



Sep 10, 2013 00:00 BST

The sound of the Sun

Magnetic wave phenomena from the Sun have been converted into a haunting audio visual experience – enabling people to hear and see the Sun as never before during the British Science Festival.

Dr Richard Morton, a Research Fellow at Northumbria University, has worked with artists and scientists to turn scientific data collected on the Sun's magnetic field into an optical and audible experience known as the HeliOscillator.

The HeliOscillator exhibition, which is running at the Globe Gallery throughout the week-long festival, aims to educate people about the dynamic

activities that take place in the Sun.

High-energy particles which can cause damage to telecommunications, satellites and power networks escape the Sun's atmosphere during Space Weather Events. These events are related to the Sun's magnetic field, which is observed to support sound waves and magnetic waves. Current research efforts are focused on determining the role that these waves play in generating and initiating Space Weather Events.

The project is a collaboration involving Dr Morton, artists Noel Murphy (VDU) and Jamie Salmon (The Curious Machine), and scientists from Northumbria and Sheffield Universities.

Dr Morton said: "The Sun is our closest star and intimately connected with life on Earth. As well as providing heat and light for life, there is a destructive element to our relationship. Scientists are currently trying to understand the daily life of the Sun in order to predict the destructive events, such as solar flares and coronal mass ejections.

"The exhibition takes real data of magnetic waves observed in the Sunspots in the Sun's atmosphere and transforms them into a haunting audible and visual experience, allowing the dynamics to the Sun to be experienced in a whole new light."

"We hope that people will see that the Sun is not just the pristine, yellow, unchanging orb sat in our skies," Dr Morton added. "The Sun's atmosphere is a place where extremely powerful events take place on scales of thousands of kilometres every single day. These events are some of the most beautiful and intriguing natural phenomena we are able to witness.

"Careful monitoring and analysis will allow us to understand these events and hopefully allow the prediction of the more dangerous events so that we can protect civilisation from the potentially devastating consequences."

The British Science Festival is an annual celebration of science, engineering and technology which visits a different UK city each year. The Festival is organised by the British Science Association and this year is being hosted by Newcastle University with Northumbria University and Newcastle City Council as associate partners and AkzoNobel, Northumbrian Water, GE Oil & Gas and

Saudi Aramco as major sponsors. The Festival will take place in different venues in and around the city from Saturday 7 September through to Thursday 12 September.

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