

PRESSBOOK

Gianni MOTTI

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CERN Experiment Shows Why Every Artist Needs A Particle Accelerator (And Vice Versa)

On May 20, 2005, the Swiss artist Gianni Motti challenged some hydrogen protons to a foot race. Walking through the tunnel of the Large Hadron Collider – the world’s biggest particle accelerator – he averaged a pace of three miles per hour. The protons were faster, circling the 17-mile loop at 186,282 miles per second. Motti never tried racing them again.

Motti’s foot race was not only tolerated by CERN – the European consortium that operates the LHC – but was actively solicited as the first in a [series of artist commissions](#). While the LHC is now most famous for finding the Higgs boson, those artist interventions have become an essential aspect of the particle accelerator’s identity as a space for creative collaboration across the sciences and humanities. This evolving relationship will be explored next Monday in a panel discussion [organized by Swissnex San Francisco](#) and [the Exploratorium](#).



Bill Fontana in the Large Hadron Collider. Photo by Michael Fontana. Courtesy of CERN.

The power of Motti’s performance – beyond his deadpan theatrics – was that he sought a connection between our everyday experience and a realm known only through indirect observation. Motti literally carried out the sort of thought experiment undertaken by physicists including Albert Einstein and Richard Feynman, who imagined themselves in the position of photons and electrons in order to theorize their behaviors.

More recently the American sound artist Bill Fontana – who will be one of the panelists next week – spent a couple months at CERN listening to the LHC and recording what he heard. His sonic surveillance of protons under acceleration accentuates the machine noise that physicists strive to eliminate from their experiments. Making it music, Fontana calls attention to how much is missed through our efforts to filter and sift.

The Large Hadron Collider was built to explore the unknown. That’s an ambition the sciences and arts have in common even when their tools are different. The work undertaken by Fontana and Motti shows that a machine as complex as the LHC can be a tool for both sorts of investigation. Vast artistic potential remains, from the visual (e.g., capturing social interactions between CERN scientists using LHC data visualization) to the conceptual (e.g.,

attempting to fix the damage done to subatomic particles after a collision). Explored by artists and scientists in collaboration, the LHC leads in myriad directions.