

Ronald Feldman Fine Arts

TODD SILER

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FRACTAL REACTOR: RE-CREATING THE SUN

SEPTEMBER 9 – OCTOBER 7

Man is unique not because he does science, and he is unique not because he does art, but because science and art equally are expressions of his marvelous plasticity of mind. Jacob Bronowski: Mathematician and Poet (1908-1974)

Todd Siler, trained in both science and the visual arts, will exhibit models and drawings derived from his studies and speculations on nuclear fusion reactor design. Delving into an area that science and technology so far have been unable to fully solve, Siler, in his new body of work, responds to one of the most monumental scientific challenges of the day: how to recreate the power of the sun on earth in order to provide a safe, readily available, environmentally friendly energy source, that is essentially inexhaustible.

With the obsession of the search for the Holy Grail, Siler has pursued the premise that a thermonuclear fusion energy system might become increasingly more effective to the degree that this system more closely embodies the geometry and physics of a star, which is nature's "fractal reactor."

This perspective contrasts with that of the prevailing scientific community and the ongoing practice of building nuclear reactor devices based on Classical [Euclidean] geometry as opposed to fractal geometry, which better represents nature's irregular-shapes and non-linear forms. Siler sums up the differences this way: "Why not work *with nature rather than against it*, in controlling the forces that govern burning plasmas? Instead of jamming a square peg (i.e. Euclidean geometry) into a round hole (i.e., fractal geometry), why not consider the possibility of exerting intense forces on the plasmas by approximating the gravitational forces in a star?"

The exhibition, a lively and engaging expression of Siler's suppositions, uses a variety of materials and techniques to capture the essence of immaterial energy. Models and sculptures suggest the power of compressed and contained energy that includes nature's fractal forms. Drawings incorporate sculptural elements, tactile surfaces, and the colors of enormous heat against the entropy of the void, and a video animates the Fractal Reactor concept with hallucinatory graphics.

Siler envisions that his concept will contribute to the success of utilizing a stellar source of energy and power, with which nature gifted the universe and which human beings can choose to use for peaceful purposes. As better fusion energy systems are made available to everyone and every nation, the violent conquests for finding and securing sustainable sources of energy will subside.

The models are created in collaboration with Charles Benson, architect with Advanced Technological Resources, sculptor Roger Leitner, and Anark Corporation, a design productions company specializing in interactive media.

Todd Siler received his PhD in Interdisciplinary Studies from MIT. Public collections include the Solomon R. Guggenheim Museum, The Metropolitan Museum of Art, and The Museum of Modern Art. Siler was a Forum Fellow at the World Economic Forum in Davos, Switzerland. Publications include "Fractal Reactor: A New Geometry for Plasma Fusion," in *Current Trends in International Fusion Research – Proceedings of the Third Symposium*, edited by Dr. Emilio Panarella. (National Research Council of Canada, Ottawa, Canada: 2002). An article explaining how Siler arrived at the Fractal Reactor concept through *Metaphorming* – using his art and neurobiology background to "prepare his mind" for this work – will be published in *Leonardo Journal*.

There will be a reception September 9, 6 – 8. Gallery hours are Tuesday through Saturday, 10 – 6. Monday by Appointment. For information, contact Sarah Paulson at (212) 226-3232 or sarah@feldmangallery.com.