



HAL
open science

No title

Jean-Marc Chomaz, Laurent Karst, Gregory Louis

► To cite this version:

Jean-Marc Chomaz, Laurent Karst, Gregory Louis. No title. MM '19: The 27th ACM International Conference on Multimedia, Oct 2019, Nice, France. pp.1141-1142, 10.1145/3343031.3360987. hal-02938387

HAL Id: hal-02938387

<https://hal.science/hal-02938387>

Submitted on 19 Jan 2022

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

Unresolved Sun / Soleil Irrésolu

An Art-Science Installation on the Origin of Time

Jean-Marc Chomaz
LadHyX
CNRS, École polytechnique
Palaiseau, France
chomaz@ladhyx.polytechnique.fr

Laurent Karst
ENSA Dijon
Dijon, France
atelier16@club-internet.fr

Gregory Louis
Blue Bear
Paris, France
louisgregory@neuf.fr

ABSTRACT

This work questions our relationship to time and cosmic phenomena that occur on scales in space and time far beyond human perception. In UNRESOLVED SUN / SOLEIL IRRÉSOLU, these phenomena are made tangible by a thin disc of green fluorescent liquid inhabited by mobile and ephemeral vibrations, in an unusual visual and sound landscape. Thanks to a complex optical device and precise adjustment, the light that passes through the layer is projected onto the adjacent wall in the form of a large orange disc deformed by storms. The space deployed in the imagination results more from music than from choreography. The small green fluorescent disc and the large projection then behave like a sound material composed of textures and rhythms. The sonic material is derived from the real and historical astrophysical observation of the crab Pulsar, a remnant neutron star of the gigantic explosion of a supernova never reported, the first object in space observed with a radio telescope to pulse at audible frequency.

CCS CONCEPTS

Fine arts; media arts; sound and music computing.

KEYWORDS: art installation; cosmos exploration; vibration; sound design; modular synthesis; light manipulation; data materialisation, time reversal, origin, irreversibility, causality.

1. ARTISTIC INTENTION

A muted vibration, a space that hesitates to unfold, an orange disc, tormented by primordial storms, a big torn mouth of an undecided cosmos.

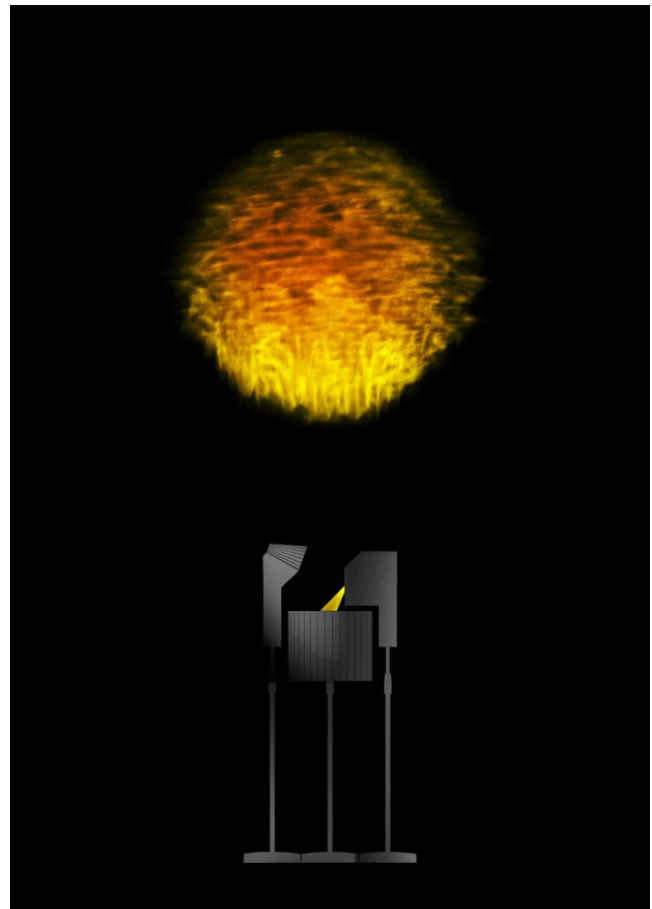


Figure 1: UNRESOLVED SUN / SOLEIL IRRÉSOLU Labofactory (artistic collective) Jean-Marc Chomaz and Laurent Karst.

At a distance from this red and vibrant sun, three slender black forms have initiated a dialogue, duality of lines, reversibility of the rays. In the centre of the black cylinder, a thin liquid lens pulses, a landscape of networked light waves, insoluble, hesitant and mobile quadrature. The other two shapes seem to lean over this microcosm, two large sticks or sceptres commanding a kingdom of light: one is thin, the other finished with a cone whose concave base is identical in size to the luminous lens. Faced with this device, at the rhythm of the waves travelling

through the thin liquid layer, the large disc is torn and then calmed down, an unsolved sun of the origins, a memory of the primitive moment when the flow of time had not yet decided on the slope.

2. THE SOUND SPACE

The sound space of the undecided Sun was conceived by Jean-Marc Chomaz and Greg Louis, composer, based on the radio signals emitted by the Pulsar du Crabe. The composition work uses the frequency data emitted by the pulsar available in the scientific literature since its discovery in 1968 and extrapolates them until the appearance of this residual neutron star from the supernova explosion in the Crab galaxy in 1054 recorded in Chinese astronomical surveys. In the installation, this vibration partition of the pulsar is played by perpetually going back in time to its appearance in 1054 and the storms of this unresolved sun are directly produced by the sound waves emitted in the exhibition space that the visitor experiences with his body.

ACKNOWLEDGMENTS

With the participation of Margaux MAUFROY, Valérien VAUDE, Anouk DAGUIN and Aniara RODADO and the contribution of Philippe Tatry Airbus DS - Space Systems - Gaïa satellite astrometry. The work is supported by the Chaire Arts & Sciences (Fondation Daniel et Nina Carasso, École polytechnique et École nationale supérieure des Arts Décoratifs – PSL).

REFERENCES

- [1] MCD art et science numéro 81, magazine et Cultures Digitales, sous la direction d'Annick Bureau, 2015.
- [2] Juhani Pallasma, 2010 : Le regard des sens, éditions du linteau.
- [3] A. Shanken Edward, 2008 : Art and Electronic Media, Phaidon.
- [4] Agamben Giorgio, 2007 : Qu'est ce qu'un dispositif, Paris, Payot et Rivages.
- [5] Max Planck, 1999 : Autobiographie scientifique, Champs Flammarion.
- [6] Maurice Merleau-Ponty, 1964 : Le visible et l'invisible, Bibliothèque des Idées.