

Dead Stars *or* The Poetics of Space

LACMA LAB AREAS OF INTEREST:

- Explorations in advanced visualization
- Sensory and extrasensory modes of perception
- Space exploration

PROJECT OVERVIEW:

In *Dead Stars*, and its umbrella project, *The Poetics of Space*, I seek to reframe our perception (and inherent paradoxes) of time and space by creating immersive installations utilizing real astrophysical data implemented with new technologies to make the complex abstraction that is deep time and deep space both felt and understood.

PROJECT DESCRIPTION:

I'm proposing two interrelated projects: a large-scale light installation, *Dead Stars*, and *The Poetics of Space*, an open-ended exploration of space, examining the lines where philosophy and astrophysics begin to slip, facilitated by a residency at NASA JPL and/or SpaceX, resulting in as of yet undefined outputs. Both comprise the overarching conceptual artwork, observation and analysis of current astrophysical development, and creation of final forms utilizing new technologies best suited to express aesthetic, conceptual, and data-based outcomes.

Dead Stars is an experiential installation mapping all the dead stars in the known universe; things that we can see, yet are no longer actually there. Light sources will be installed from the ceiling of a cavernously large, darkened exhibition space, and programmed to "burn out" over the course of the exhibition. Timing will be based on actual lifespan data of the stars, and accurately compressed over the installation period (e.g. one hour is equal to 100 million years.) Other elements, such as sound recordings made in space, may be incorporated, and played at the same rate as the starlight.

The Poetics of Space will look at the universe through our human lens of perception, exploring shifting baselines, how space plays tricks on us with galaxy lensing, parsing the "event horizon," and how we set about knowing the unknowable. This might take on an archive form.

My ideas tend to start out complicated, until, through work and winnowing, become clear and accessible final artworks that are both meditative and thought provoking. The full scope will be determined after the residency, allowing for open-ended exploration, and time for ideas to germinate. I welcome refinement in collaboration with technologists and the museum!

BIO:

[**Note:** short bio provided here. Please see separate C.V. for more detailed information.]

Rachel Sussman is a contemporary artist based in Brooklyn, New York. Her photographs and writing have been featured in the *New York Times*, *Wall Street Journal*, *Guardian*, and NPR's Picture Show. She has spoken on the TED main stage and at the Long Now Foundation, is a

MacDowell Colony and NYFA Fellow and is a trained member of Al Gore's Climate Reality Leadership Corps. She has been granted numerous awards, and her work has been exhibited in museums and galleries in the US and Europe, and acquired for museum, university, corporate, and private collections. Her first book, *The Oldest Living Things in the World*, reaches shelves April 22, 2014, published by the University of Chicago Press, with forewords by Carl Zimmer and Hans Ulrich Obrist.

In addition to her artwork, Sussman worked as an Interactive Producer for over ten years and managed large teams and interdisciplinary projects ranging from NBC.com's Homicide and Saturday Night Live websites to educational software projects employing speech recognition technologies. She also performed trapeze as part of the duo The Amazing Siblings throughout New York, though her acrobatic career was cut short by a rotator cuff injury.

MERIT:

We're fascinated with space because it gives a visceral, existential jolt to the system. Advances in technology allow us to record more data as we look deeper into the galaxy, but we're easily overwhelmed by the complexities. I aim to bring some complex concepts into tangible and tantalizing form. My work explores a mode of open-ended inquiry and long-term thinking; something that can be practiced and applied by everyone.

This work is about the perceptions generated by our own fundamental equipment: our brains, in the context of exploring the most fundamental mystery: our universe. This is an opportunity to break out of the quotidian and into the inconceivable vastness of space, allowing a moment to put our lives and realities into universal perspective. Art and technology make the perfect marriage here: chipping away at the question of why, and in what context, we exist, and how things are often not what they seem.

It's an inherently poetic line of enquiry, and also underscores the similarities between artists and scientists. Both search for answers – Truth with a capital T, even – hoping to invent or discover or craft something that shakes up old thinking and makes a lasting impact on the world. Both employ analytic and synthetic approaches, take risks, and engage in sophisticated thinking in uncharted territories. There are a lot of happy accidents. Both art and science can be filled with passion and frustration, setbacks and breakthroughs. The work is never meant to exist in a vacuum: it is the *audience* that completes the picture.

This audience might discuss Bachelard and Heisenberg, or have an unmediated museum experience. Both are valid and valuable. If I accomplish what I set out to, both will have a moment of awe.

MEANINGFUL EXPLORATION OF EMERGING TECHNOLOGY:

New technologies are often celebrated in their own right, but often burn bright and die young, to be eclipsed by whatever is next down the pike. In my work, and want to put the meaning back into the use of selected technologies: using them to best present the content, while being a component of the content itself. I am especially interested in drawing attention to seeming contradictions and dichotomies, such as the use of new technology to discover ancient light, which not longer exists but will be displayed and explained through other technologies in an experiential, conceptual art context.

INSPIRING DIALOG:

The infinite topic of “space” captures our imaginations like no other, but there is often a barrier to both experiencing the awe of contemplating the universe, and translating the seemingly arcane data collected by scientists into something relatable to the general public. This work, like my previous *Oldest Living Thing in the World* project, will inspire dialog on the nature of time, space and our perceptions of them among the general public, scientists, and technologists alike.

SUBJECT AREAS: Space, astronomy, installation art, conceptual art, deep time, time travel, long term thinking, astrophysics, new technology, existentialism, intersections of philosophy and physics, awe, the sublime, phenomenology

PUBLIC ENGAGEMENT:

In addition to the exhibition itself, there will be multiple modes of public engagement. These might include guest lectures by JPL scientists at LACMA and a NASA/LACMA art and science event encouraging transdisciplinary exploration and collaboration.

The exhibition itself might have some interactive elements, for instance, changing the pace of passing time in the gallery space, so that in the course of a single viewing day, where a visitor might choose to lie down and look up into "space" for eight hours as the stars burn out, or they could compact the history of the universe in an hour.

I'd like to define opportunities for public engagement in more depth and specificity after the full scope of the project is defined.

DATA:

The data from *Dead Stars* will provide, in useable form, the locations of all known dead stars in the night sky, as well as their birth and death dates. Other data (as yet unidentified) will undoubtedly be collected pending my JPL residency and the related research areas.

OUTSIDE SUPPORT:

SPACE: I have relationships with a couple different departments at **NASA JPL**. NASA Global Climate Change (<http://climate.nasa.gov/>) will be publishing an interview and a portfolio of my *Oldest Living Things* work, which relates to NASA's ongoing climate work and new, 2014 Earth missions. I likewise have a relationship with JPL's permanent artist-in-residence, Dan Goods, who has offered to introduce me to any department I'd like to work with, and identify which groups are most open to collaborating with artists. His one concern was finding funding and institutional support for my presence on campus, and the LACMA Lab grant solves that problem perfectly.

TECHNOLOGY: The **Office of Creative Research** (OCR: <http://o-c-r.org>), specifically Jer Throp, has expressed enthusiasm for my work, and can help with the technical expertise to synthesize data and provide the technical knowhow to help implement my ideas. OCR is a multidisciplinary research group exploring new modes of engagement with data, through unique practices that borrow from both the arts and sciences.

POSSIBLE FINANCIAL SUPPORT: The TED Conferences partnership team nominated me for a [REDACTED] grant as part of the **Lincoln Reimagine Project**. I was informed that I’m a finalist, but I am not certain when the results will be announced, or if they are selecting this project, or my other proposed work: to create an archive of a 250 million-year “road trip” through time and across the island of Socotra, a remote island off the horn of Africa.

BUDGET

The following represent some of the costs associated with this project. A detailed budget cannot be accurately formulated before determining the scope of the outputs, but are broken down into likely increments in the implementation plan below. A complete and final budget will be created following the initial month-long JPL residency when the scope of the project is finalized.

- Travel & accommodations from New York to LA (minimum three visits)
- NASA JPL residency fee (to meet NASA requirements for on-campus residency)
- Installation materials (light sources, programming/software for timing, cushions for visitors to experience installation comfortably looking up for long periods of time, possible sound installation)
- Stand alone web/app development and associated hardware and software costs
- OCR honorarium for consultation and development
- Artist fee

IMPLEMENTATION PLAN

KEY MILESTONES	DATE	FUNDS NEEDED
Initial research, planning, and contact development	May 2014	[REDACTED]
1 st Research residency at NASA JPL (or JPL and SpaceX)	June 2014	[REDACTED]
Project outcome mapping, feasibility testing, and planning; Brainstorm sessions and meetings with relevant LACMA Lab Advisory Board members	July – Oct 2014	[REDACTED]
2 nd Residency at JPL/SpaceX; scope refinement, data gathering, and prototyping	November 2014	[REDACTED]
Final project planning and data assessment	Dec 2014 – Jan 2015	[REDACTED]
Interactive site/app development, installation component testing, final production	Jan – March 2015	[REDACTED]
LACMA Exhibition	April 2015	[REDACTED]
	TOTAL:	[REDACTED]