



Performance:

Vibrations of the Sun

Sunday, May 10, 2:00 PM, Kaserne

Studying the Sun from the Inside Out

This performance explores how scientists use sound to gain new insights into the Sun. By transforming data from the Sun's electromagnetic fields into sound – a process known as sonification – researchers can effectively listen to solar activity, offering a unique perspective on the complex processes unfolding deep within its core.

The Sun acts as a resonant cavity for very low-frequency acoustic waves. Much like a musical instrument, it supports a range of oscillation modes, often referred to as harmonics. These harmonics can be observed through subtle oscillations on the Sun's surface. While such data has been studied for decades, it has only rarely been translated into sound, making sonification a powerful yet underused approach.

Our ability to harness solar energy on Earth is rooted in the interaction between electromagnetic waves – such as light – and matter. These waves cause charged particles to vibrate. Since all matter is made up of electrons and protons, electromagnetic radiation across the spectrum interacts with it, increasing its internal energy and, among other effects, generating heat.

Venue:

Days of the Sun, tagedersonne.ch

Credits Performance:

Cast by Philipp Matter, Performer
Concept & Choreography by Fabian Müller, nomatark.ch

Sourced Sounds:

Sonifications of data sets of solar activity captured by the Michelson Doppler Imager (MDI) and the Helioseismic and Magnetic Imager (HMI). This data was downloaded from The Sonification of Solar Harmonics Project at the Stanford Solar Center. solar-center.stanford.edu/sosh

Written, narrated, and edited by Sam Rowell
Audio mastered by Sean McCann

Produced by **Fulcrum Arts**, 2025.

This project was originally presented as part of *Energy Fields: Vibrations of the Pacific*, an exhibition and performance series presented through the Getty initiative *PST Art: Art & Science Collide*.