#### A co-production

Mines Paris – ITN (Institut des Transformations Numériques) -Executive Producer, Crescendo-APJM (Association pour la Promotion des Jeunes Musiciens), Polychronies/2CDM (Collectif de Création et de Diffusion Musicale)

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# FROM THE ABYSS TO THE STARS **STORIES FROM THE OUTER LIMITS**

Season 2025 - 2026

## FROM THE ABYSS TO THE STARS, STORIES FROM THE OUTER LIMITS

Multimedia show combining arts and sciences

Thanks to the increasingly precise and distant data provided by the satellites of the European Copernicus program, or by Ifremer's underwater robots exploring the abyss, we are now able to obtain information about our planet and the universe that should help scientists and politicians make informed decisions about the environment, climate and security.

The Polychronies percussion ensemble, here extended to include woodwinds and strings, came up with the idea of a multimedia show based around 2 musical creations with electroacoustics, one looking towards the abyss by composer Kazuko Narita and the other towards the stars by composer Lara Morciano.

Using generative electronics technologies from Ircam and the ERC REACH project (notably the Somax2 software), led by Gérard Assayag, these pieces are mixed spatialized works, integrating instrumental music with gravitational or electro-magnetic waves sonified from the universe, natural aquatic sounds produced by marine animals, as well as background noise, noise pollution and more.

This show is made possible by the collaboration of scientific establishments (Mines Paris - PSL, Université de Toulon, Ifremer), which provide the creators with observation data in the human audible and visible spectrums, the basic sound and visual materials that feed and inspire the multimedia creation.

A narrative by writer Jacques Keriguy (with subtitles depending on the country) punctuates the progression of music and visual events projected in real time onto several screens. It has an informative, didactic, but also poetic and marvelous function. Alongside the musicians performing the works, it is directed by Mark Blezinger through the action of the narrator, a sort of modern-day explorer who ponders the ecological, scientific and philosophical issues facing humanity in the 21st century.

We propose an action with variable geometry according to contexts and places, namely :

- the show in its entirety

- in the form of a sound and multimedia installation

- as an illustration of workshops

These events will also aim to :

- Give a strong voice to some of the most innovative female music composers of our time, from an international perspective and with a positive and humanistic use of new technologies.

- Link to a vast natural perspective from the abyss to the cosmos, at a time when we feel the fragility of these spaces and the urgent need to grasp all their beauty and protect them.

- Use state-of-the-art artificial intelligence to create sound and multimedia interaction in which human creation is central, but which also opens up new and powerful aesthetic spaces.

A sound - and multimedia - installation in which virtual "agents", both pre-composed by the composers and trained in their materials and aesthetics, but also autonomous and capable of exploring

So, does the imaginary world of natural spaces (for example, the fusion of two massive black holes generating disturbances in gravitational fields, measurable by our instruments) resonate with the artistic and musical imaginary world? What forms, sounds and orchestrations might this image provoke in composers?

indefinitely by themselves the musical universe thus defined, come into play and inhabit the exhibition space, with a sophisticated spatial layout and accompanying visual media (photorealistic, 3D, generative, etc.) that extend the music on this abyssal/ cosmos journey. These agents are the same as those making up the live generative electronics in the concert, but here in totally autonomous mode, and reacting to the audience.

Workshops can focus on :

- Earth and cosmic data acquisition, in connection with climate studies and sunlight modeling.

- Underwater acoustics and robotics, the mysterious life of the deep sea and marine bio-phonics as an indicator of biodiversity.

- New digital technologies for musical creation, including Ircam's most advanced work on co-creative artificial intelligence intervening in real-time with musicians, but also the use of space, sonification of data from terrestrial, marine and space observations, acoustics and marine biology, in relation to the musical and ecological themes of the project.

(Illustration of the stage system with 3 projection screens)