

Press release: The sound of Mars

The NASA InSight lander, which is supported by the UK Space Agency, has recorded a haunting, low rumble caused by vibrations from the wind. These vibrations were detected by an ultra-sensitive seismometer, developed in the UK, and an air pressure sensor sitting on the lander's deck.

Both recorded the Martian wind in different ways. The seismometer recorded vibrations as the wind moved over the lander's solar panels, each of which is more than 2 metres in diameter and sticks out from the sides of the lander like a giant pair of ears. The air pressure sensor recorded the vibrations directly from changes in the air.

Science Minister Chris Skidmore said:

Less than two weeks into the InSight Mission, UK science is already uncovering incredible things about Mars. As new Science Minister I am excited to see what more we can achieve on land and in outer space.

The mission is an example of our successful space sector making a difference to international science. Through the Government's Industrial Strategy, we are driving the biggest increase in public investment in research and development in UK history.

Video

This is the only time during the mission that the seismometer – called the Seismic Experiment for Interior Structure, or SEIS – is capable of detecting these sounds. In a few weeks, it is due to be placed on the Martian surface by InSight's robotic arm. For now, it is recording wind data that scientists will later be able to cancel out of data from the surface, allowing them to separate "noise" from actual Marsquakes.

Sue Horne, Head of Space Exploration at the UK Space Agency, said:

This is brilliant news because it means we know the sensors have survived the rigours of landing on Mars and are meeting the requirements to achieve their science goals. It is just amazing to hear the first ever sounds from Mars.

SEIS includes three Short Period sensors (SEIS SP) developed in partnership by Imperial College London, Oxford University and STFC RAL Space, with £4 million in funding from the UK Space Agency. These sensors can detect motion at sub-atomic scales, which includes the wind on Mars, which is barely within the lower range of human hearing.

When the sensors pick up vibrations from InSight's solar panels, the whole spacecraft acts like a giant microphone.

InSight science team member Prof Tom Pike of Imperial College London said:

The solar panels on the lander's sides are perfect acoustic receivers. It's like InSight is cupping its ears.

Prof Pike compares the effect to a flag in the wind. As a flag breaks up the wind, it creates oscillations in frequency that the human ear perceives as flapping.

InSight, which landed on 26 November 2018, will study the inside of Mars to learn how planets, moons and meteorites with rocky surfaces, including the Earth and its Moon, formed.

Dr Neil Bowles, from the University of Oxford's Department of Physics, said:

To get the first data from the seismometer instrument package has been fantastic and even with a short test run the analysis is now full swing.

To 'hear' the low frequency rumble of the Martian wind on the lander being picked up by the SEIS-SP is really eerie and provides a strangely human connection to this very different environment.

Both audio samples have been released to the public almost completely unaltered. In some cases, they have been raised an octave in order to be perceptible to the human ear.

But an even clearer sound from Mars is to come. In just a couple years, the British-built Mars 2020 rover is scheduled to land with two actual microphones on board. One has been included specifically to record the sound of a Martian landing for the first time. A second will be able to detect the sound of the instrument's laser as it zaps different materials. This will help identify these materials based on the change in sound frequency.

Press release: Overseas Territories meet in London for annual Joint Ministerial Council

Political leaders from all UK Overseas Territories met with UK ministers this

week for the annual Joint Ministerial Council in London from 4-5 December.

The discussions, hosted by Foreign Office Minister of State for the Overseas Territories Lord (Tariq) Ahmad of Wimbledon, covered a range of topics, including Brexit, trade and investment, financial services, safeguarding, disaster management and constitutional issues. HRH the Duke of York also addressed the attendees at the JMC reception.

Minister of State for the Overseas Territories Lord Ahmad of Wimbledon said:

It was a pleasure to welcome Premiers and representatives from all of the UK's Overseas Territories to London. The UK Government is negotiating a Brexit agreement for the whole of the UK family, including the Overseas Territories, and we are committed to finding the best deal for all of us. We also discussed a range of other issues of high importance to all of the Overseas Territories, including making sure that we are collectively prepared for the next hurricane season.

I will be taking the conversations I have had with colleagues from the Overseas Territories and making sure they are fully considered and reflected on as we continue our plans and discussions on Brexit over the coming weeks and months.

The ministers and representatives from the Overseas Territories held a series of productive discussions on Brexit. These talks reaffirmed the UK government's commitment to taking the Territories' priorities into account as the UK prepares to leave the EU, including in relation to funding, trade, the environment and education.

This follows assurances given by the UK Government that, in the unlikely scenario that we leave the EU without a deal, existing projects under certain EU funding streams will be guaranteed by Her Majesty's Treasury for the lifetime of those projects.

Also present at the meeting were:

- The Rt Hon Lord Bates, Department for International Development
- Thérèse Coffey MP, Department for Environment, Food and Rural Affairs
- George Hollingbery MP, Department for International Trade
- John Penrose MP, Prime Minister's Anti-Corruption Champion
- Chloe Smith MP, Cabinet Office
- The Rt Hon Mel Stride MP, Her Majesty's Treasury
- Robin Walker MP, Department for Exiting the EU

The leaders of the Overseas Territories also attended Her Majesty The Queen's Reception for the Diplomatic Corps at Buckingham Palace.

Further information

Press release: Overseas Territories meet in London for annual Joint Ministerial Council

Lord Ahmad of Wimbledon hosted political leaders from UK Overseas Territories on 4-5 December

Press release: Charity Commission intends to order a veterans charity to wind up

The Commission is today giving [public notice](#) of its intention to issue an order to direct the winding up of Afghan Heroes.

The Commission opened a [statutory inquiry](#) into the charity in November 2013, due to various regulatory concerns about its management and administration, including that its assets may be at serious and significant risk of harm.

Section 84B of the Charities Act 2011 gives the regulator the power to issue an order to direct a charity to be wound up. The regulator can do so if it is satisfied that a charity does not operate, or its purposes can be promoted more effectively if it ceases to operate; and exercising the power is expedient in the public interest.

The Commission's summary of reasons is set out in the Public Notice of Intention to Exercise Powers: Afghan Heroes.

As required in law, the Commission is now inviting representations. Any representations must be made within 30 days.

See [further information about schemes and orders](#).

Representations can be emailed to:

IAEInvestigationsCRM@charitycommission.gsi.gov.uk marking it 'Representations to the Public Notice – Afghan Heroes – 1132340'.

The Commission will consider any representations received within 30 days. It may (without further public notice) issue the order (with or without modifications) 60 days after the 1st day of this notice.

The Commission's inquiry into Afghan Heroes is ongoing; a report setting out the findings of the investigation will be published once it has concluded.

Reports of previous inquiries are available on GOV.UK.

Ends

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Afghan Heroes: notice of intention to order charity to wind up