

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



- 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**

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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'

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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.

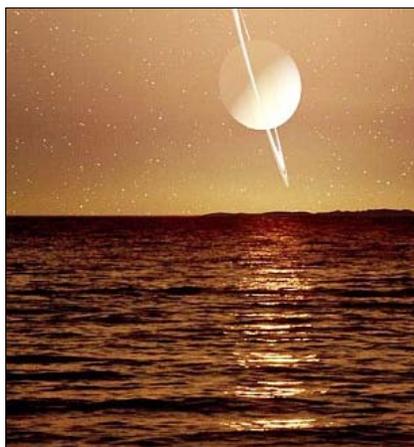
A real human would sound like a dead Smurf. But Leighton's team modelled the effects purely in terms of physics, working out the effects on the sound of a human voice.

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

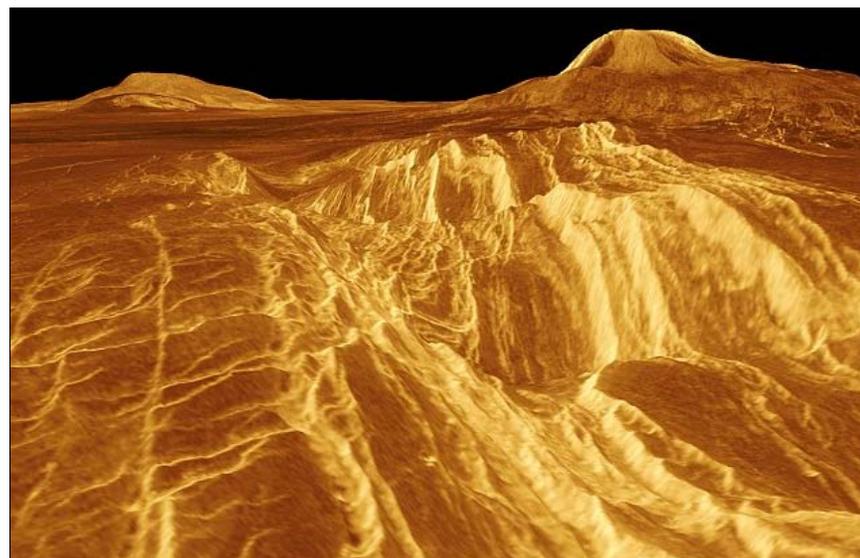
'On Venus, the pitch of your voice would become much deeper. That is because the planet's dense atmosphere means that the vocal cords vibrate more slowly through this 'gassy soup'.

'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.'



This artist's rendition shows a lake of methane on Titan - scientists simulated sounds from Saturn's icy moon



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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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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"Humans would sound like 'growling Smurfs' on Venus"? In most of the UK, humans sound like growling smurfs, from the way they mangle their own native tongue.

- cupid, ex london, 03/4/2012 04:20
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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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That's what the symbol OM means written on the palm. Just tune into the frequency and you can pick up the sound anywhere in the universe. Can I prove it? No, but I can experience it.

- Teen Spirit, Practice and Theory, 03/4/2012 01:22
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All those probes sent to Mars and not one has ever had a cheap microphone fitted.

- harry, Fife, 03/4/2012 00:00
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Shouldn't that be - would sound like the agonised deaths of smurfs

- Just, Saying, 02/4/2012 23:21
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On Venus human lungs would either melt with the suffocating acidic atmosphere or burn to a cinder in the 467 °C temperature.

- Get it Right, UK, 02/4/2012 22:24

'hard lesson' after miscarriage to slow down while pregnant
Look after yourself!



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Ruckus between the two Mels



Jennifer Garner covers up to drop Violet off at a friend's house before treating a winking Seraphina to shopping trip
Being a busy mum



'I never do anything to get banned.. I just go a little too far for some': Rihanna insists she's not controversial
It just happens accidentally?



Topless Tom Cruise belts out Bon Jovi classic Wanted Dead Or Alive in new Rock of Ages trailer
He thrills the crowds



'Just because Tim and I aren't IN love anymore, doesn't mean we don't love each other': Why Denise Welch still wears her wedding ring



He must like the place! Ashton Kutcher splashes out on Hollywood mansion he's been in since November
Justin Bieber viewed it



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Three 'coaches' signed to Universal



That's toned down for you! TOWIE's Chloe Sims is a far cry from her usual cleavage-baring self in stylish crop top
Likes to flaunt her assets



Make-up free Beyoncé dresses down in dowdy loafers, boyfriend blazer and wacky trousers
She was taking a stroll with baby Blue



Let's hope the wind doesn't change! Cameron Diaz scrunches up her face as she tries to

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to her father Lionel
Looked very grown up



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Looked incredibly alluring



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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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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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