



Haines & Hinterding

The Other Light (cosmic ray muon detector), 2025

Electronics including Geiger–Müller arrays, light sensitive trigger, flash bulb units, polycarbonate, steel, various cables, light

Cosmic rays will present within the gallery as random pulses of flashing light.

The origin of these rays that are ever present, originate in neutron stars, black holes and from the sun. These massless particle waves pass through everything on their journey through the cosmos into a cloud of unknowing. Muons are the offspring of the cosmic rays that bombard our atmosphere from deep space. Produced after colliding with the ionosphere they are a form of radiation that while passing through affects life on earth and at the same time has been the cause for much scientific speculation. Cosmic rays are thought to have profoundly shaped life by influencing chirality, or handedness in molecules. Most substances relevant to biology are chiral such as carbohydrates, amino acids and proteins.

The Geiger Muller design of the electronics samples the background radiation against a spike that each ray is producing as it passes through the detector. The detector is hooked up to flash units establishing a pulsing light event each time a muon strikes the detector.

Space is filled with cosmic rays — tiny fragments of atoms — all with varying amounts of energies. Many of the low or medium-energy ones are thought to originate from within our galaxy, likely from supernovae, or exploding stars, which hurl high-speed particles out into space when they die. Then there are what are considered ultra-high-energy cosmic rays: particles with energies

millions of times greater than any particle ever observed on Earth. These types of rays are puzzling, mostly because no one is quite sure what is causing the particles to get so energetic. For us, the pulses that crack like lightning as the muons strike the detectors have always felt like a sign of a 'sombre precursor', a broadcast transmission from far away that precedes, configures life and also surpasses everything.

Haines & Hinterding

Lichen and Stars, 2021

The most immediate relation presented by the Lichen and Stars pairings is the enormous distance and difference in scale between the two. Relatively small, biological organisms found on earth are brought into dialogue with Astro photographs of celestial bodies thousands of lightyears away. The photographic diptychs compress this separation between the infinite and infinitesimal to consider their connections and, in so doing, distil the otherwise incomprehensible vastness of space and time into single visual threads. From simple observations of formal or compositional likeness, profound relationships emerge that ask us to consider divisions of the local and peripheral, micro and macro, physical and temporal, as well as the thin, precarious- feeling divide between the habitable and uninhabitable. Photography, that most trusted documenter, is utilised as a vehicle for intercontextual travel. In a single vista, we are positioned simultaneously at terrestrial and interstellar levels. It is possible to read the dialogues as telecommunications, the prefix 'tele' denoting distance (Think television, telepathy, telephone).

To capture his Astro photographs, David uses telescopes. While for Joyce, photosynthesising organisms (such as lichen) represent the highest form of intelligence, able to absorb and utilise energy directly from starlight. Herein lies a direct (tele)communication between lichen and stars, earth, and sky. Lichen are composite organisms, characterised by the symbiosis between a fungus and algae or cyanobacterium. The algae provide energy through photosynthesis and the fungus obtains nutrients through earthly decomposition.

- *James Gatt 2021*

- The titles indicate locations of Lichens which involved field excursions in the Blue Mountains Region NSW.
- The astronomical imaging involved research grade small scale specialised astro-imaging telescopes located largely in Siding Springs, NSW and controlled remotely by computer by the artist during the middle of the night. These sessions took place over approx. a 12-month period.

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David Haines

Transmission to the Sun (a fragment from a visual Score), 2016

Photographing the sun from the roof of my house in H- alpha hydrogen band 0.06 angstroms the score is superimposed as a set of instructions on top of the image, the landing place in the cosmos for a piece of music.

What we have here is a fragment 2 pages from a larger score of 9 additional pages but in this instance because the duration isn't specified each page could be an entire piece.

The proposal is to transmit the composition off the earth and into the sun. The location is specified for the top of Pantoney's Crown, a mesa in the widest canyon on earth, located in the Capertee Valley, NSW. The journey to the top of the crown will require some commitment as it involves a long walk in on untracked terrain and then a complex scramble through the cliff line to the top of the mesa. A design for a transmitter has been sought and would involve the modification of a household microwave magnetron to penetrate the ionosphere that surrounds the earth and eventually reach the Sun our nearest star.

Joyce Hinterding

LC Lichen Oscillator (Cadmium Yellow) 2025

16k green gold leaf lichen antenna, sterling silver leaf capacitor, acrylic on board, metal fittings, mixer with headphones

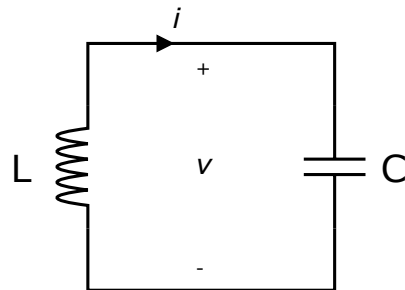
Analogue Synthesis, for me, begins with oscillation and feedback, a phenomenon that not only appears in electronics and sound, but also in cellular structures, plants, and the everyday world, from the positive feedback characterised by amplification to the negative feedback required for maintaining equilibrium or homeostasis. In the world of electronics, these dynamic and energetic processes are described using signs and symbols to form circuits.

LC Lichen Oscillator (cadmium Yellow) utilises the conductivity of gold and silver to translate the dynamic states required by a circuit, such as induction (L) and capacitance (C) to produce a speculative piece of electronics that is energised by

the surrounding electromagnetic activity. The components follow basic principles but are based on aesthetic observations and translations of Lichen photographed in the Blue Mountains.

LC Lichen Oscillator (cadmium Yellow) is a pairing of an active antenna that scavenges electromagnetic energy and a capacitor based on a fractal algorithm by Stanislaw Ulam that stores this energy like a battery. Together, this pairing forms one of the most enigmatic yet fundamental mechanisms in electronics: the tuned or resonant circuit. Commonly called the Tank circuit or the LC circuit, this circuit has only two components an Inductor (a coil or a loop of conductive material) and a capacitor (a short-term battery). Once this circuit is energised, it begins to oscillate. Although graphically large, the components are electrically small and are energised by very modest local electromagnetic fields; as a result, the work oscillates in the inaudible MHZ range.

The scavenging ability of the work can be heard in the headphones.



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