

# sferics

**Alex De Little – Moon Palace Residency**

**October – December 2023**



*'...if you put an antenna and a receiver, then you can hear them, they are very beautiful. That is all I have done, that is to make it available to people to hear. Very simple.'*

**– Alvin Lucier**

Moon Palace by Heather and Ivan Morison is both a social and a physical sculpture: its physical allure simultaneously draws people together to observe – to observe the cosmos, to observe one another, to observe themselves and their place in the cosmos. When invited to respond to the project, I became interested in the idea of being able to listen to, or with, the cosmos. What lies beyond the Earth is regularly observed through visual technologies like telescopes, but how can we listen to it? There are some projects that take sets of data observed by telescopes and use creative approaches to convert it into sound. While this is both valuable and interesting, I am more interested in how we might connect with what is happening beyond the Earth in real time –

***How might we fix our ears beyond the Earth's atmosphere?***

***What happens to our sense of perspective if we are listening in this way?***

***Do we hear ourselves differently?***

***What is there to be heard?***

***Does it sound like anything we already know?***

***Does listening not seeing connect us differently to what lies beyond the Earth?***

Sferics (short for atmospheric) are natural radiofrequency emissions resulting from lightning in the ionosphere, part of the Earth's upper atmosphere that is ionized by solar radiation. Part of these emissions fall into the spectral range of human hearing, so do not have to be transformed into the audible region once they have been detected using special antennas and receivers. Instead it is possible to simply listen to them using an antenna, amplifier and headphones or a loudspeaker.

For this project, my collaborator Eric Stammers developed a technique for listening to spherics. The equipment uses a Low Frequency Radio receiver with a 20 metre long piece of wire that acts as an antenna. This, attached to a pair of headphones or a loudspeaker, makes it possible to hear sferics in real time.

On first listening through headphones, the sound might seem akin to a small crackling fire, electrical static, or the sound of rain on the windowpane. Over repeated listens, I began to realise that significance in this listening is a matter of perspective. When listening to sferics, we extend our ears beyond the Earth's atmosphere and allow our sonic awareness to dance around the edges of space. We hear the totality of global lightning discharges in real time, from where we are in that moment. In a sense, the device developed by Eric acts as a listening device that is capable of displacing the listener's ears to the edges of space, capturing the energy from the lightning discharges as they whizz around the ionosphere at the speed of light.

***What does this mean for my sense of perspective?***

***What can this kind of listening do?***

There are different kinds of sferics, often named according to the sounds they produce: tweeks, bonks, pops, whistlers and others. Two types are especially easy to detect: those creating very short sounds that are constantly heard as crackling and others creating pops. In addition, longer, musical sounds resulting from an echoing between Earth and ionosphere and 'whistlers' producing a significantly longer, descending, sound can be heard. There is also an even rarer type called 'dawn chorus' which sounds akin to a chirping swarm of birds.

On the last handful of Moon Palace after-dark sessions, I took the apparatus along with me, suspending my long piece of wire over a tree branch or along a fence and setting up the receiver in the dark or often in the rain. Attendees attentively listened in, one by one, reaching out into something that is not known – extending their ears to the electromagnetic dynamics of the ionosphere. Impressions were varied, a mixture of indifference and enrapture. Some listeners stayed for significant periods of time, tuning in to the huge energetic dynamics contained within tiny sounds.

In these listening sessions, the global sound of the sferics was often mixed together with local radio interference – an intertwining of man-made and natural signals, like a sonic version of light pollution.

***What does it mean to come back into the body after this?***

***What kind of perspective does this afford?***

***What can we do with a practice of listening in this way?***