

hOUR ANGLE

a sonification of the sun

by John Eacott

3rd November 2008

hOUR ANGLE is a musical performance generated by the movement of the sun. The piece is most effective at significant solar events such as the winter or summer Solstice or spring or autumn equinox but may be performed at other times.

A performance of hOUR ANGLE may be of any duration. Previous performances have lasted 30 minutes i.e. 15 minutes before the moment of solstice and 15 minutes after. This duration may be adapted to suit a particular event and longer durations of one or even two hours may be effective

In the case of the summer solstice hOUR ANGLE sonifies the slowing up of the sun's northerly progression until the moment of solstice, and then it gradually starts to move south again. Musically this means that the performance begins with some energy which slows down and down until the central portion of the piece in which movement is incredibly slow, as little as one note every 100 seconds, before very gradually building in tempo again.

hOUR ANGLE is a formal process resulting from the calculation of the sun's position and draws from traditions in 'minimal' music. It is also a kind of 'ambient' work in which the audience are invited to listen for a while and then move on, perhaps to return later to hear how the piece has changed. Performers may be arranged as a single group or separated into smaller units to suit the chosen site. Musical qualities may be described as meditative and tonal.

How it works

hOUR ANGLE uses astronomical data to calculate the sun's 'declination' and 'hour angle' – equivalent to its latitude and longitude as viewed from the earth. Custom computer software converts the data into notation in real time which is read on computer screen by each individual or group of musicians.

What kind of events

hOUR ANGLE is a musical celebration of the sun and would be suitable for any festival or event with connections with the sun, astronomy, ecology, contemporary arts or new technologies.

Astronomical events suitable for performance of hOUR ANGLE

Winter Solstice 1204 GMT Sunday 21st Dec 2008

Spring Equinox 1144 GMT Fri 20th March 2009

Summer Solstice 0645 BST Sun 21st June 2009

Autumn Equinox 2218 BST Tue 22nd Sept 2009

Winter Solstice 1745 GMT Mon 21st Dec 2009

Spring Equinox 1732 GMT Sat 20th March 2010

Summer Solstice 1228 BST Mon 21st June 2010

Autumn Equinox 0409 BST Thur 23rd Sept 2010

Winter Solstice 2338 GMT Tue 21st Dec 2010

Requirements

Although adaptable to the needs of a specific event the basic requirements for a performance of hOUR ANGLE are as follows:

Location

Any site where performers and audience may gather. Outdoor locations may be ideal but musicians need cover to protect them and their instruments from rain and strong sunlight. Consideration of acoustic properties is vital such as the proximity of walls or buildings to reflect the sound towards the audience and avoidance of loud sound sources.

Musicians

Any size of ensemble may be used from solo performer to orchestra and / or choir.

As the performance may be long, the endurance of instrumentalists is a factor. Previous performances have used celli and tuned percussion as these can be played continuously for long periods. Collaboration with a professional orchestra or string orchestra would be ideal but involvement of other ensembles, including amateur, community or youth groups may be considered.

Hardware

A combination of computers and additional displays is required for the musicians to read from. Generally one display is needed per two musicians. A performance by a 32 piece string orchestra for example could be achieved using 8 laptop computers with 8 additional displays.

Optionally, a further large display from which the audience can see the astronomical parameters changing may be desirable.

Previous Performances

The first performance of hOUR ANGLE took place at Pullens Festival, Crampton Street, Kennington, London SE17 on 20th June 2008 and lasted 30 minutes.

John Eacott

is a trumpeter and composer whose career started in the 1980s with anarchic jazzers **Loose Tubes** and industrial metal bashers **Test Dept**. In the 1990s he focused on composing many works for Theatre including **Gormenghast** for the David Glass Ensemble and arrangements for the 2002 RSC production of **Timon of Athens**. Film scores include the Miramax feature **Three Steps to Heaven** (1995), **Escape to Life** with Vanessa Redgrave (2001) and jazz arrangements for **Alfie** starring Jude Law (2003). His orchestral compositions have been performed and recorded by the **Scottish Chamber Orchestra** and **Docklands Sinfonietta**.

hOUR ANGLE, along with a related composition Flood Tide are John's first works since completing a PhD on generative music in 2007. Previous generative works include **The Street** - interactive sound environment (2000), **Morpheus** - CD Rom of generative electronica (2001), **Intelligent Street** - sound space in which users alter their sound environment by sending text messages (2003).

Contact Information

For performance enquiries:

Natasha Bird

natashabird@hotmail.co.uk

Or general enquiries:

John Eacott 210 Brixton Road, London SW9 6AP

020 7733 0398 h 07950 953 852 m

john@informal.org

www.informal.org