

A Sampling from the History of Photography

George Legrady ©

Experimental Visualization Lab

Media Arts & Technology

University of California, Santa Barbara

Niepce (1826), oldest chemically fixed image (taken on his roof)



<https://www.hrc.utexas.edu/niepce-heliograph/>

10 minute shutter exposure



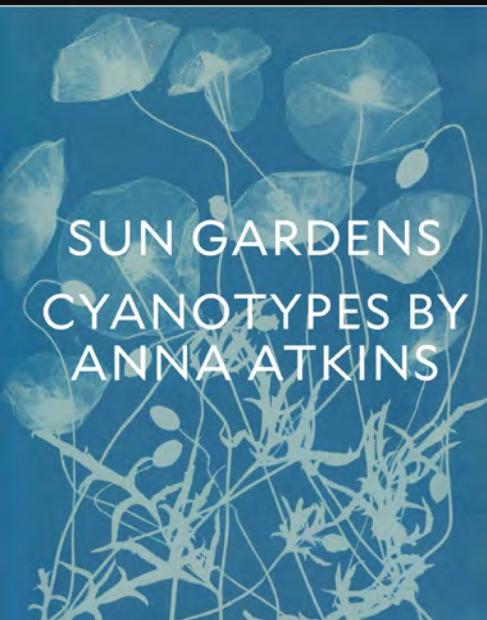
Louis Daguerre, first photograph of a person on a busy street, (1839)

The Photographic Workshop (1846)



Henri Fox Talbot (1800-1877), Patent for the Calotype restricted circulation

Cyanotype photographs of plants - Scientific Applications



“Ricking the Reed”, Platinum print, Peter Henry Emerson (1886)



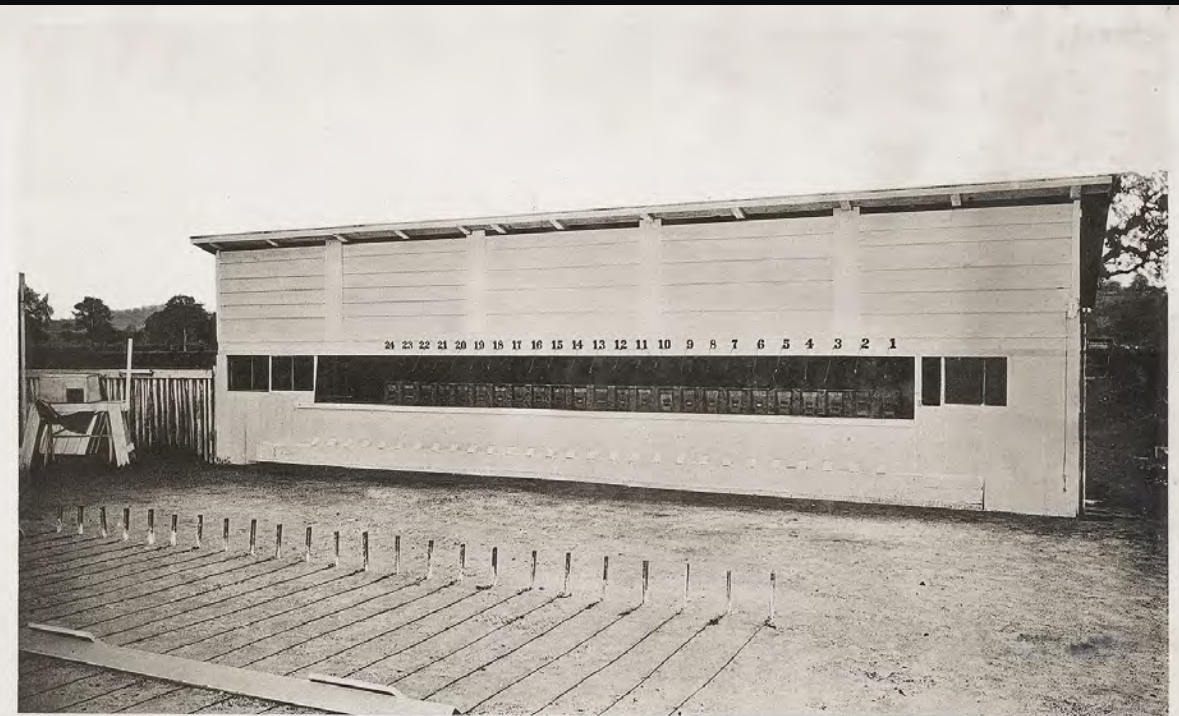
“Two Ways of Life”, Platinum print, Oscar Gustave Rejlander (1857)



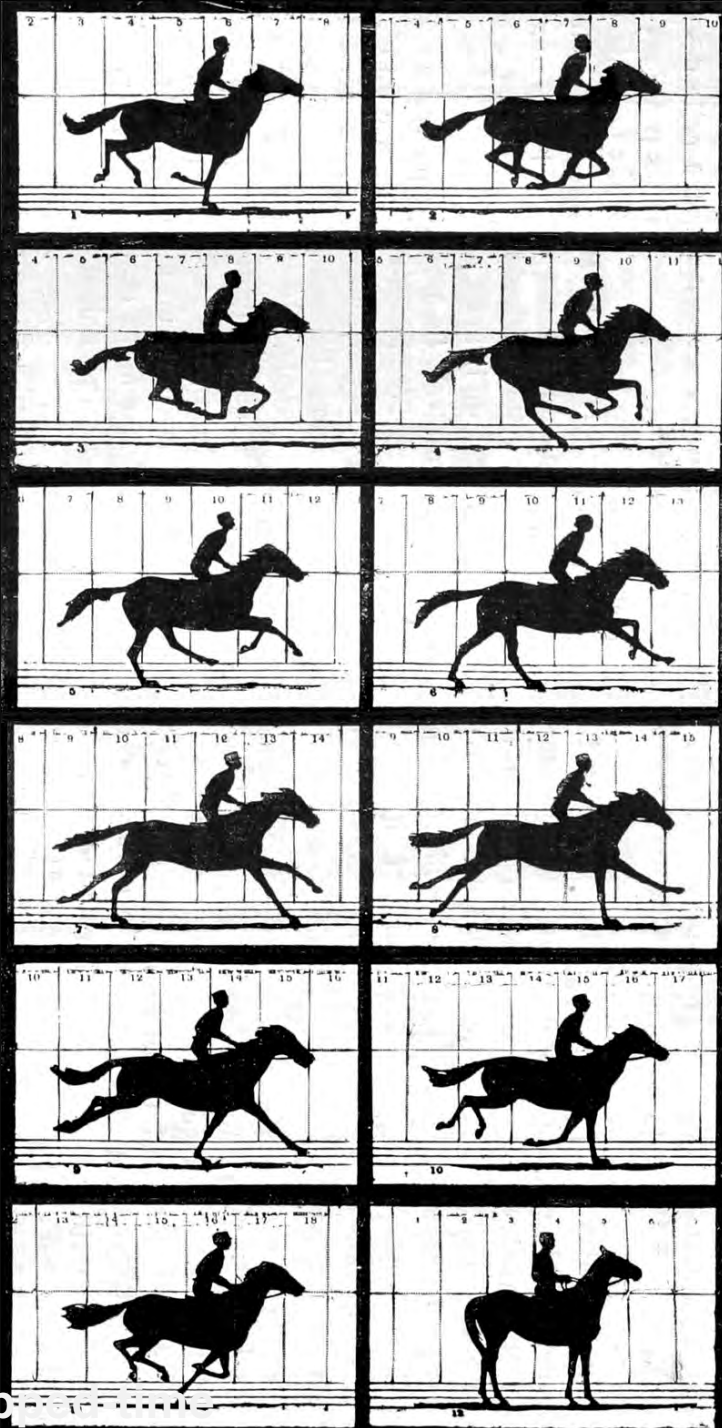
“The Passing of Arthur” (Right image) Julie Margaret Cameron (1875)



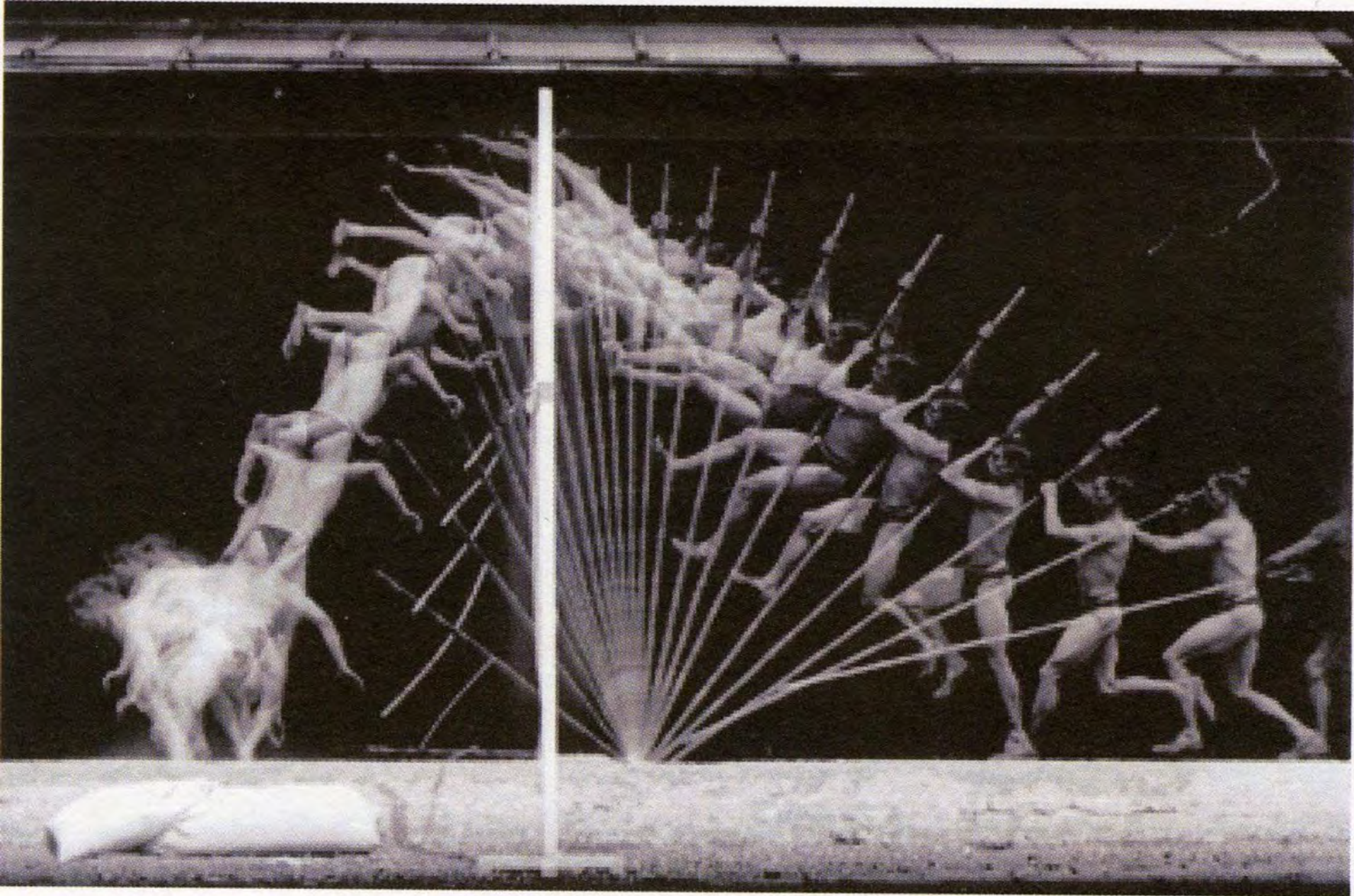
Animal Locomotion, 1872



VIEW OF THE 24 CAMERAS IN POSITION



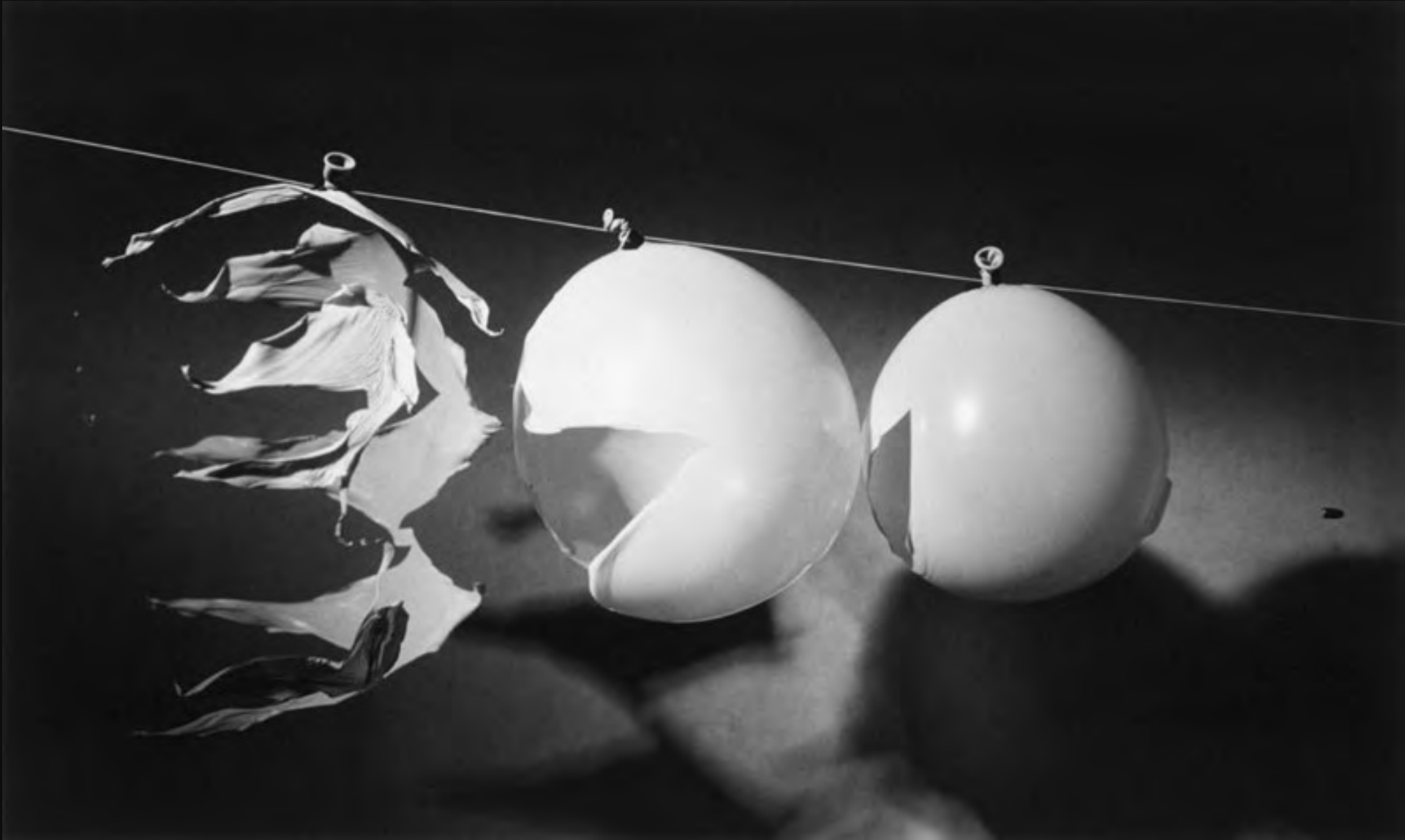
Chrono-Photography



Etienne-Jules Marey, scientist, physiologist, 1880s



High-speed photography



Harold Edgerton, MIT, "Bullet through Three Balloons" (1959)

Visualizing Photons in Motion at a trillion frames per second (2013)

Femto-Photography: Capturing and Visualizing the Propagation of Light

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Chinmaya Joshi^{1‡} Everett Lawson¹ Mounqi Bawendi³ Diego Gutierrez² Ramesh Raskar¹

¹ MIT Media Lab

² Universidad de Zaragoza

³ MIT Department of Chemistry

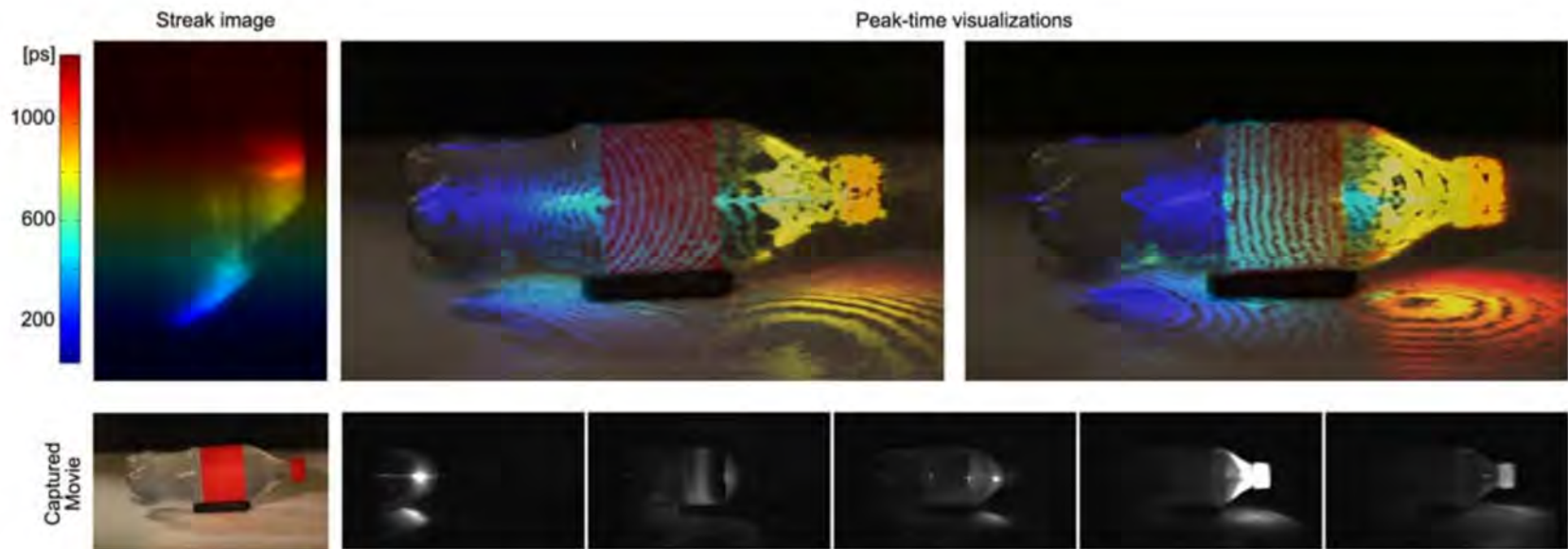
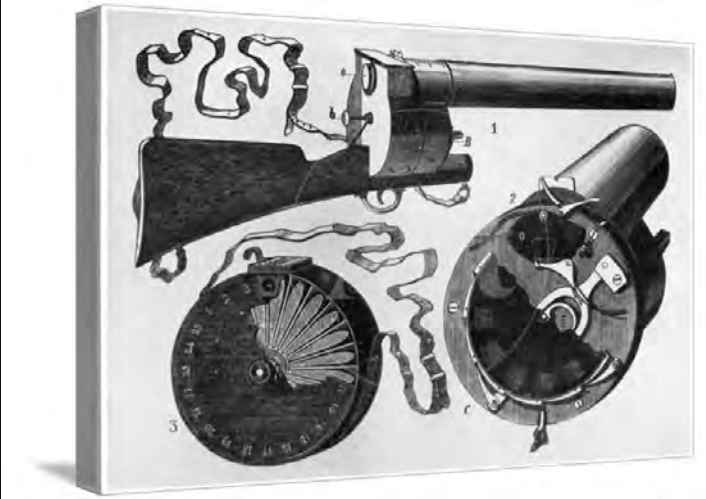
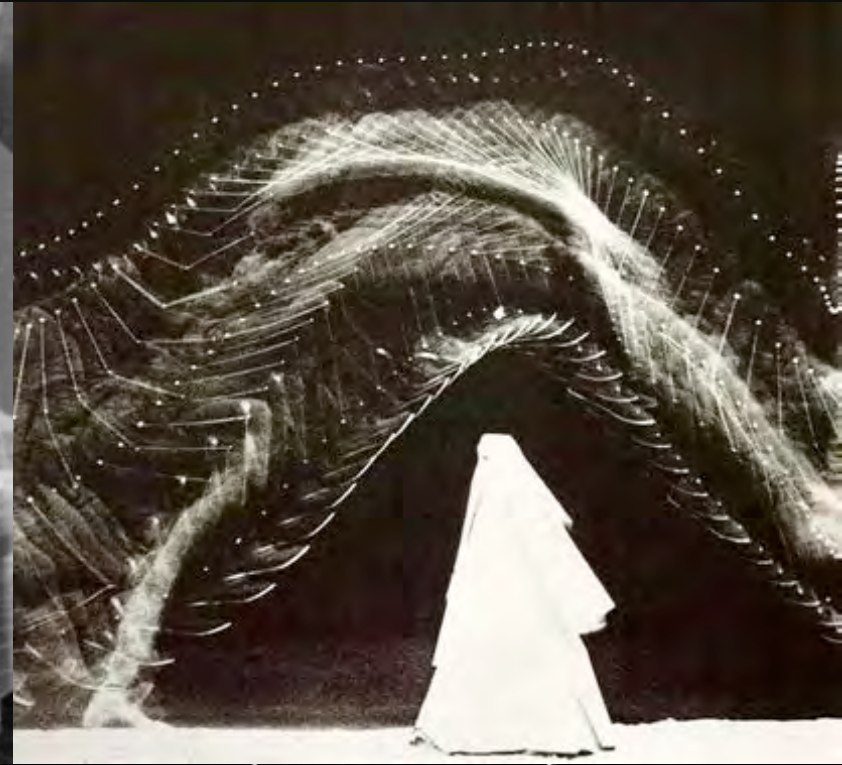
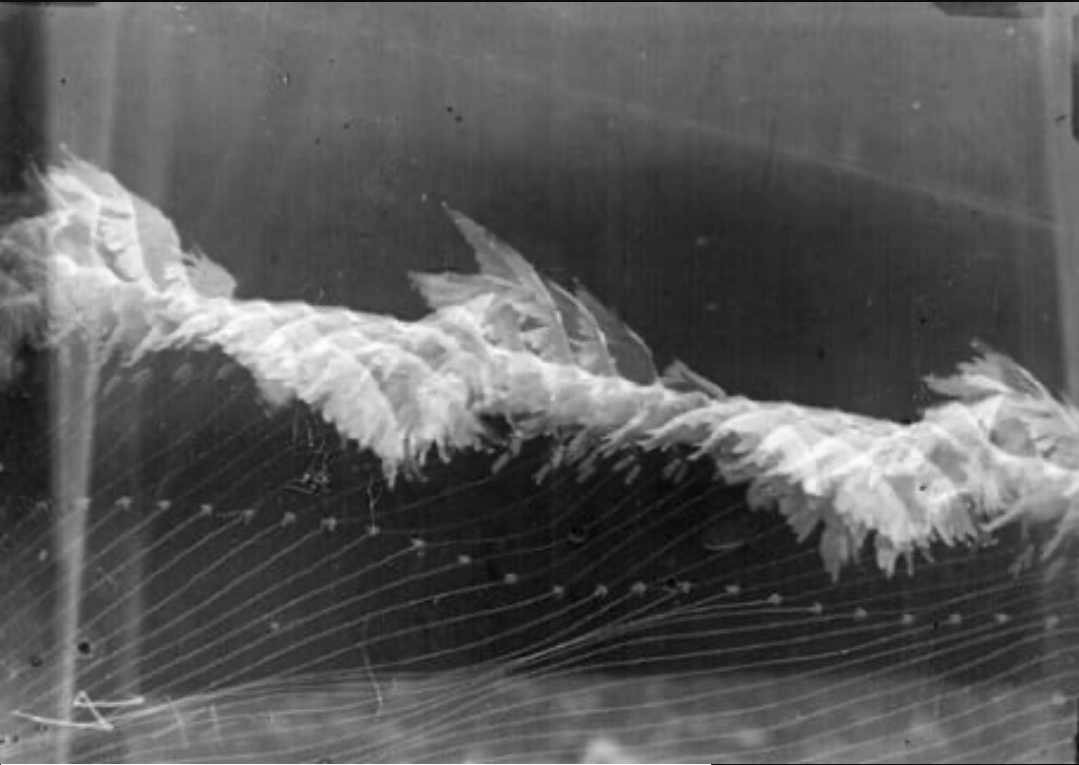


Figure 1: *What does the world look like at the speed of light? Our new computational photography technique allows us to visualize light in ultra-slow motion, as it travels and interacts with objects in table-top scenes. We capture photons with an effective temporal resolution of less than 2 picoseconds per frame. Top row, left: a false color, single streak image from our sensor. Middle: time lapse visualization of the bottle scene, as directly reconstructed from sensor data. Right: time-unwarped visualization, taking into account the fact that the speed of light can no longer be considered infinite (see the main text for details). Bottom row: original scene through which a laser pulse propagates, followed by different frames of the complete reconstructed video. For this and other results in the paper, we refer the reader to the video included in the supplementary material.*

Camera Motion, *Grand Prix*, Jacques-Henri Lartique (1913)



Chrono-Photography

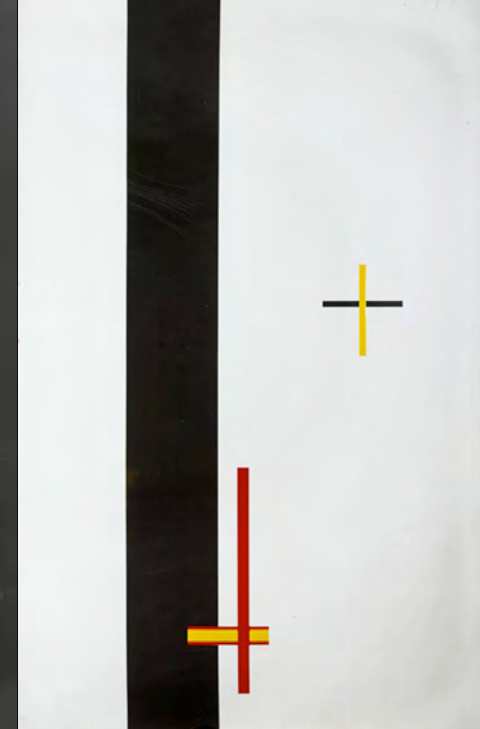
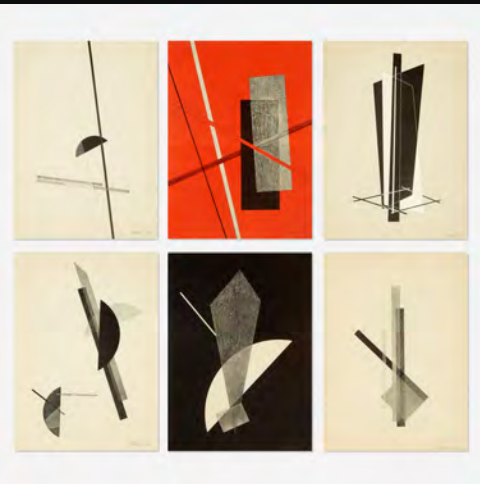


Etienne-Jules Marey, scientist, physiologist, 1880s

“Head in Movement”, Anton Giulio Bragaglia (1911)



Depth of Field



László Moholy-Nagy, *Photograph (Self-Portrait with Hand)*, 1925/29, printed 1940/49

Self-portrait (with mirrors)

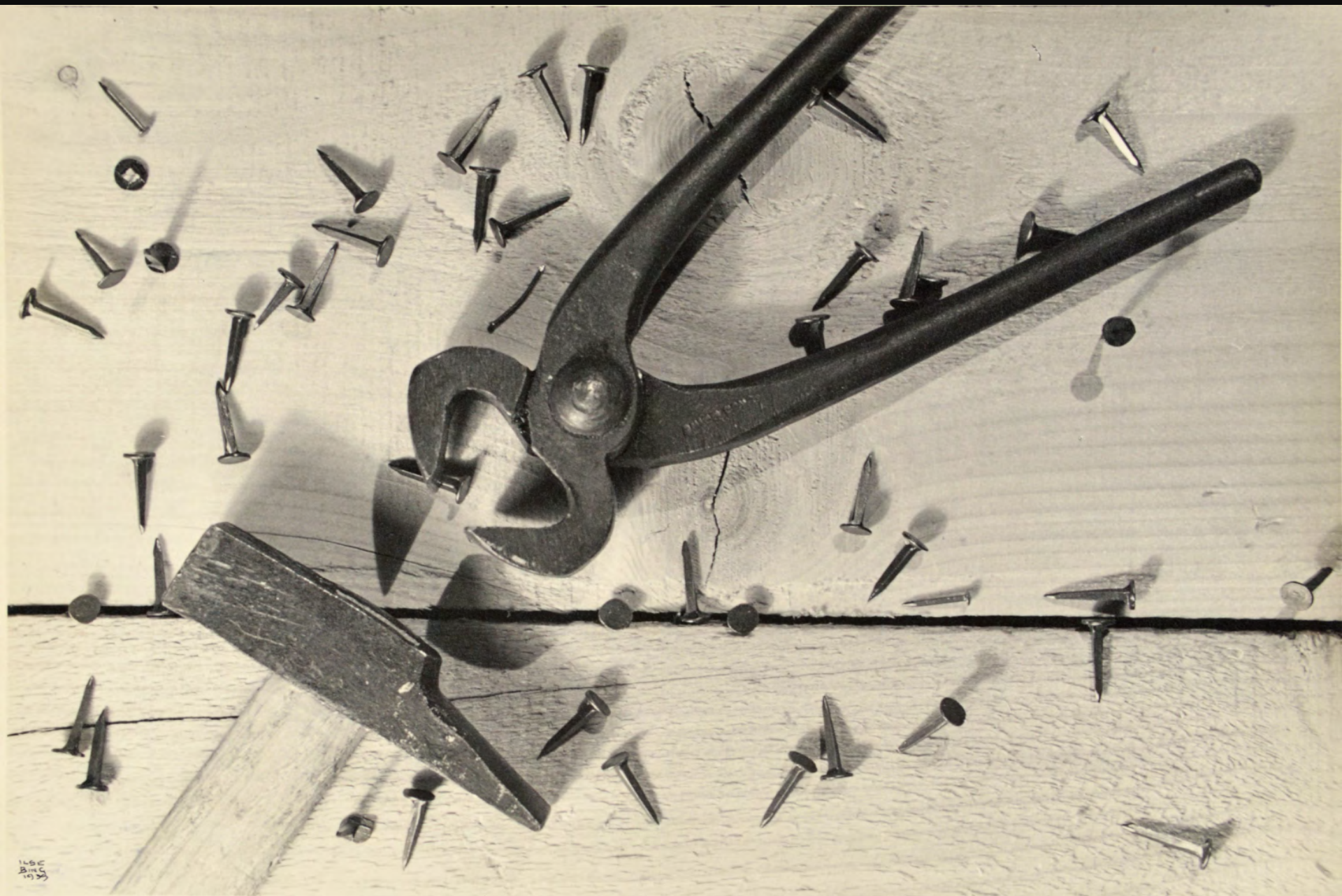


Ilse Bing (1899–1998). *Self-Portrait with Leica*, 1931. www.eastman.org/node/6733

Ilse Bing, Three Men Sitting on Steps at the Seine (1931)

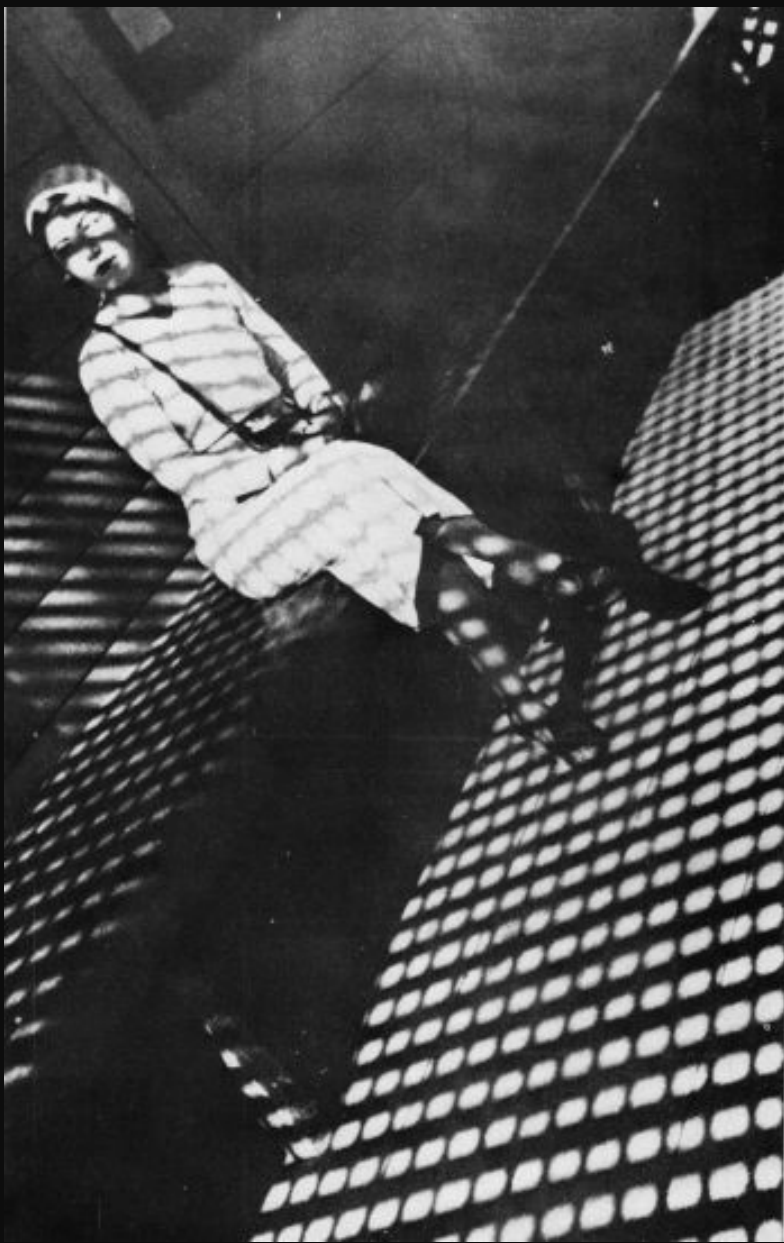


“Hammer, Plier, Nails”, 1939, gelatin silver print



Ilse Bing (1899–1998), <https://henryart.org/exhibitions/ilse-bing-modern-photographer>

“With Leica” (1934), “Gathering” Alexander Rodchenko (1928)



Seville, Spain, Henri Cartier-Bresson (1933)



Time of Change, Selma March, Bruce Davidson (1965)



Shakedown at Ellis Unit, Huntsville, Texas, Danny Lyon (1968)



© Danny Lyons / Magnum Photos / Edwynn Houk Gallery

<https://www.dailymail.co.uk/news/article-3375845/American-outlaws-One-photographer-s-four-decade-journey-biker-gangs-prisons-segregated-South-captured-brutal-honesty.html>

Child With Toy Hand Grenade in Central Park, Diane Arbus (1962)



New York World's Fair, Gary Winogrand (1964)



Dealey Plaza (where John Kennedy was assassinated), Gary Winogrand (1964)



Play of balance with Point-of-View, Knoxville, Tennessee, (1971) Lee Friedlander





Shape of Light

100 Years of Photography
and Abstract Art

“Vortograph”, Alvin Langdon Coburn (1916)



Vortograph (1916-1917) <https://www.moma.org/>

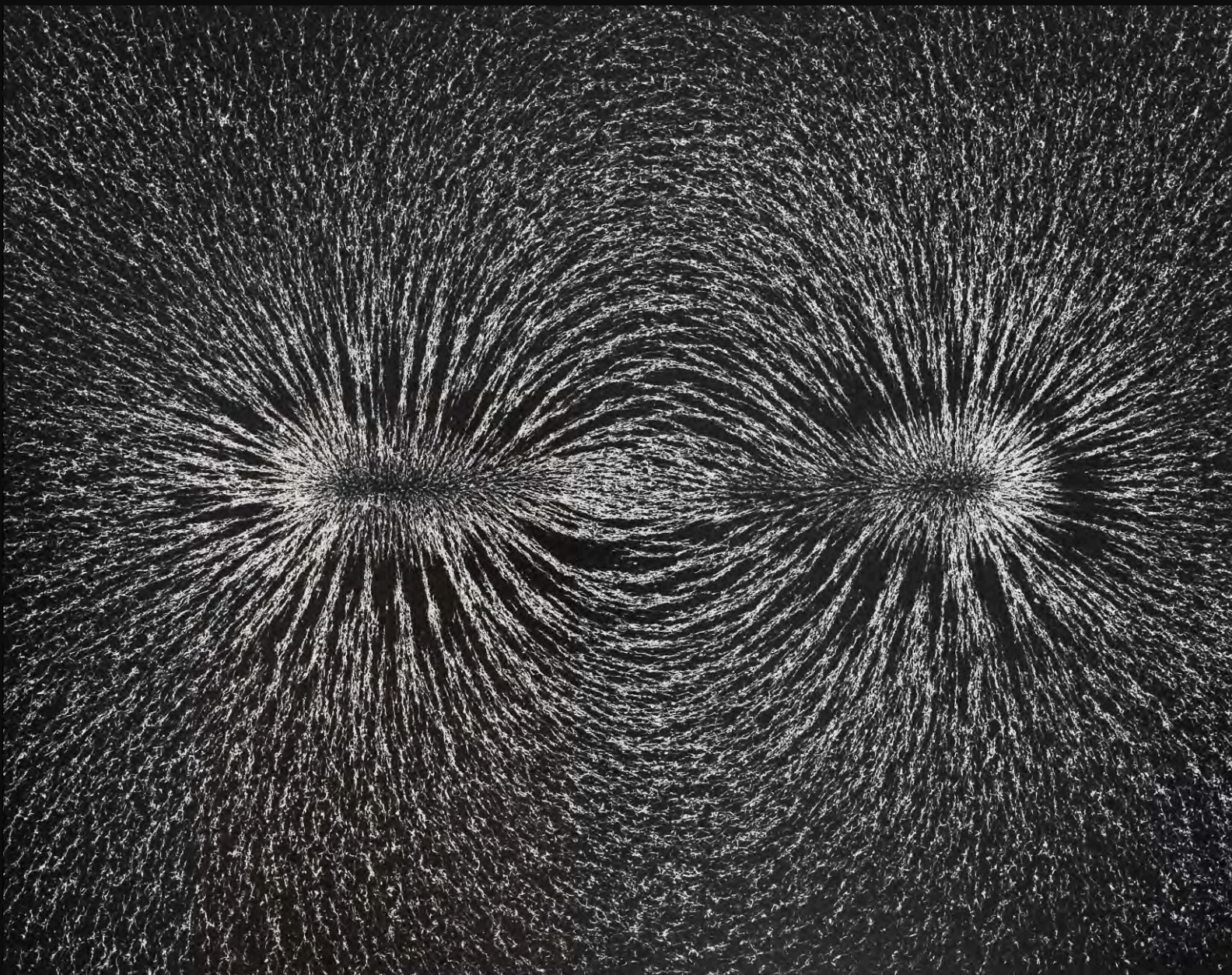
“Light Abstractions”, Francis Bruguiere (1925)



a



“Magnetic Field”, Berenice Abbott (1925)



<https://bellgallery.wordpress.com/2014/02/12/spotlight-magnetic-field-by-berenice-abbott/>

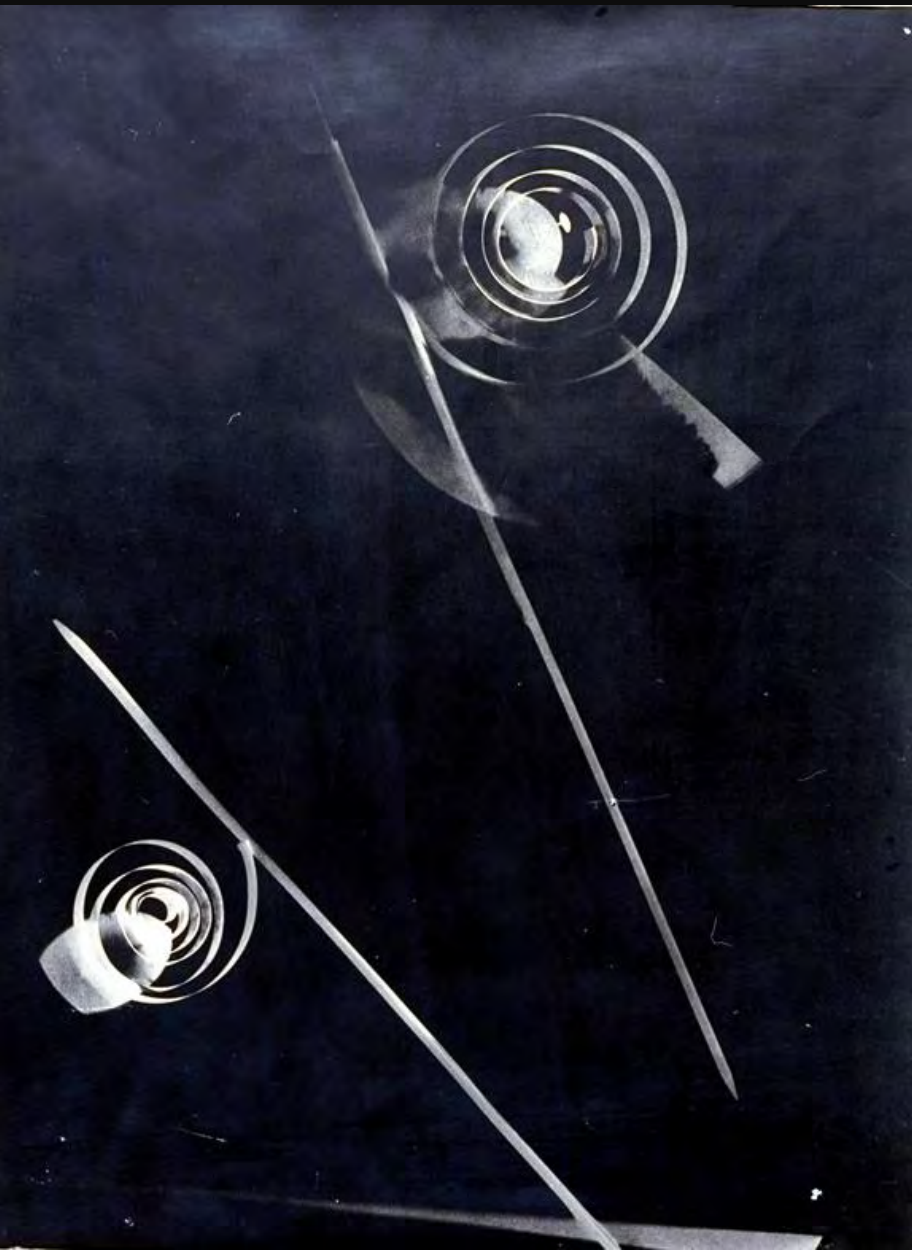
“Light Tapestry”, Nathan Lerner (1938)



“Space Writing”, Man Ray(1935), “Planes” (1922)



“Photogram” (1922), “Dessau”, Laszlo Moholy-Nagy



“Metal”, Germaine Krull



<https://www.widewalls.ch/magazine/germaine-krull-metal-pinakothek-moderne-munich>

“Amourette”, Christian Schad (1918)



“Light Abstractions”, Otto Steinert(1952)

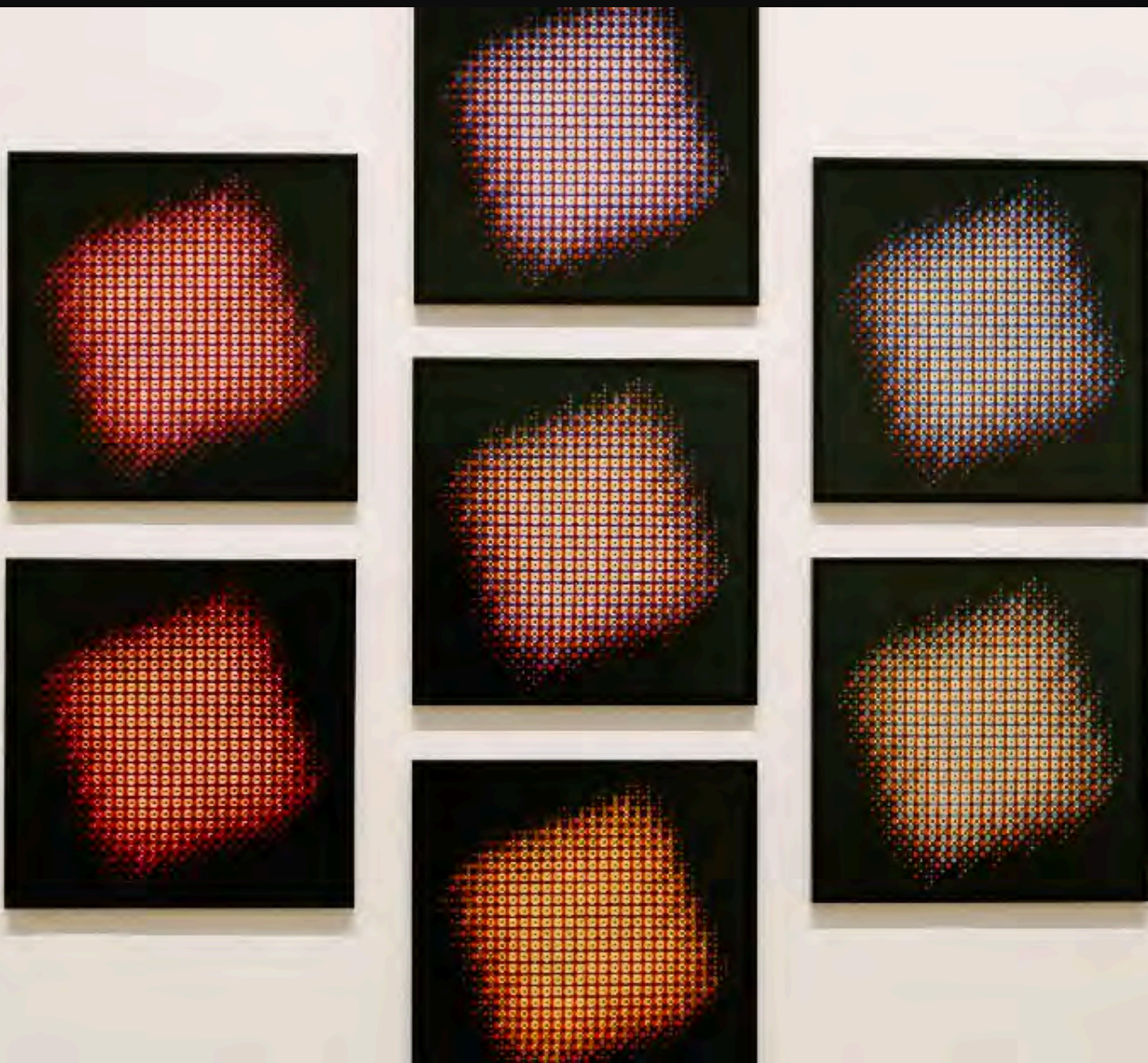


<https://www.tate.org.uk/whats-on/tate-modern/display/otto-steinert>

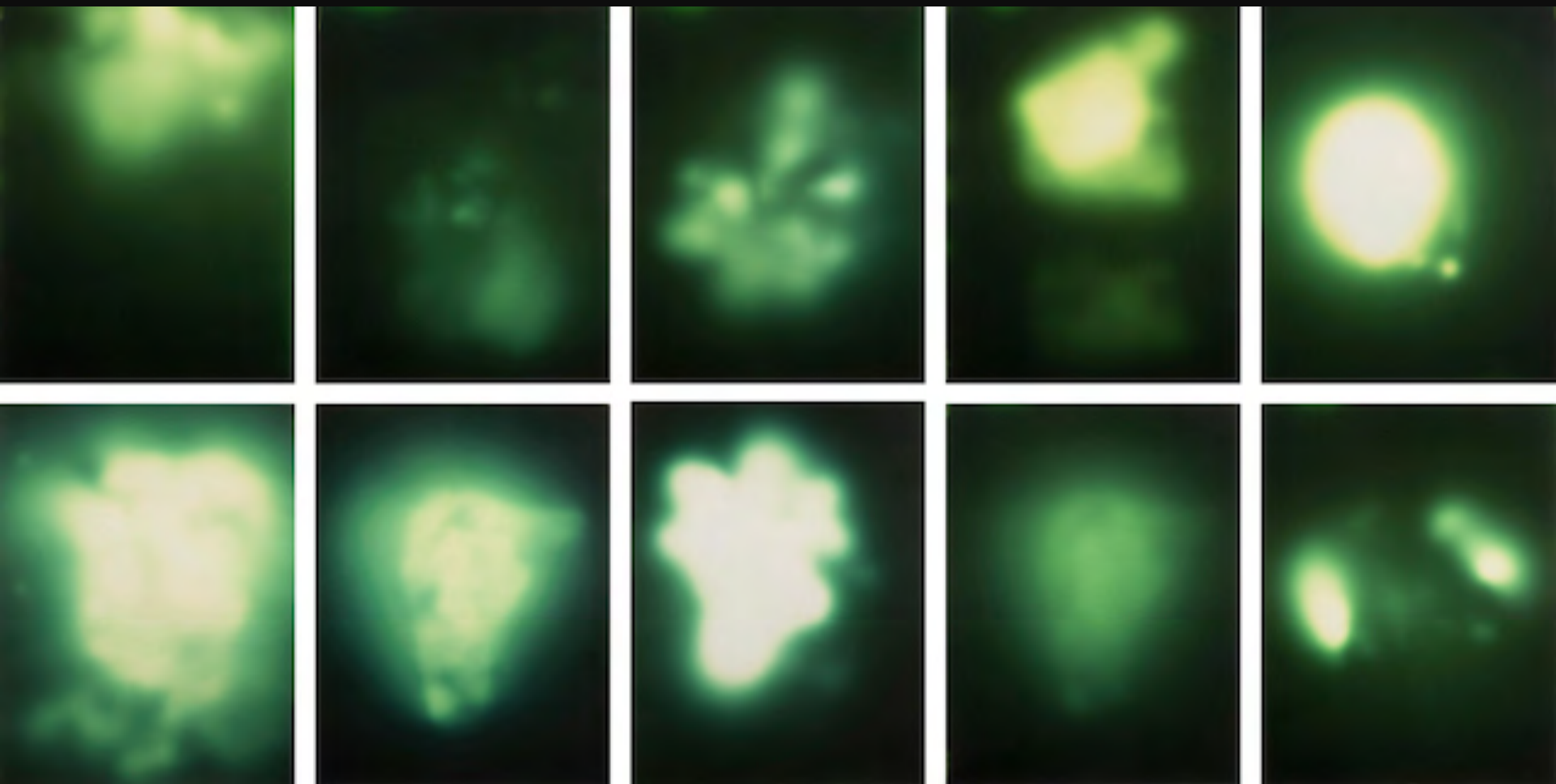
“New Jersey 5”, Aaron Siskind (1950)



“PinHole Structures”, Gottfried Jager (1967)



“Untitled”, (Radioactive exposure) Sigmar Polke(1992)



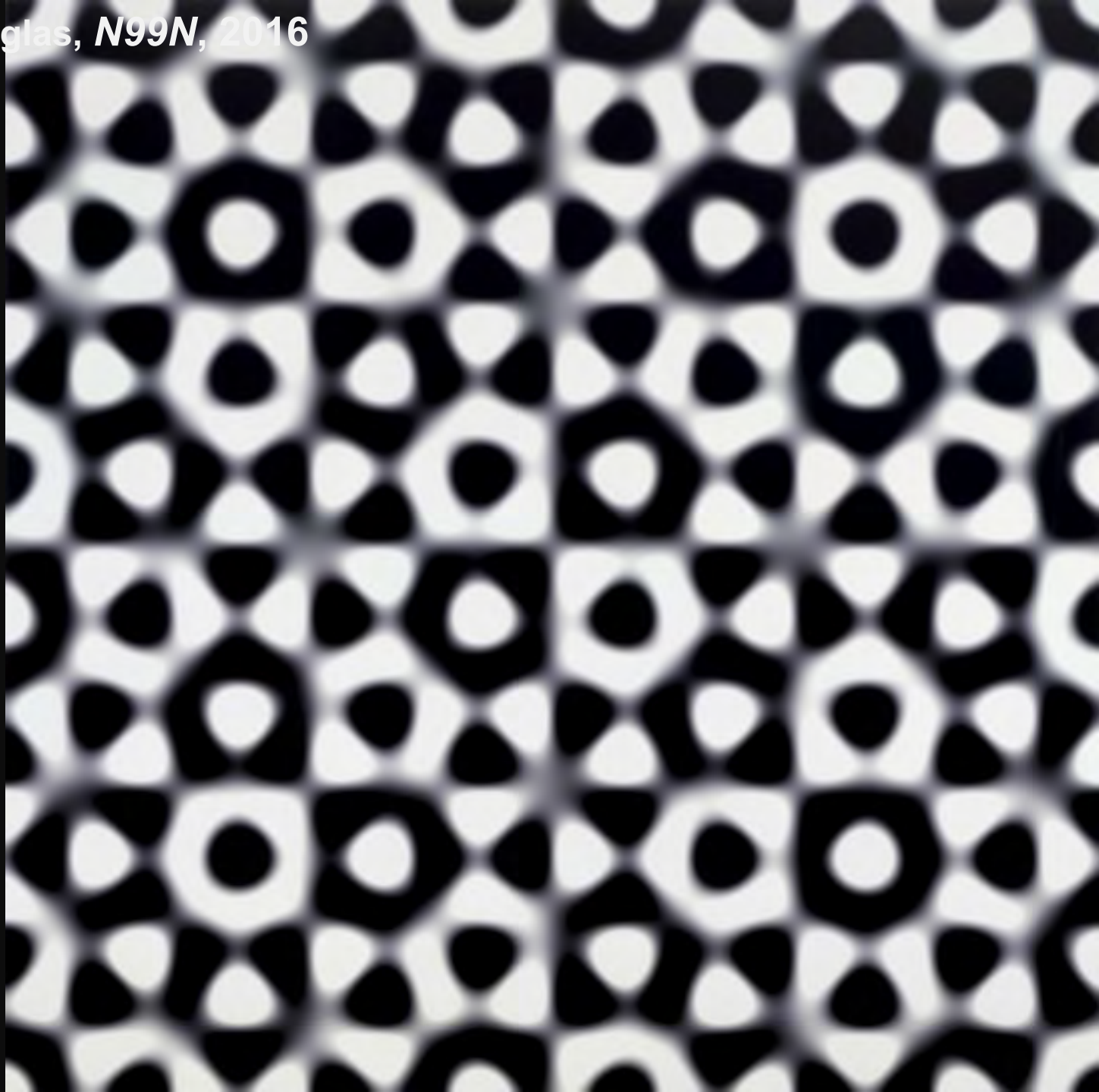
“Untitled”, Quetta, Pakistan, Sigmar Polke(1974-1978)



Alison Rossiter (2012)



Stan Douglas, *N99N*, 2016



“DCT series”, Stan Douglas (2016)



First View of Earth from Moon, Lunar orbiter, NASA (Oct 1, 1966)



First View of Earth from Moon, Lunar orbiter, NASA (October 1, 1966)



<https://www.nasa.gov/feature/50-years-ago-the-lunar-orbiter-program>

First View of Earth from Moon, Lunar orbiter, NASA (Oct 1, 1966)



Man on the Moon, Buzz Aldrin, Apollo 11 mission, NASA (July 16, 1969)



Recent news photo, possibly Afghanistan



Mask fabrication in China



Images in Painting, Photography, Astronomy, Microscopy, Particle Physics and Quantum MEchanics

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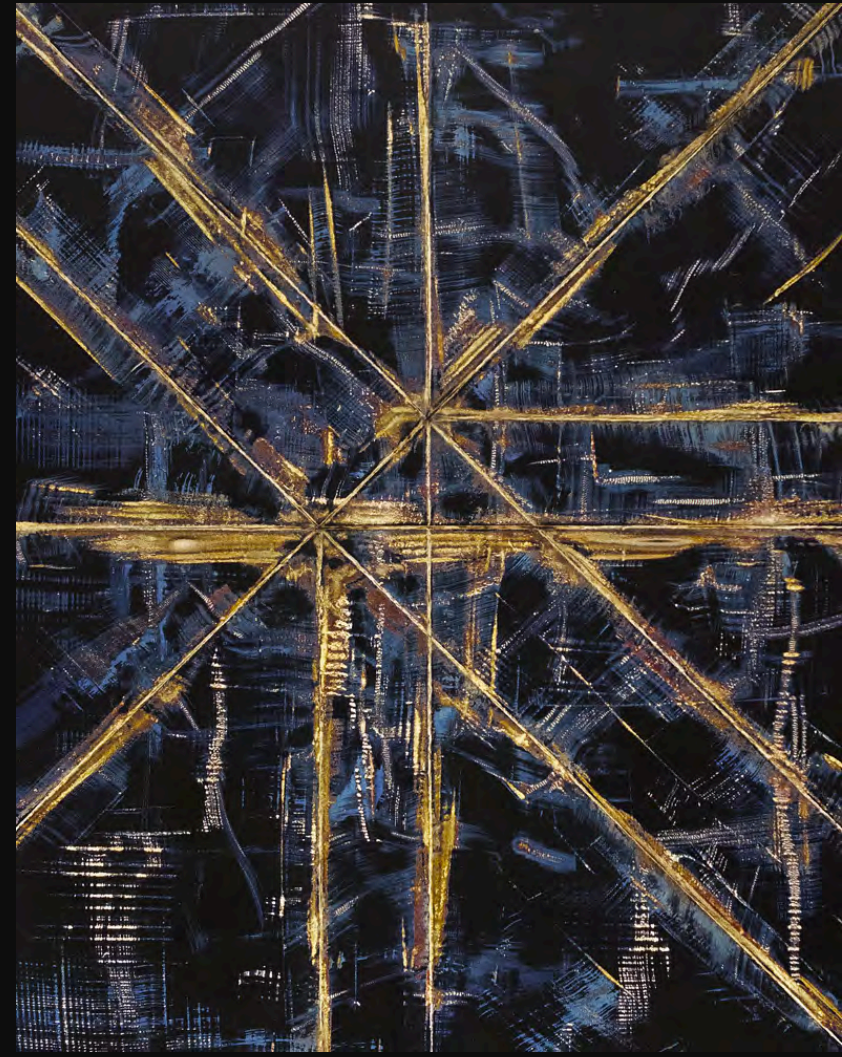
1980–2000

Six Stories from the End of Representation

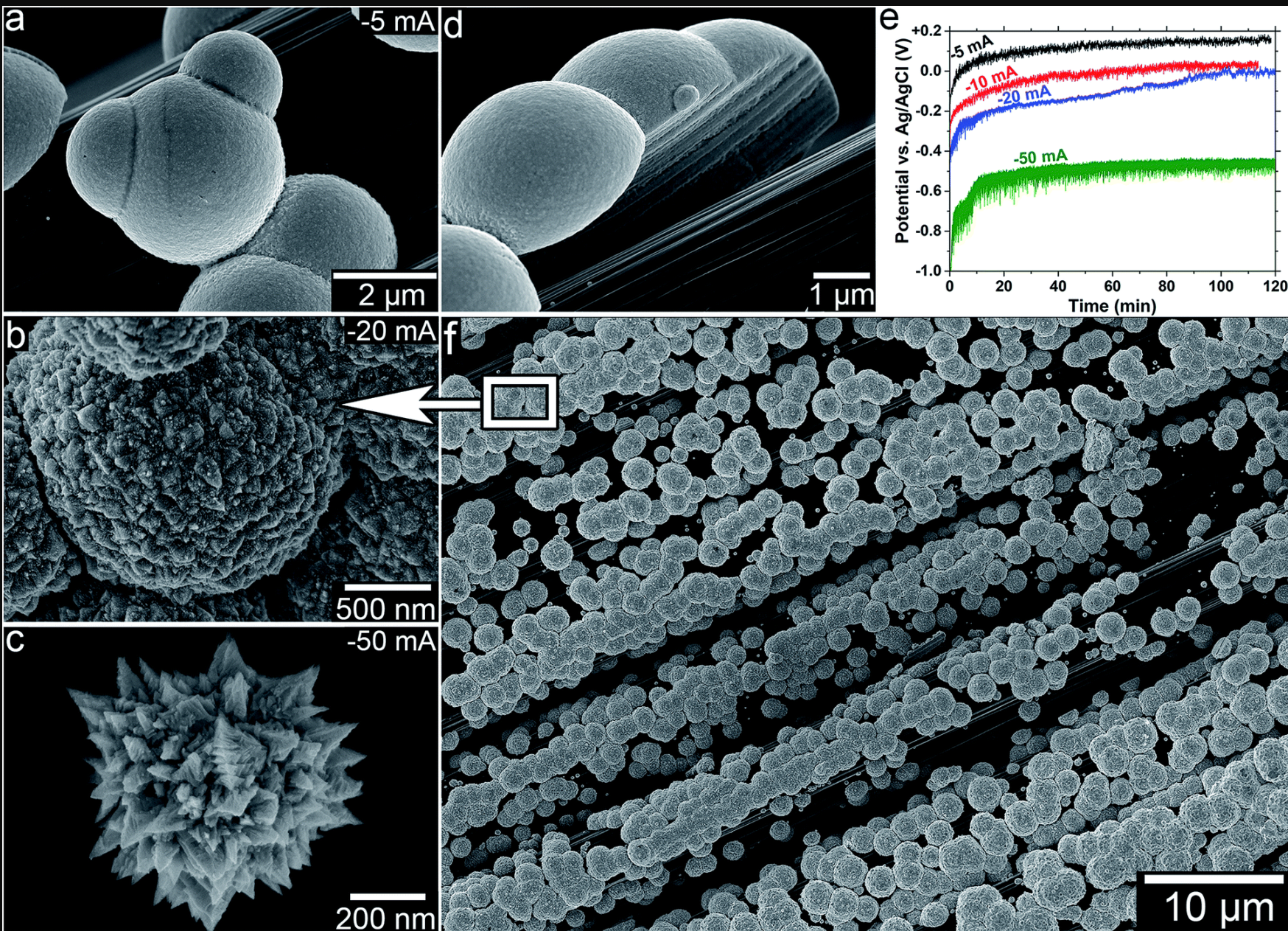
James Elkins

Marcel Duchamp (1916) | Gerhardt Richter (1965)





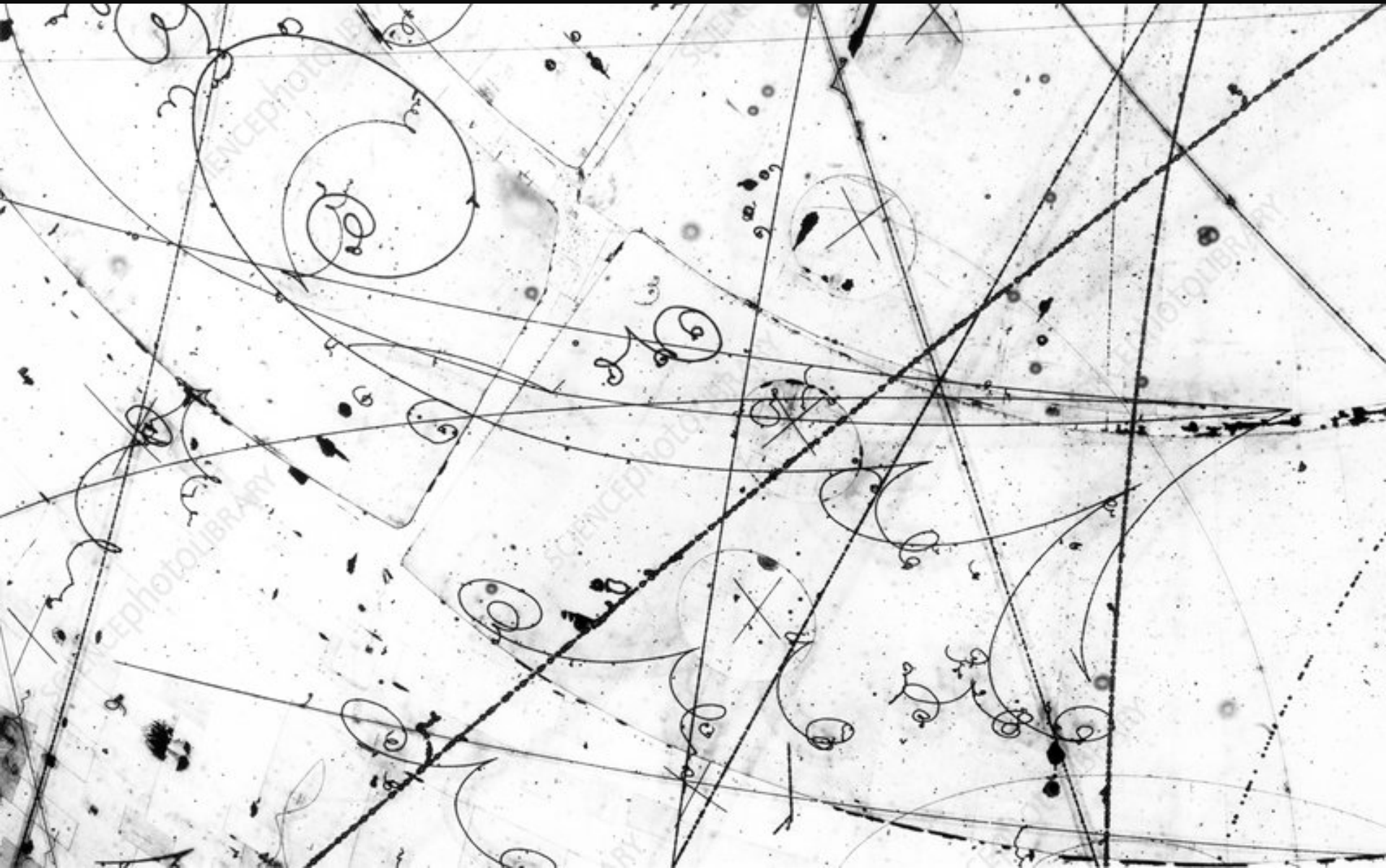
SEM images of carbon fibers electrodeposited with platinum



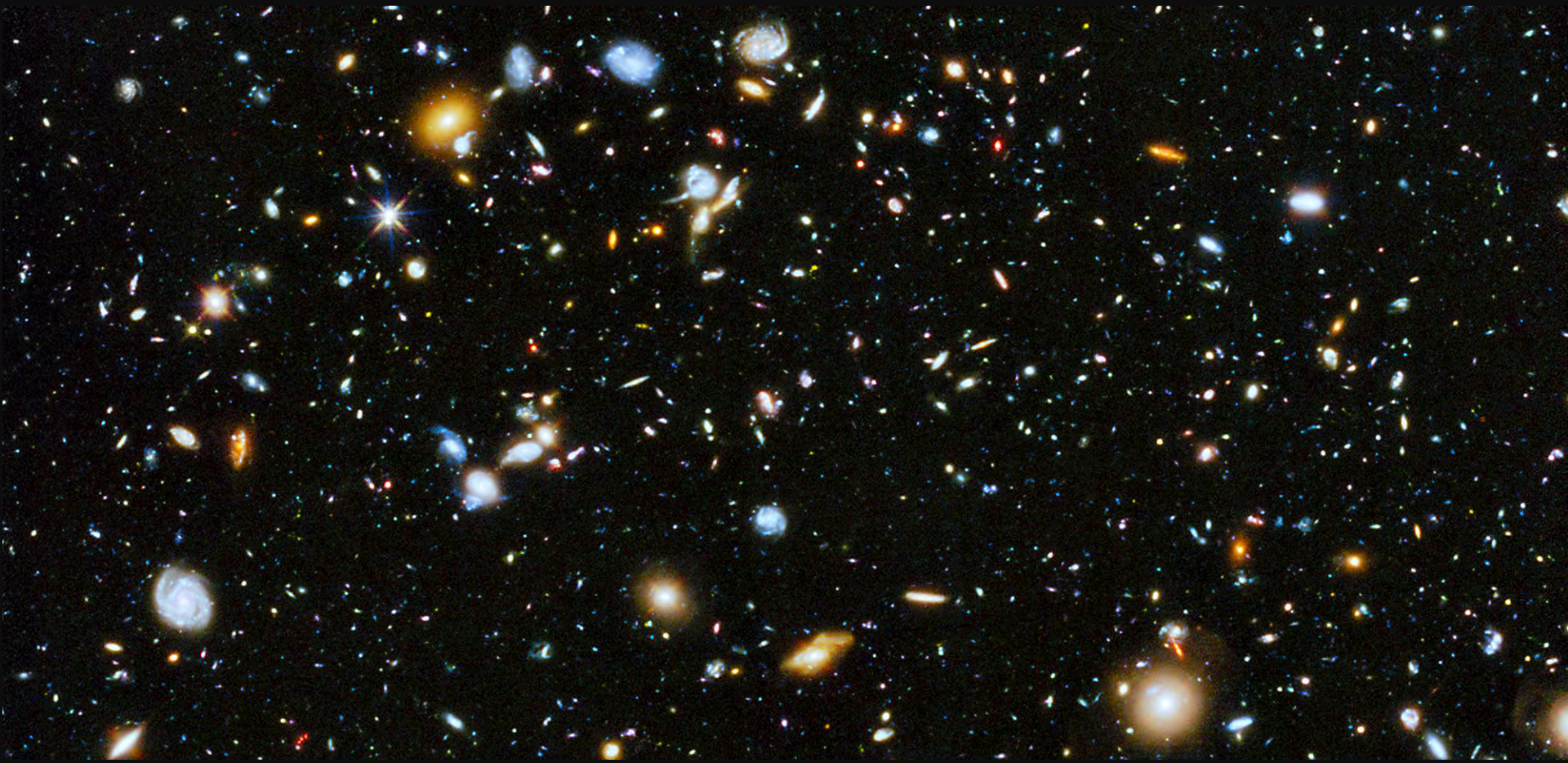
Cosmic Ray Collision by CERN



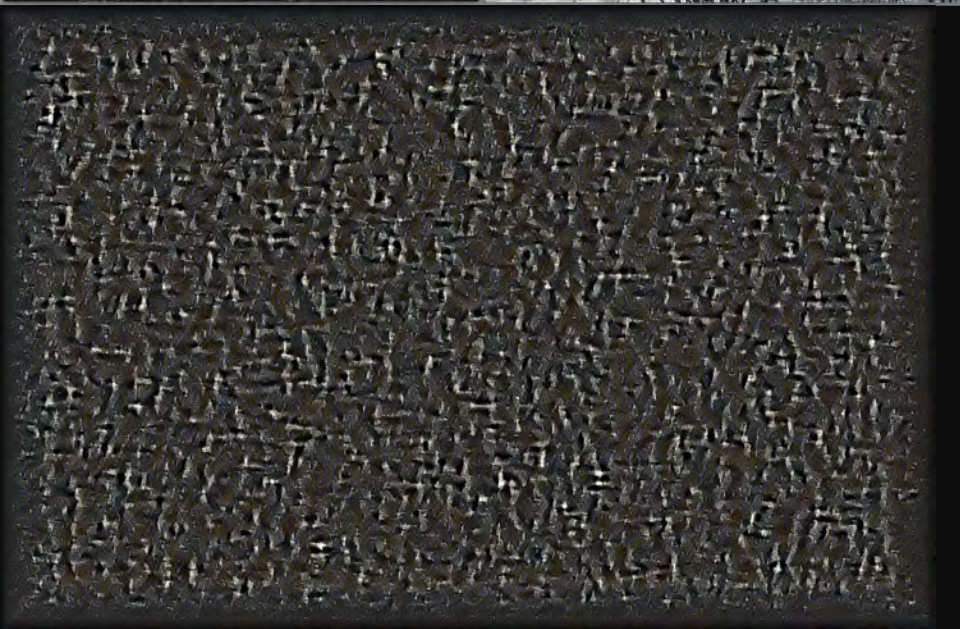
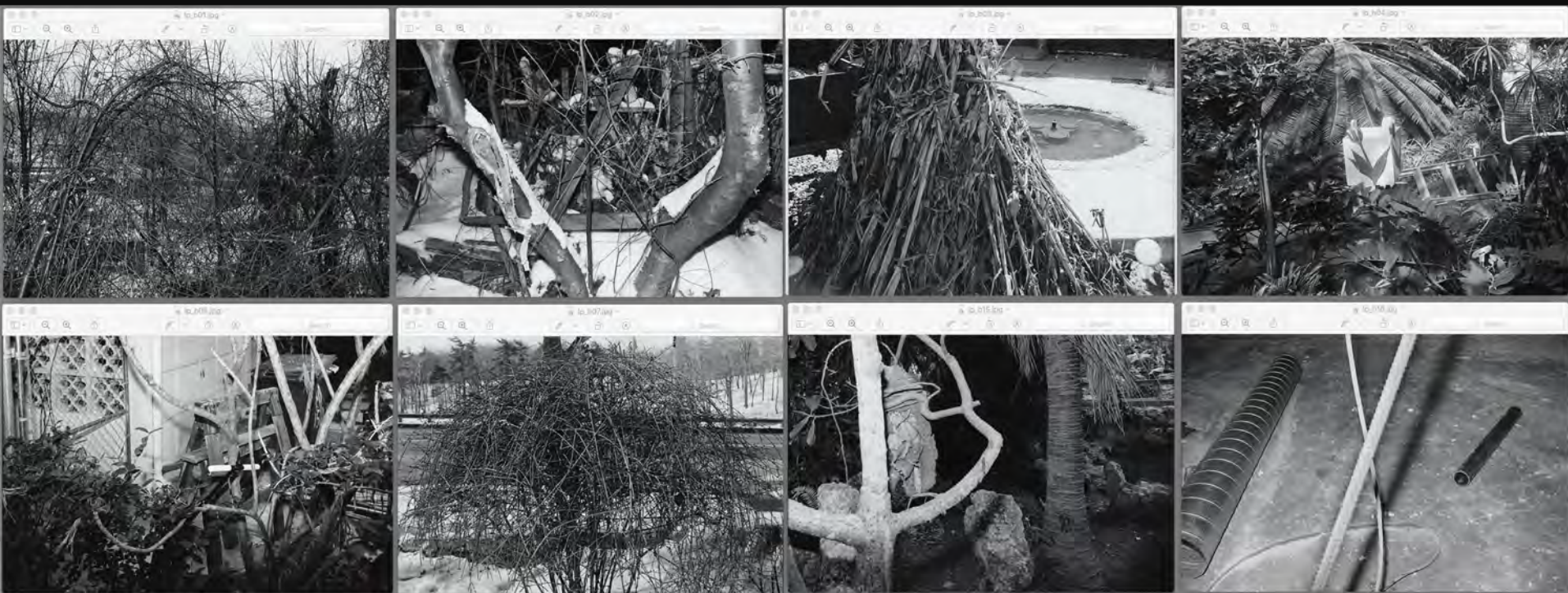
Photograph of a neutrino interaction event in the 15-foot bubble chamber at the Fermi National Accelerator Laboratory (Fermilab, Chicago)



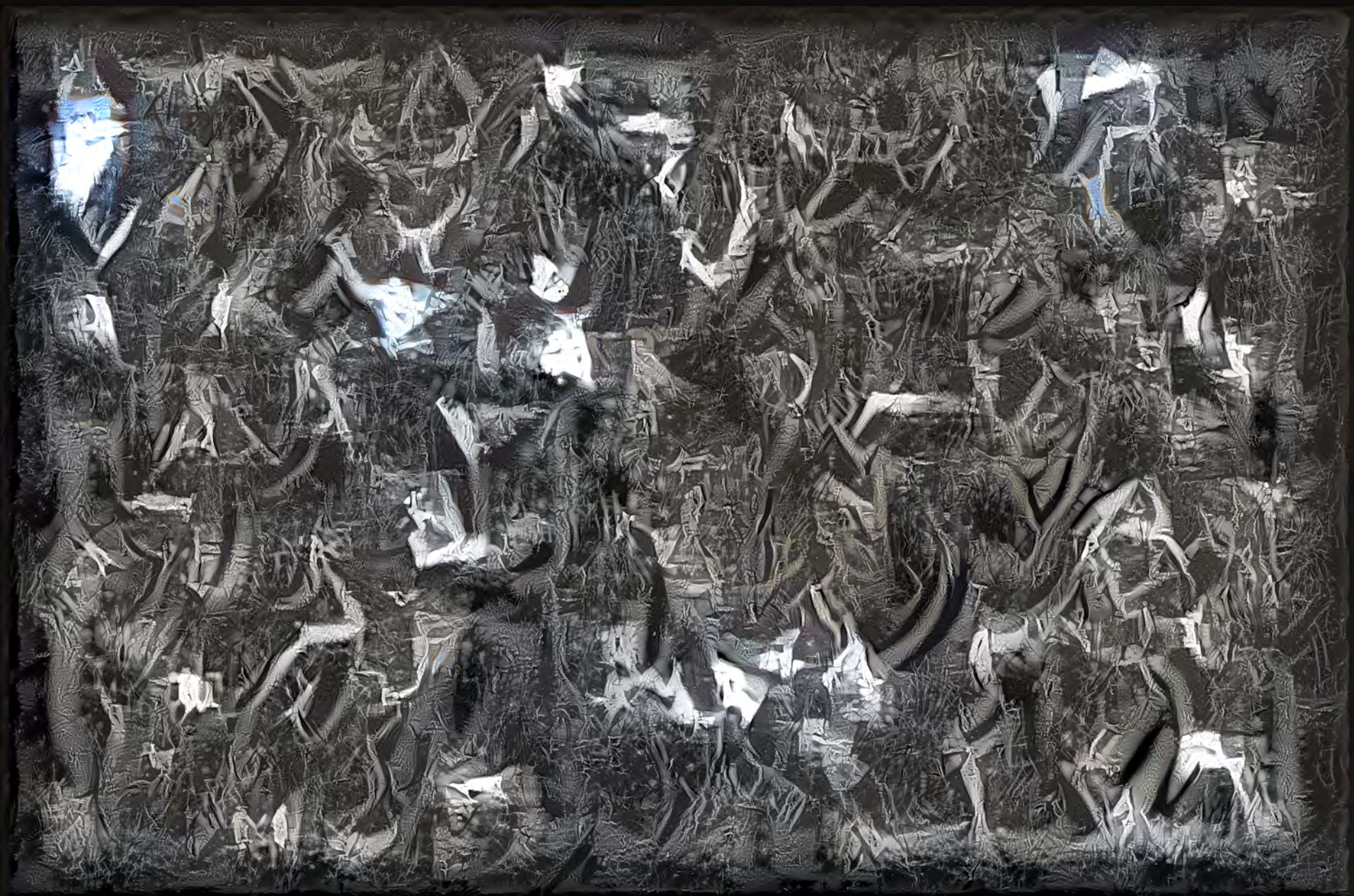
Hubble Ultra Deep Field (or HUDF) – Hubble Advanced Camera (2002-2012)



Software Generated images using Neural Texture Synthesis (Snelgrove)



Software Generated Images – statistical derived



What is a photograph?

- The photograph is a cultural / social artifact
- It is not a neutral document, it is shaped by beliefs
- It is an image that supposedly one has to learn how to read
- A visual record of a historical moment in time and space
- A representation that follows rules of how culture has evolved its understanding of images

To be continued...