NICOLA RAE

**Nicola Rae** lives and works in London. She received her BA in Fine Art at Canterbury College of Art, an MA in Art & Design in Education (2006-2008) and an MA in Contemporary Art Theory at Goldsmiths (2009-11). Her art practice has been based at APT Studios in Deptford since 1995. Engaging with sited acoustic experimentation has become part of her developing art practice since 2005. More recent projects have involved researching live sonic processes made visual through the use of sound emission analysers. These installations often include projections of interactive sonic visualizations that respond to a variety of acoustic sources and microphones, picking up participative co-production of sonic experimentation. Other sound frequency works respond directly to electro-acoustic phenomena and to audio files sourced online, as in ‘Interplanetary Radio Frequencies’. Recent exhibitions include: ‘Space Station/Play Station’, West Bund Art Centre, Shanghai, China, 2014; ‘PERSONAL STRUCTURES’ at Palazzo Bembo, Collateral event at 55th Venice Biennale, 2013; SOUNDLAB at CUBE4x4x4, Mannheim, Germany, 2012; ‘Track Changes: LV21 Lightship, Gillingham Pier, Kent, 2011.

***Interplanetary Radio Frequencies: received from different planetary magnetospheres 1979-2014’***

*2014-15*

Projected sound frequency installation

NASA WAV files accessed through University of Iowa’s SpaceAudio.org, Sygyt Software’s Overtone Analyzer, frosted perspex panels, projector boxes, perspex tube refractors, Genelec speakers, Optoma Projectors HD25E, BrightSign media players.

Variable dimensions

No sounds can be heard in space yet radio waves traverse this environment and are picked up by receivers on Earth. Names like ‘chorus waves’ are given to these plasma waves that relate to sounds within our auditory experience on this planet, yet these electro-magnetic phenomena are charged particles responding to the influence of the magnetic fields of different planets. This digital projection explores a parallel experience of light as visualized sound responding to the received radio waves, which have then been refracted into the revolving, circular motions of interplanetary plasmas. Three different magnetospheres and eras are focused on in this installation. The earliest transmissions were received in 1979 when Voyager traversed Jupiter’s magnetosphere. In 1980 Voyager picked up magnetospheric activity on Saturn, as did Cassini from 2004. The most recent radio waves included in this installation were received from the Van Allen Probes (2012-14) within Earth’s magnetosphere between 60-36,000 miles away. The earliest transmissions from Voyager include many mechanical spacecraft sounds, setting up self-reflexive sonic resonances between the spacecraft and different planetary magnetospheres.