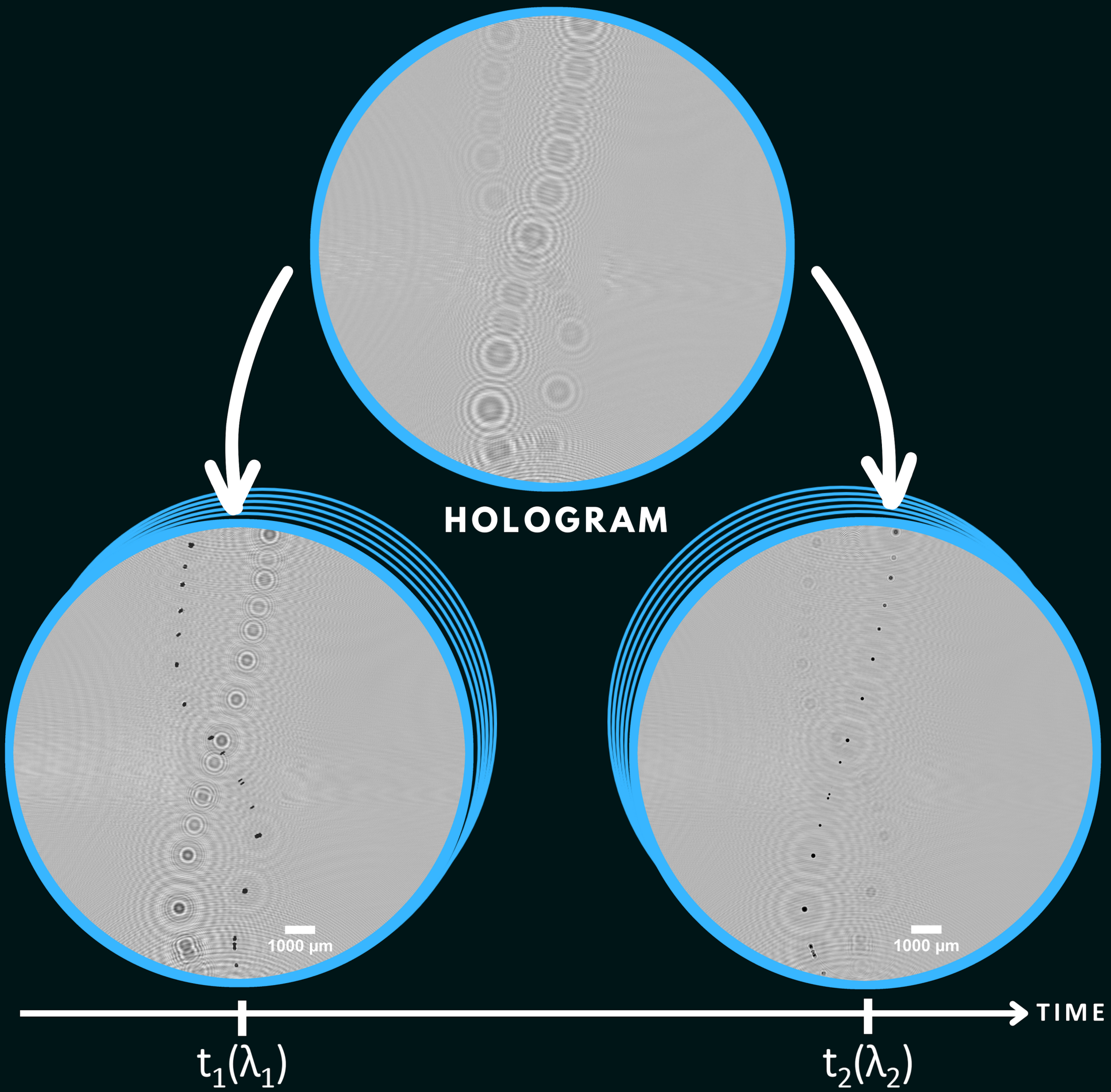


THE DANCING BEADS

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Stretching a viscoelastic fluid element between two plates can lead to the formation of a bead-on-a-string structure. This structure is composed of several drops connected by a filament (not visible here). Submitted to a perturbed environment, it may start to oscillate. Digital holography is a 3D optical method. It consists in recording an infinite number of planes and focusing on each particle image. In the present case, a two-wavelength light source is used to capture the moving objects but at two different times on a single hologram. Measuring the 3D coordinates and velocity of particles is then possible. Here, the oscillation takes the shape of a stationary wave of wavelength equal to the distance between the plates.

Robin Noury et al, "Phase analysis for focus plane detection in digital inline holography: application to three-dimensional locations of drops and threads in a beads-on-a-string structure," *Appl. Opt.* 62, 6241-6252 (2023)