'However, the speed of sound in the atmosphere on Venus is much faster than it is on Earth, and this tricks the way our brain interprets the size of a speaker (presumably an evolutionary trait that allowed our ancestors to work out whether an animal call in the night was something that was small enough to eat or so big as to be dangerous).

'When we hear a voice from Venus, we think the speaker is small, but with a deep bass voice. On Venus, humans sound like bass Smurfs.'



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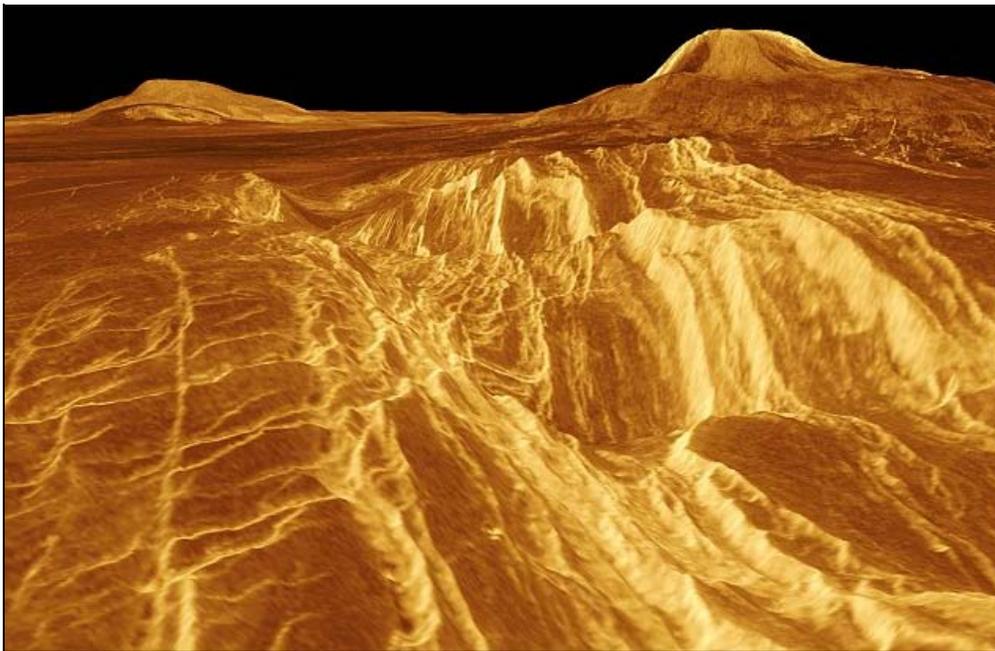


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When we hear a voice from Venus, we think the speaker is small, but with a deep bass voice. On Venus, humans sound like bass Smurfs

Prof Leighton, who has been working on the sounds of space for the last ten years and has previously made the sound of a methane waterfall in space, added: 'I'm interested in what music would sound like in space.

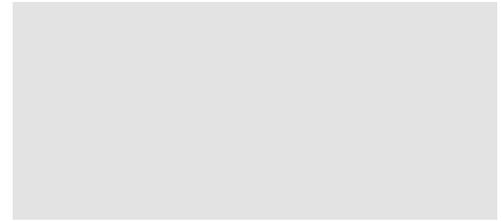
'If astronauts are based on Mars for several months, they might just take musical instruments along, or build one there. What would they sound like?

'As a scientist, I reckon the most exciting thing to work on is a completely new idea, something that's never been done before.'

Despite many years of space exploration, scientists have no evidence of the sound of other planets.

While most planetary probes have focused on imaging with cameras and radar and a couple have carried microphones, none of them successfully listened to the sound of another world.

The sounds will be added to the Flight Through The Universe shows this Easter at the Astrium Planetarium at INTECH near Winchester, Hampshire.



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I teach at a school near these guys. Just to say they did this work in their own time so they could come to schools like mine and get kids interested in science. They did another talk on sounds made by whales and dolphins which got my kids excited. It didn't cost taxpayer anything but has got lots of people (including my class) talking science for a while. Their day jobs are in an institute which fits bionic ears to hundreds of deaf kids, and then teaches them to talk (which you cannot do if you have been deaf all your life), on NHS. That's how they know so much about speech and hearing. Obviously they were 'reaching' when extending to other worlds, but that's how you excite kids. And it was taken seriously by NASA.

- Keith, Southampton UK, 04/4/2012 16:33

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The first sound of " thunder on earth " sounded nothing like it if they cant get right then how can we believe the others that followed ?

- david, england, 03/4/2012 18:39

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Its an interesting project although I can't quite see what the practical applications are. On a lighter side, Railway Station speakers and McDonalds Speaker ordering system were clearly designed by Venusians, so there is life out there!

- David, Cavan Ireland, 03/4/2012 17:02

Click to rate Rating 3

skeptics... if your gonna nagate science or race just to leave the best cynical comment why bother reading these articles? Go do that on Jersey Shore forums or something... Leave space and science to us adventurers who actually appreciate it

- Lucio, Zanarkand of Ziia 7 from Messier 83 Galaxy, 03/4/2012 15:55

Gomez as she arrives at the airport Looked smitten



Simon Cowell will be pleased! One Direction set to be worth £64million this time next year They've taken the charts by storm



What has happened to Lil' Kim's face? Rapper sparks concern with puffy facial features and altered lips Unrecognisable - and that make-up can't help



A Whole Lotta Shakin' Goin' On! Not-so-Little Richard seems to have been indulging in too much Tutti Frutti as he bares his belly



'I'm the victim', says Chris Brown as he accuses Drake of throwing a bottle at him during vicious nightclub brawl Was a row Rihanna



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Still shrinking! Miley Cyrus shows off her knobbly knees and spindly legs in tiny denim hotpants Star, 19, was seen leaving her Miami hotel



'I took some punches': Tony Parker reveals he suffered scratched retina during Chris Brown and Drake nightclub brawl Wrong place, wrong time



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There are no sounds to listen to. As far as 'being on Venus' is concerned, I was under the impression that, if hypothetically setting foot on the planet, one would be instantly crushed and flattened by atmospheric pressure, or something similar. Still like to hear these sounds though - if possible.

- TheMightyOak , Shrewsbury, U.K., 03/4/2012 11:24

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You mean they sound like teenagers

- Eddie Johnn, In the real world, 03/4/2012 10:29

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Not that you would have time to utter anything or even open your mouth once you take off your helmet. Come to think of it your lander wouldn't even survive the trip to the surface for you to even get out on the surface so this is all a bit pointless.

- Jane, Northampton, 03/4/2012 09:24

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I've always thought that I would sound more like a keening Jetson or a howling Flintstone rather than a growling Smurf, but I guess I will just have to take your word on the matter until I can develop my own form of interplanetary travel...

- rick, atlanta, georgia usa, where we fry vegetables and put ice in tea, 03/4/2012 08:58

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"So Smurfs come from Venus. - Nermal the guru, London, 02/4/2012 22:08" ----- That's inductive reasoning in action :^)

- T. Servo, Satellite O' Love, High Earth Orbit, 03/4/2012 07:07

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DM: "Scroll down to hear" Me: (scrolls down) "Hear what?"

- Daniel, The States, 03/4/2012 02:27

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Jay Electronica

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Thanks, ma'am!



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Nike's brand new FuelBand



'If you have a body, you are an athlete'; it's the principle upon which Nike was founded. This product more than most encapsulates that.

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Monitors your pulse and sends real-time data via wireless to its app on your iPhone and iPod Touch

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Braun Oral-B Triumph 5000 Electric Toothbrush



The toothbrush with a wireless SmartGuide that tells you how well you've cleaned your teeth.

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'Play' Multi-Message Video Pad



It's mooted as the 'ultimate video memo'. And some say it will sound the death knell for post-it notes. Above all, it's fun to use.

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For fans of the 350-million selling game, this is possibly the most exciting speaker system to ever be invented.

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