BEHIND THE SKY

by

Christopher Rackley
A Thesis
Submitted to the
Graduate Faculty
of
George Mason University
in Partial Fulfillment of
The Requirements for the Degree
of
Master of Fine Arts
Art and Visual Technology

Committee:

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_____ Director of the School of Art

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Date: 1 May 2012 Spring Semester 2012
George Mason University
Fairfax, VA

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A thesis submitted in partial fulfillment of the requirements for the degree of Master of Fine Arts at George Mason University

by

Christopher Rackley
Bachelor of Arts
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Director: Paula Crawford, Associate Professor
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Fairfax, VA

DEDICATION

To my wife Sandy who believed in me long before I did.

ACKNOWLEDGEMENTS

There are many relatives, teachers, friends, and mentors who have made my education possible and I would like to thank them. My wife Sandy whose unwavering love and support helped me realize a dream. My father from whom I have continued to learn how to make the best of limited resources ever since the first rocket ship he made for me out of a paper towel tube, and I am forever grateful that he recognized and supported my interests and abilities at an early age. My mother who opened countless opportunities for me to explore and develop my artistic inclinations. The many excellent teachers at Davidson Fine Arts Magnet School who taught me to love learning, especially Richard Manly and Rosanne Stutts. The art professors at Davidson College: Cort Savage and Herb Jackson. The Davidson professors who did not mind having an art student stray into the fields of mathematics and physics: Dr. Robert Whitton, Dr. Richardson King, and Dr. Dan Boye. My friends, especially the friends who took on the additional challenge of becoming my mentors and who never let me forget my dreams: Dr. Kate Piderman, Robert Hubert, Pastor Gary Drier, Wayne Luebbert, and Paul Schumacher. The community of graduate art students at George Mason University, especially my longsuffering painting companions: Brooke Marcy and Ryan McCoy. And of course, the faculty in the School of Art who relentlessly challenged me to connect the things I was making with the thoughts I was thinking and who were always supportive but never easy to please: Paula Crawford, Edgar Endress, Peggy Feerick, Tom Ashcraft, Mary Del Popolo, and Harlod Linton. Ben Ashworth, who always had time to teach me how to use a new power tool. I am grateful to Stephanie Booth, Erwin Thamm, and Olivier Giron for their excellent photo and video documentation of my show, much of which is used in this thesis. I would like to end by mentioning again the professor who lavished her time, her advice, and her support to such a degree that it would be impossible for me to repay in kind: to Paula Crawford, as to all who supported me, I owe more appreciation that I can ever give.

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BEHIND THE SKY

Christopher Rackley, MFA

George Mason University, 2012

Thesis Director: Paula Crawford

The following document uses photographs of Chris Rackley's artworks in progress, including pages from his sketchbooks, to give a glimpse into the meandering creative paths taken between ideas and forms. Six pieces from *Behind the Sky*, Rackley's MFA thesis exhibition, January 2012, are featured: *Walk-in Crater, The Edge of the Tideless Sea, Long Voyage, Latecomers to the Universe, Behind the Sky,* and *Beginning Cosmology.* An essay and several short writings, all in Rackley's own words, are included, revealing the core ideas and experiences around which Rackley builds his work.

There are high places

that don't invite us,

sharp shapes, glacier-

scraped faces, whole

ranges whose given names

slip off. Any such relation

as we try to make

refuses to take. Some

high lakes are not meant for us,

some slick escarpments.

I'm giddy with thinking

where thinking can't stick.

--*Kay Ryan,* No Names

BEHIND THE SCENES

Figure 1: Scale model of main gallery in the School of Art, George Mason University.

I grew up in a simulation. Baudrillard describes a simulation as a realm of hyper-reality where entertainment and information provide experiences more intense than everyday, real experiences. The shopping mall is one example he uses to illustrate such a sensory experience. I lived in a shopping mall until I was thirteen, spending much of my time playing in the stockroom of the retail shoe store where my father was manager. My father allowed me to roam the mall and during the course of a decade, I became accustomed to the cycle of changes and structures inside the mall. My sense of time was formed by the spectacle of storefront displays, especially the decorations for holidays, rather than by the seasonal weather of the world outside the mall. My sense of space was influenced by architecture designed to persuade consumers to consume. In Baudrillard's conception of the mall as a simulation, I was a receptor, a terminal of a network of images and information. However, my experience was not limited to mere reception because, unlike the shoppers, I had access to structures inside and behind the simulation.

The first level of remove from the hyper-reality of the mall was the stockroom behind the shoe store where my father worked. In the dim greenish light of the stockroom, the shelves formed long passages, like corridors in a labyrinth, on which the shoeboxes were stacked like bricks. The stockroom was off limits to the customers but I could enter the stockroom and see the organizing principles behind the shoes on display in the storefront, just as though I were an employee. As the son of the manager, I had permission to use materials and spaces in the stockroom that were off limits to even the employees. My father set aside space otherwise reserved for storage so that I could have room to play and he allowed me to use shoeboxes, cardboard shipping cases, and paper as art supplies. What was a workspace for the employees, a

storeroom for the shoes, and a forbidden space for the customers, was a creative living space for me.

The second level of remove from the mall was the network of hallways behind the stockroom. The hallways connected all the retail stores in the mall from behind. Shipments of shoes were wheeled to the backdoor of the stockroom through the hallways from trucks parked at loading docks outside the mall. The hallways also led to the trash compactors outside. Whenever I accompanied one of my father's employees to take trash out to the dumpster, I felt as though I was exploring hidden corridors that few people ever saw, like the secret passageways behind the walls of the Paris Opera House in Gaston Leroux's novel *The Phantom of the Opera*. Customers entered my father's shoe store through the front; the shoes entered the shoe store though the back, and I could pass unhindered through both thresholds. If the stockroom was a world inside a simulation, then the hallways formed a world behind a simulation.

A third level of remove from the simulation of the mall was the space only I could access: the space made by my imagination and cardboard constructions. I spent most of my time in the mall drawing or building in the stockroom. I drew characters and vehicles from comic books, magazines, and science fiction novels that I saw in the mall's bookstores. I used packing tape, corrugated cardboard, and spare paper to make robots, space vehicles, and forts. Although I imagine it must have been a nuisance to my father, he never complained when I surreptitiously removed the plastic sticks from women's dress shoes to use as levers on the control panels of my spacecraft. I learned to be resourceful by working with limited resources as I tried to escape the confined space of the stockroom by creating my own worlds.

Inside a simulation such as a shopping mall, Baudrillard says, we are caught up in a play of signs to a degree that we ignore the real world. I certainly spent more time inside the mall than outside the mall and, as Baudrillard suggests, the mall was more real for me than nature.

However, I believed that the real world was the stockroom and the hallways, the "behind-the-scenes" of the mall. Perhaps my experience of living in a world behind a simulated world is the source of my predilection for physics and math. I could not stop thinking about the subatomic model of the universe when I first encountered it in sixth grade. I began reading all that I could about atoms and devices like lasers that utilized subatomic phenomena, and I was delighted whenever I had a chance to explain to an adult what I was learning. Since that time I have continued to read about scientific models that attempt to explain the invisible structures underlying the visible physical world, especially loving the models that seem utterly alien to everyday experience, such as the counterintuitive realm of quantum mechanics.

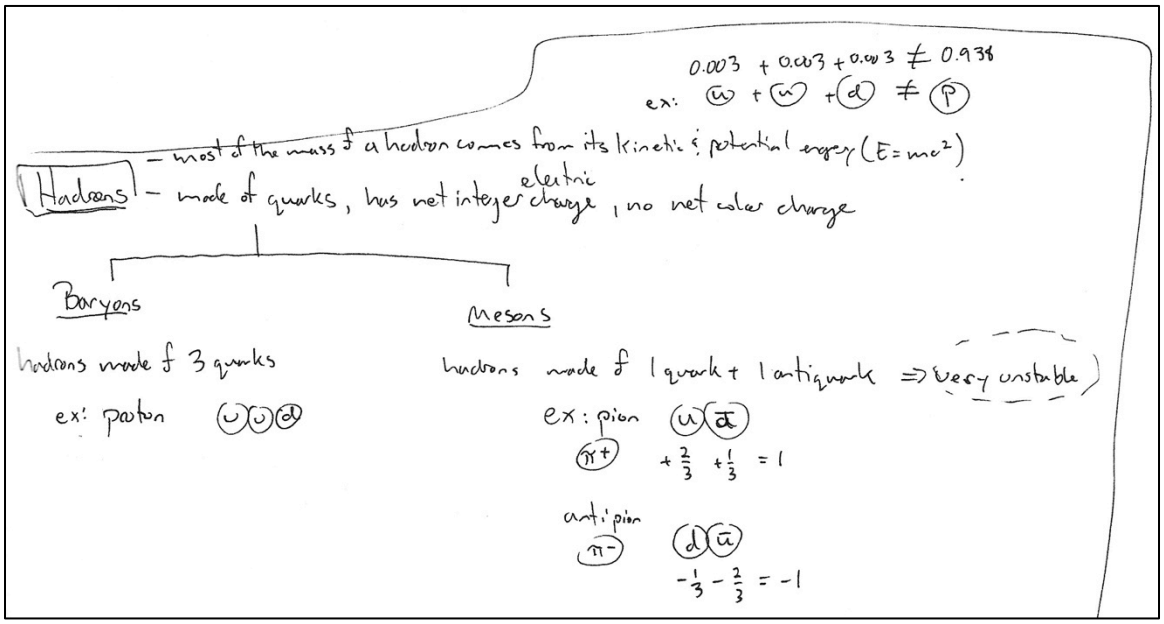

Figure 2: Notes on elementary particles, excerpt from sketchbook.

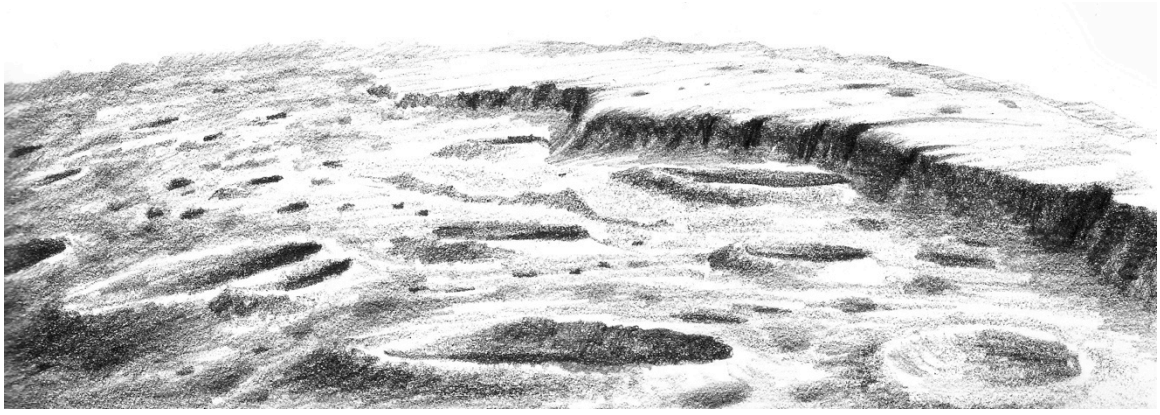

Figure 3: Preliminary drawing for *Walk-in Crater*, page from sketchbook.

The relationships between the quantum world, the everyday world, the astronomical world, and the world of mathematics are not fully understood, and thus, all contemporary models of the universe contain mysterious gaps, places where thinking cannot stick. Many fundamental aspects about our universe remain hidden. What is gravity? Is the universe infinite or finite? Why is the universe full of matter instead of anti-matter? Why is human intuition so wrong about the true quantum nature of physical phenomena? For that matter, why does quantum behavior disappear for objects larger than molecules? I see the edges of human understanding of ultimate reality as opportunities for play. Although I am interested in how things work, like Ryan, I am also giddy about the places where human knowledge about the true nature of the cosmos seems to fall into a black hole, never to return.

Figure 4: Studio with work in progress.

Figure 5: ***Behind the Sky: MFA Thesis Exhibition,*** **2012.**

The work I create is not the result of singular thoughts leading directly to finished work. Instead, the pieces come together around a collection of ideas and interests in a process similar to the way planets form. My reading in physics, math, philosophy, and science fiction exert a sort of gravitational pull on a variety of media, techniques, and methods. In my studio, a landscape painting emerges next to a pile of electronics slowly coalescing into a mechanism aspiring to give life to a foam planet. Nearby a cone made of corrugated cardboard is being scrutinized by a video camera looking for the precise point of view that will transform the scale of the cardboard cone into a large, empty corridor. In a corner a few wooden boards have been cut, sanded, and screwed together to form a frame to hold a sheet of glass ready to employ the "Pepper's Ghost" illusion. And there are books lying on the drafting table and on the taboret: a textbook on modern physics, a history of matte paintings, a primer on topology, and a collection of Arthur C. Clarke short stories.

My thesis exhibition *Behind the Sky* included several contraptions I built using wood constructions, cardboard, plastic, lights, electric motors, and my own paintings. A small video camera and a television monitor are paired with each contraption, and from the point of view of the camera, a cinematic image is revealed on the monitors. The images on the monitors are inspired by science fiction film and television. Ambient "space noise" is generated by the motorized movement of the contraptions and amplified with a guitar amp.

Figure 6: *Latecomers to the Universe*, 2012, installation view.

To design the structure for each piece, I employ strategies used by special effects artists before the advent of computer generated imagery. Each piece is designed such that visitors can enter the scenes on the television monitors by placing themselves, or part of themselves, in front of the camera. The scale of the viewer's body relative to the objects on the screens changes with each piece—in one scene the viewer is larger than a galaxy while in another the viewer fits comfortably inside an impact crater. In addition to making the viewer's scale uncertain, the

narrative connection between the images is also unclear. Although science fiction aficionados will recognize familiar tropes (a planet seen from orbit, a desolate planet surface, an exterior view of a space ship, etc.), the pieces can be viewed in any order allowing viewers to insert themselves as explorers and to fill in the narrative gaps.

Figure 7: ***Behind the Sky: MFA Thesis Exhibition*****, 2012, installation view.**

WALK-IN CRATER: WORK IN PROGRESS

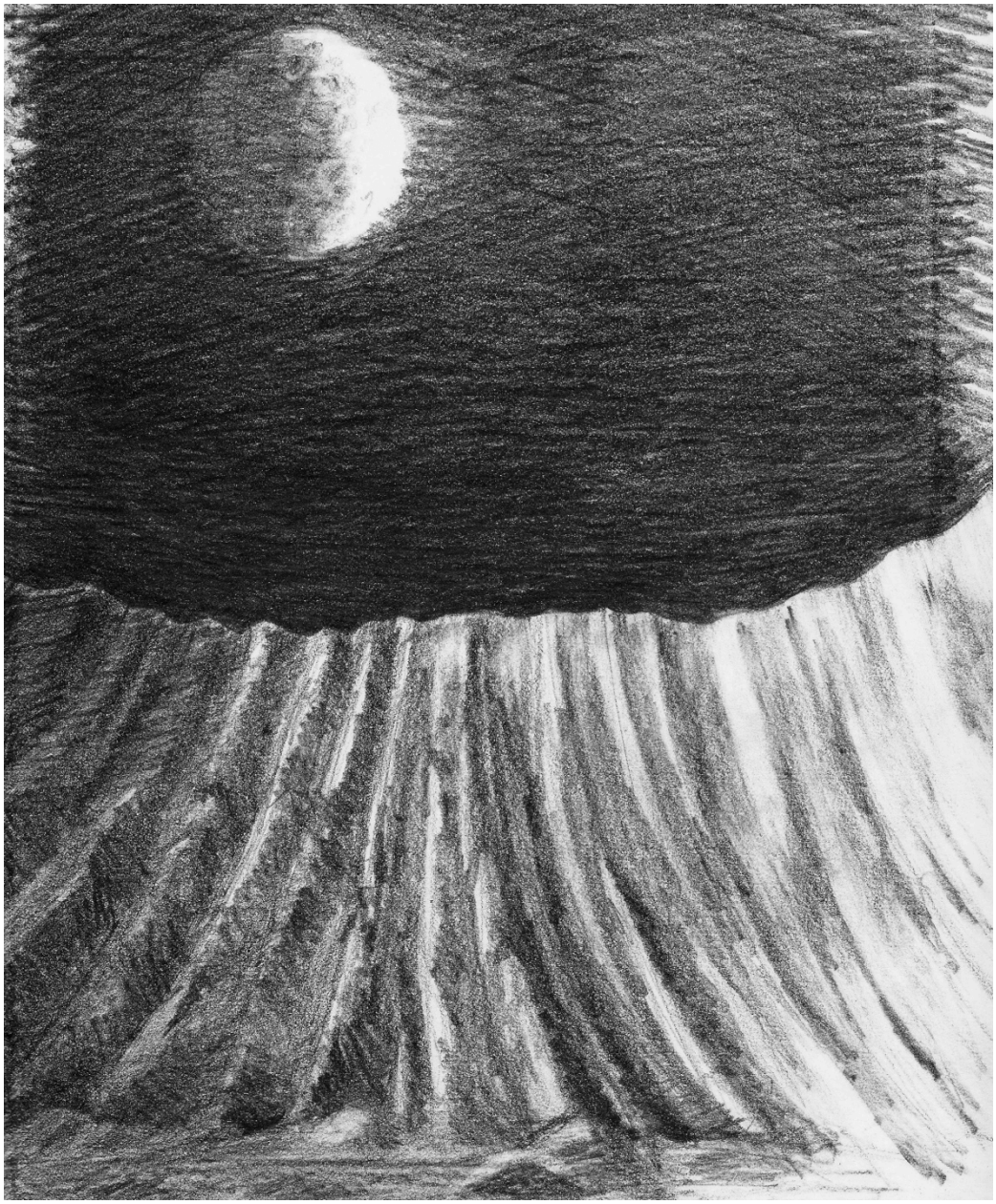

Figure 8: Preliminary drawing for *Walk-in Crater*, page from sketchbook.

General relativity predicts that time runs slower in the presence of strong gravitational fields (Hawking 43). An astronaut orbiting the Earth in a rocket and looking down at a clock on the surface below would observe the clock to run slow compared to a clock on the rocket.

Figure 9: ***Walk-in Crater*** **in progress.**

When I look down at my feet, I know that time is running slower near the floor. Head time and foot time are different times. When I am running a race, is it every truly possible to synchronize the rhythm of my feet, the ticking of a watch on my wrist, and the beat of a song I am humming in my head?

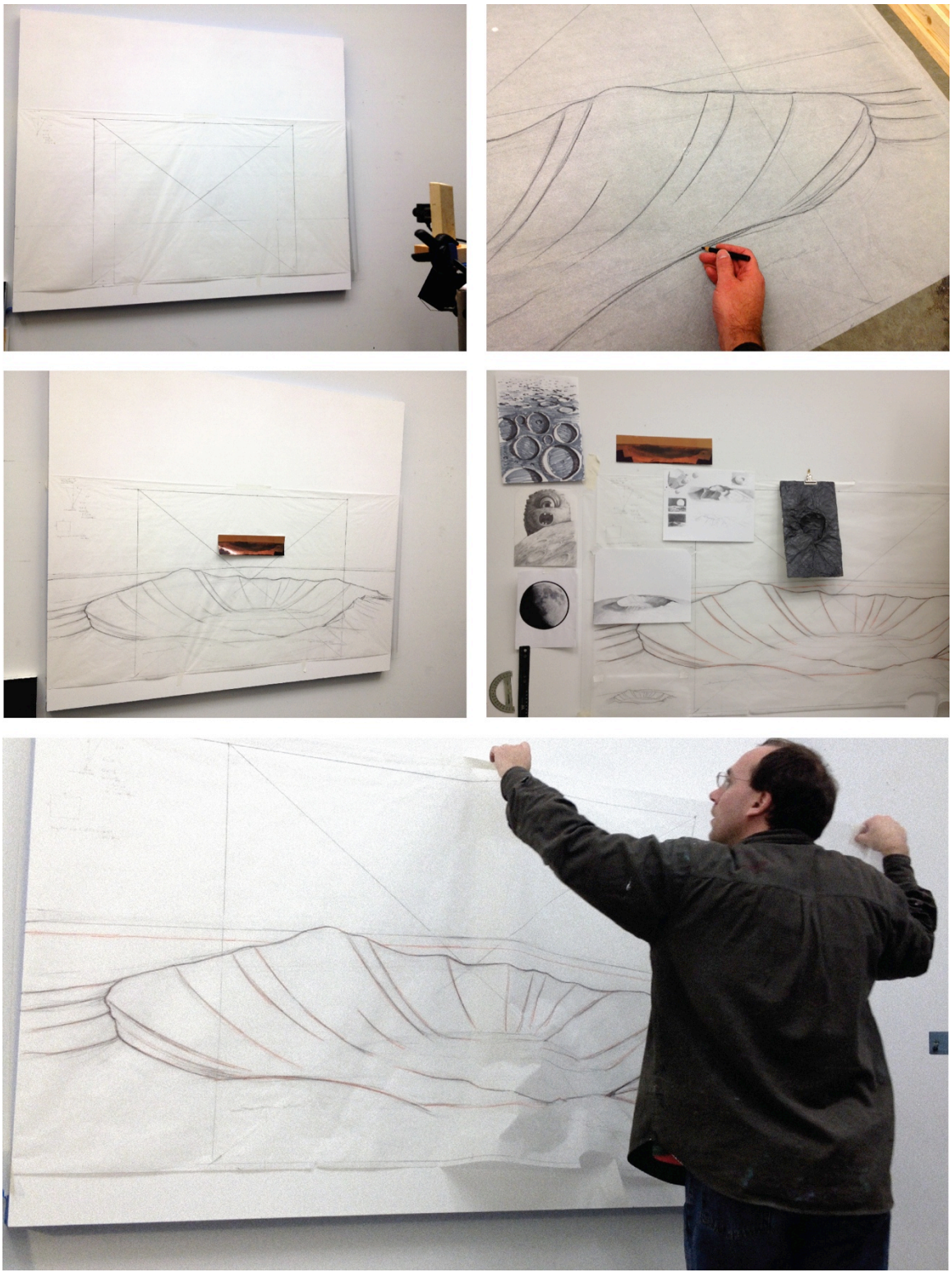

Figure 10: ***Walk-in Crater*** **in progress, transfer of drawing to canvas.**

Figure 11: ***Walk-in Crater*** **in progress.**

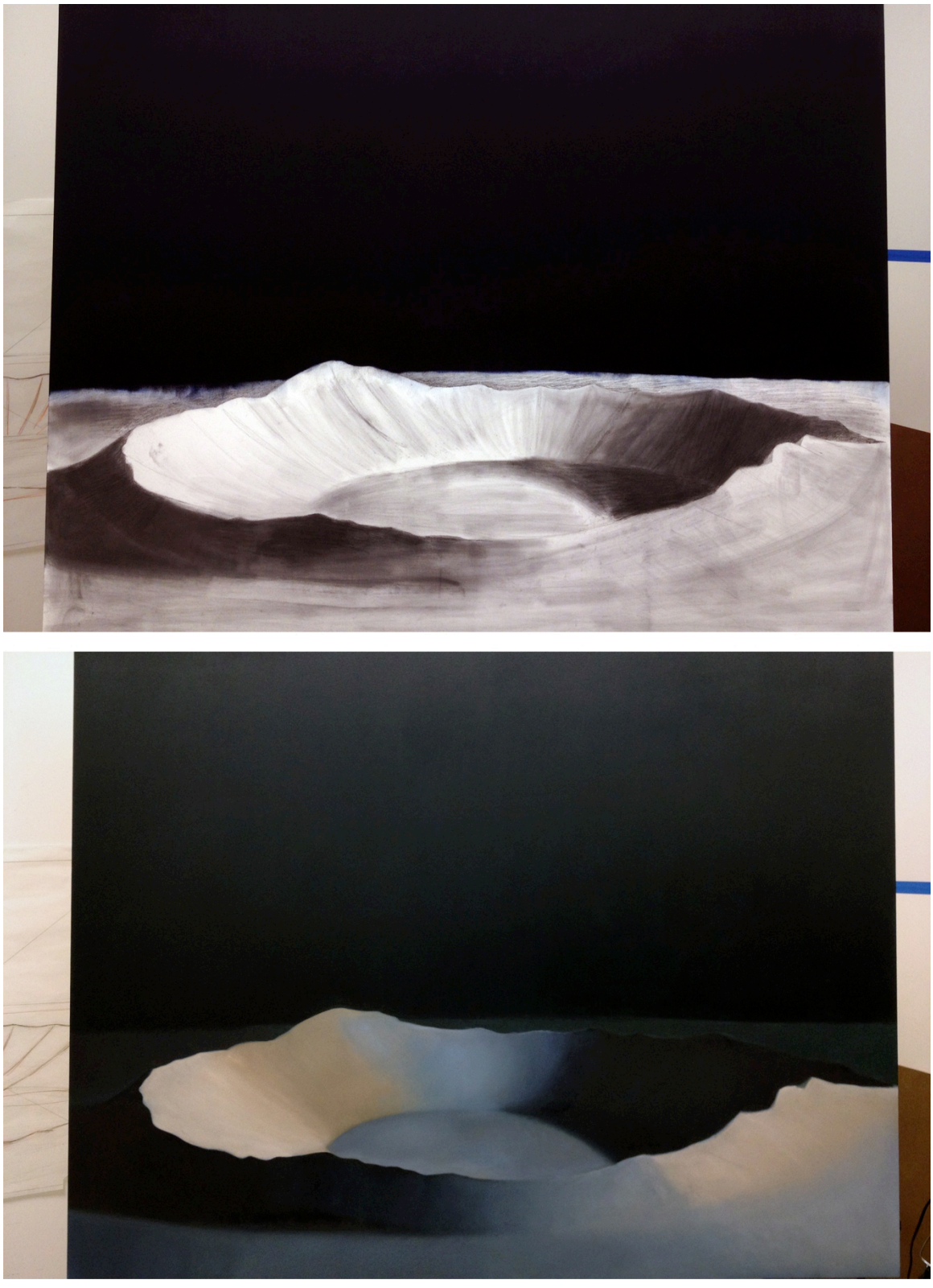

Figure 12: ***Walk-in Crater*** **in progress.**

Figure 13: Arrangement of rocks used as reference for *Walk-in Crater.*

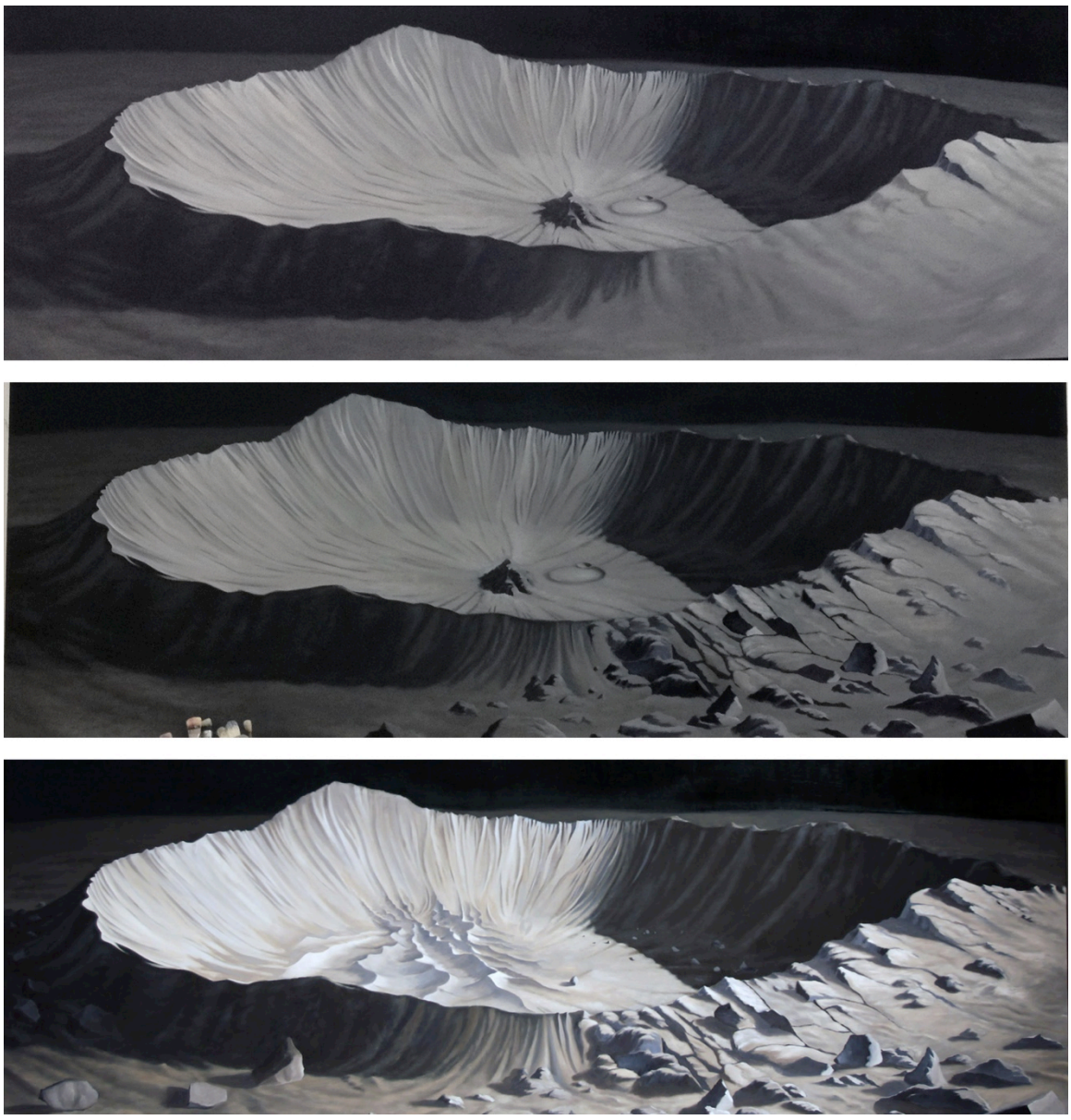

Figure 14: ***Walk-in Crater*** **in progress.**

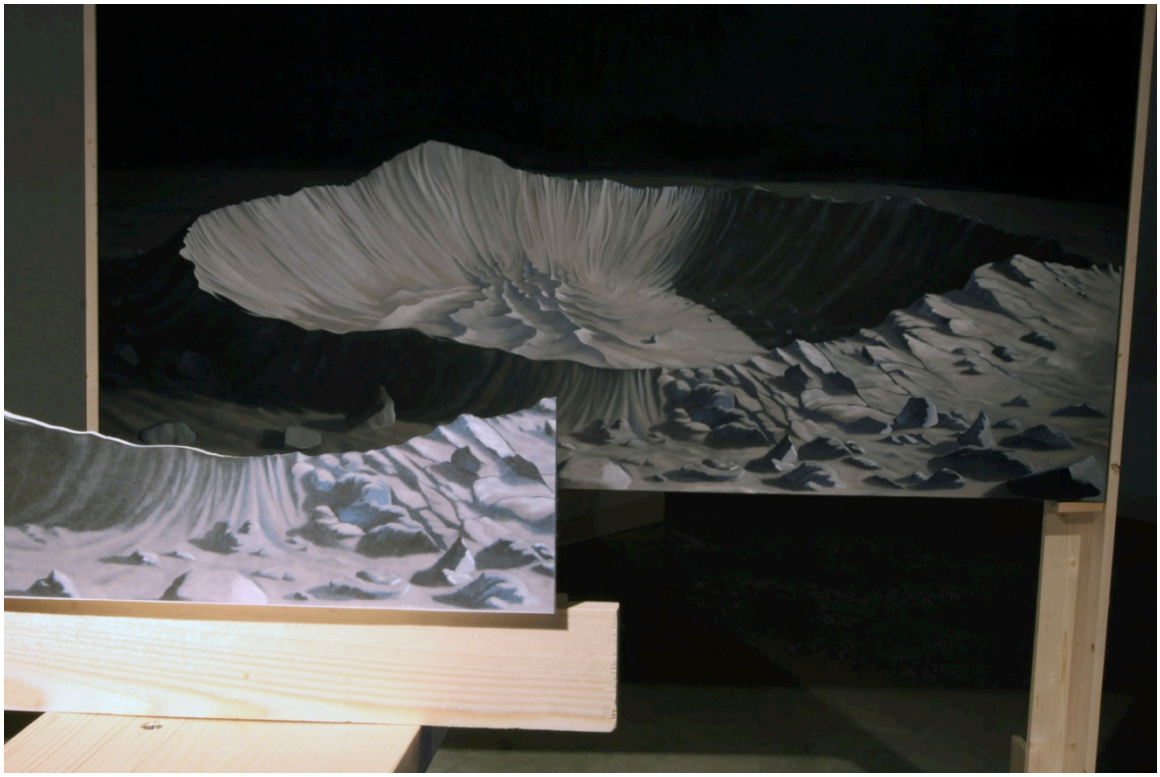

Figure 15: ***Walk-in Crater*****, 2012, installation view.**

Figure 16: ***Walk-in Crater*****, installation views.**

Figure 17: ***Walk-in Crater*****, installation views.**

THE EDGE OF THE TIDELESS SEA: WORK IN PROGRESS

Figure 18: Experiment with paper, salt, mirror, and lights in preparation for *The Edge of the Tideless Sea*.

Drawing is a way of knowing. If I can draw it, then I can understand it. Often, drawing an object involves making an outline on paper that mimics the apparent edges on the object being drawn. Of course, no such edges exist on physical objects. Outlines are fictions that allow me to say of an object, "Here it is, it's inside here," when I am drawing it on paper. In fact, I am only making a map of an object that has no edges in an attempt to frame something beyond comprehension. After all, at the subatomic level, how would one identify the boundary between the electrons that cling to the atoms of my skin and the electrons of the air molecules?

Figure 19: Excerpt from sketchbook page.

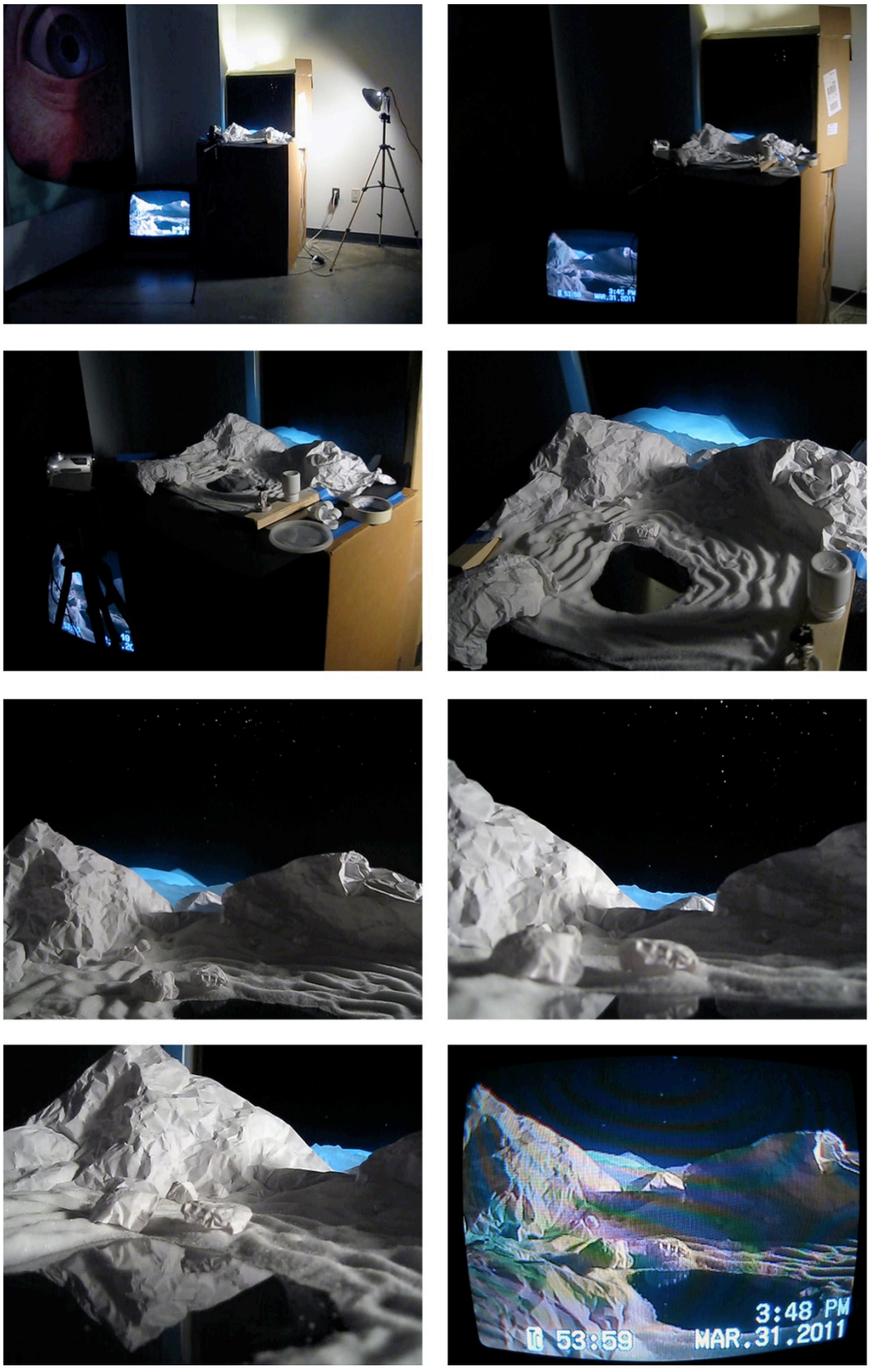

Figure 20: Experiment with small landscape, camera, and monitor.

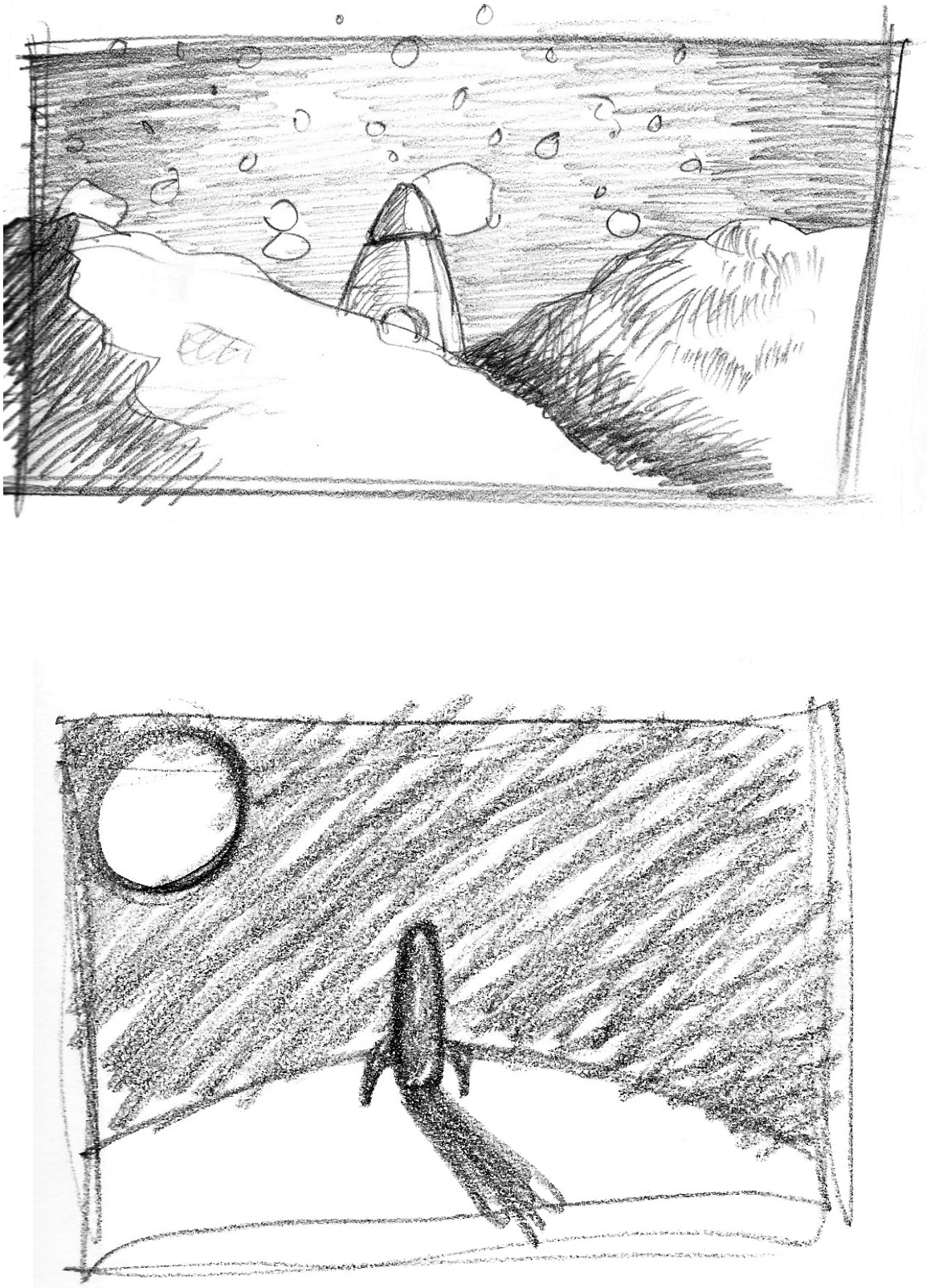

Figure 21: Preliminary drawings for *The Edge of the Tideless Sea*, excerpts from sketchbook.

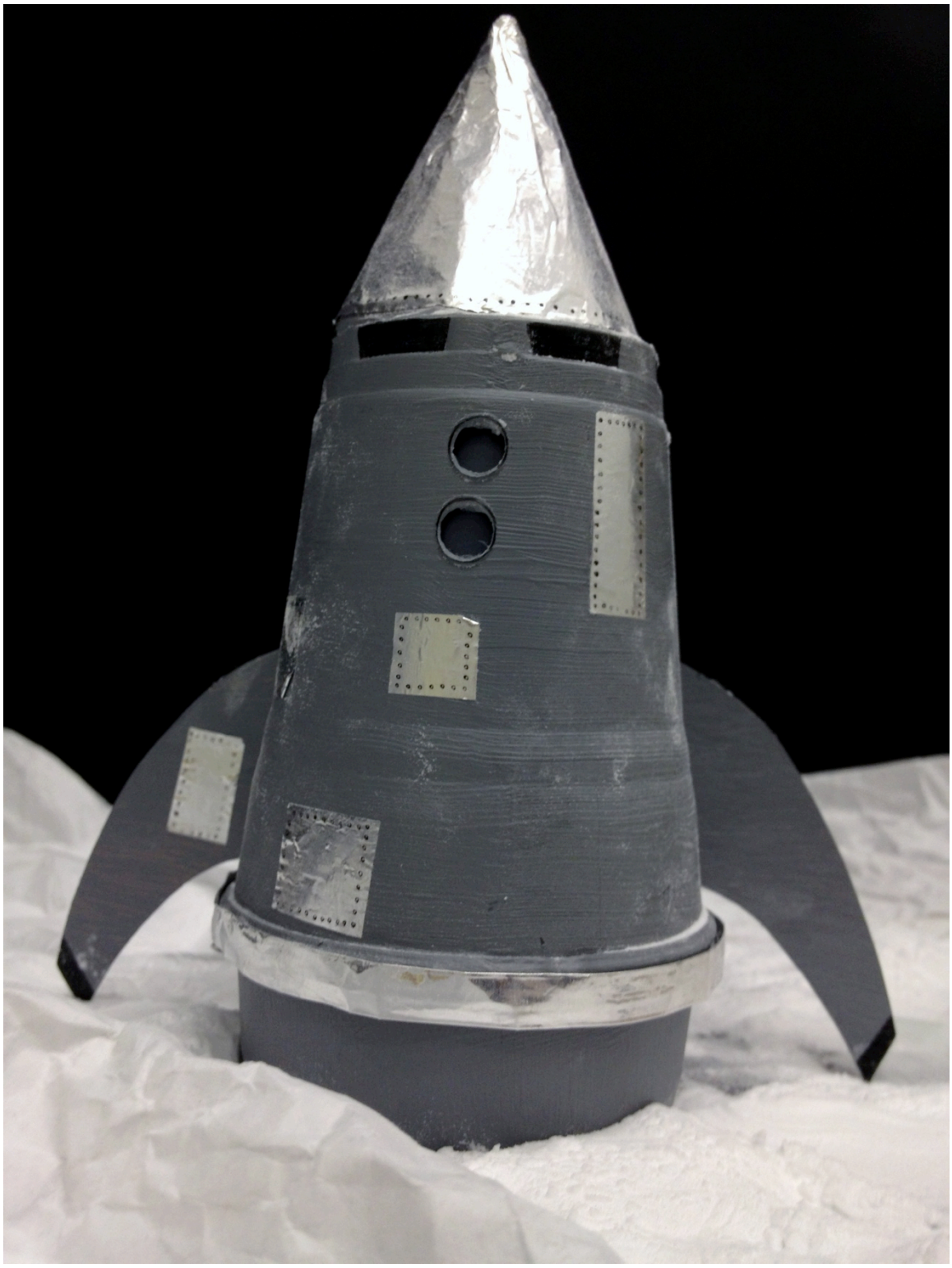

Figure 22: Model rocket used in *The Edge of the Tideless Sea*, plastic cup, cardboard, aluminum foil, paint.

Figure 23: ***The Edge of the Tideless Sea*****, 2012, installation views.**

Figure 24: ***The Edge of the Tideless Sea*****, 2012, installation views.**

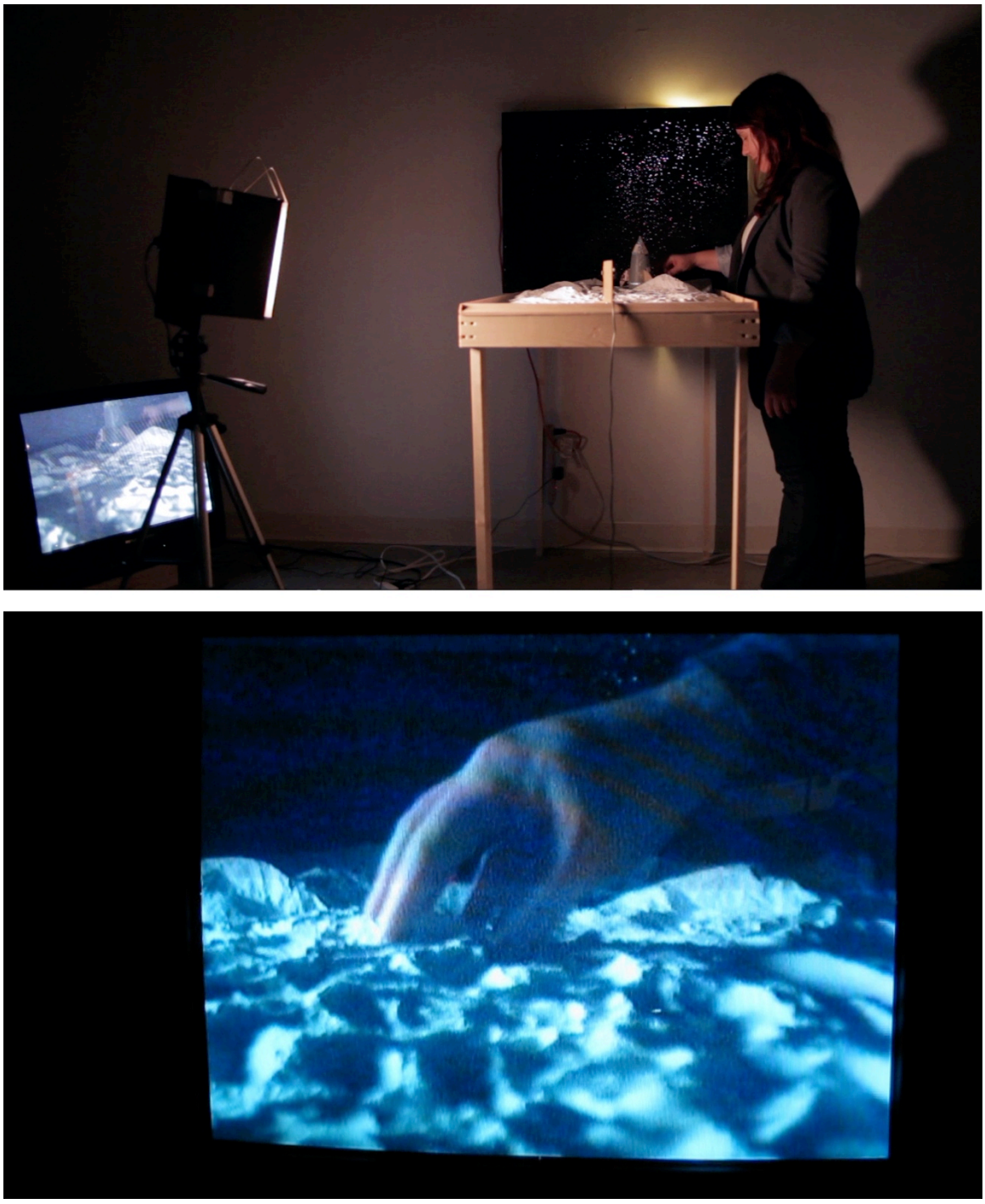

Figure 25: ***The Edge of the Tideless Sea*****, 2012, installation views.**

Figure 26: ***The Edge of the Tideless Sea*****, 2012, installation views.**

LONG VOYAGE: WORK IN PROGRESS

Figure 27: Model of corridor used in *Long Voyage,* 2012, cardboard, tape, plastic, paint, light.

There exists low-energy radiation throughout interstellar space that is analogous to the low ambient noise one hears in the background of a conversation in a restaurant. Physicists call it "cosmic background radiation" (Thornton and Rex 527-528). Cosmic background radiation is electromagnetic, the same type of energy as radio waves, lasers, visible light, and X-rays. The wavelength of cosmic background radiation is about the same length as that used in commercial microwave ovens to cook food. It therefore seemed appropriate to me to limit myself to using motors removed from microwave oven turntables to generate motion in my images of space.

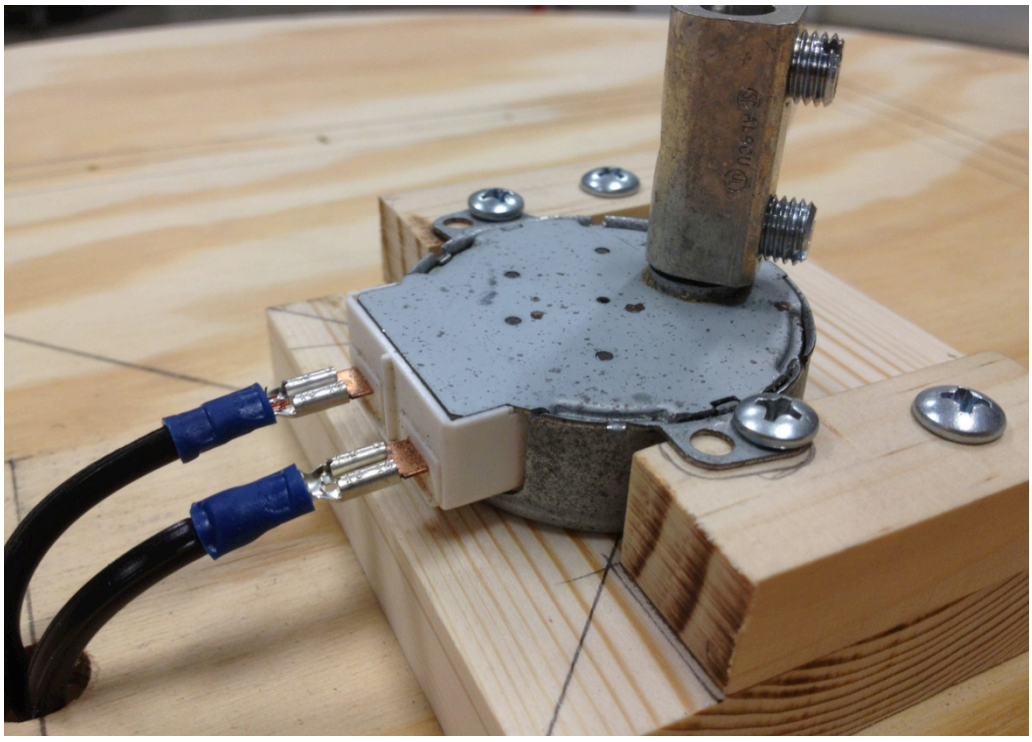

Figure 28: Microwave turntable motor used in *Long Voyage* to rotate a star field.

Figure 29: ***Long Voyage*** **under construction.**

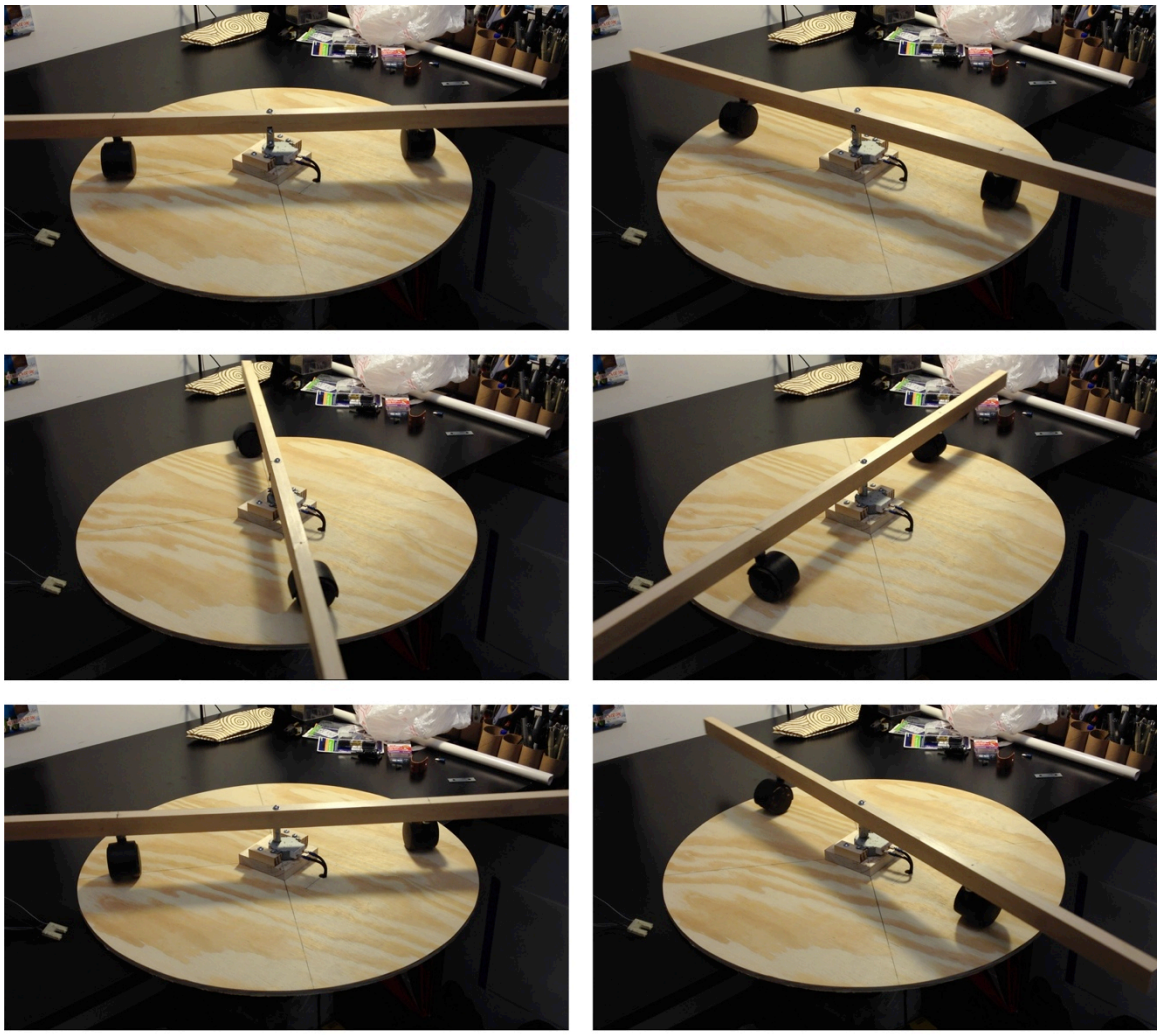

Figure 30: Test to ensure motor has sufficient torque to rotate support for star field.

My approach to designing contraptions vacillates between precise planning in a sketchbook and guess-and-check as I am building. At various points in the process of assembly, I need to test the mechanisms to verify that they work as I had hoped before proceeding to the next step. I am surprised and relieved that the microwave motors perform exactly the way I want.

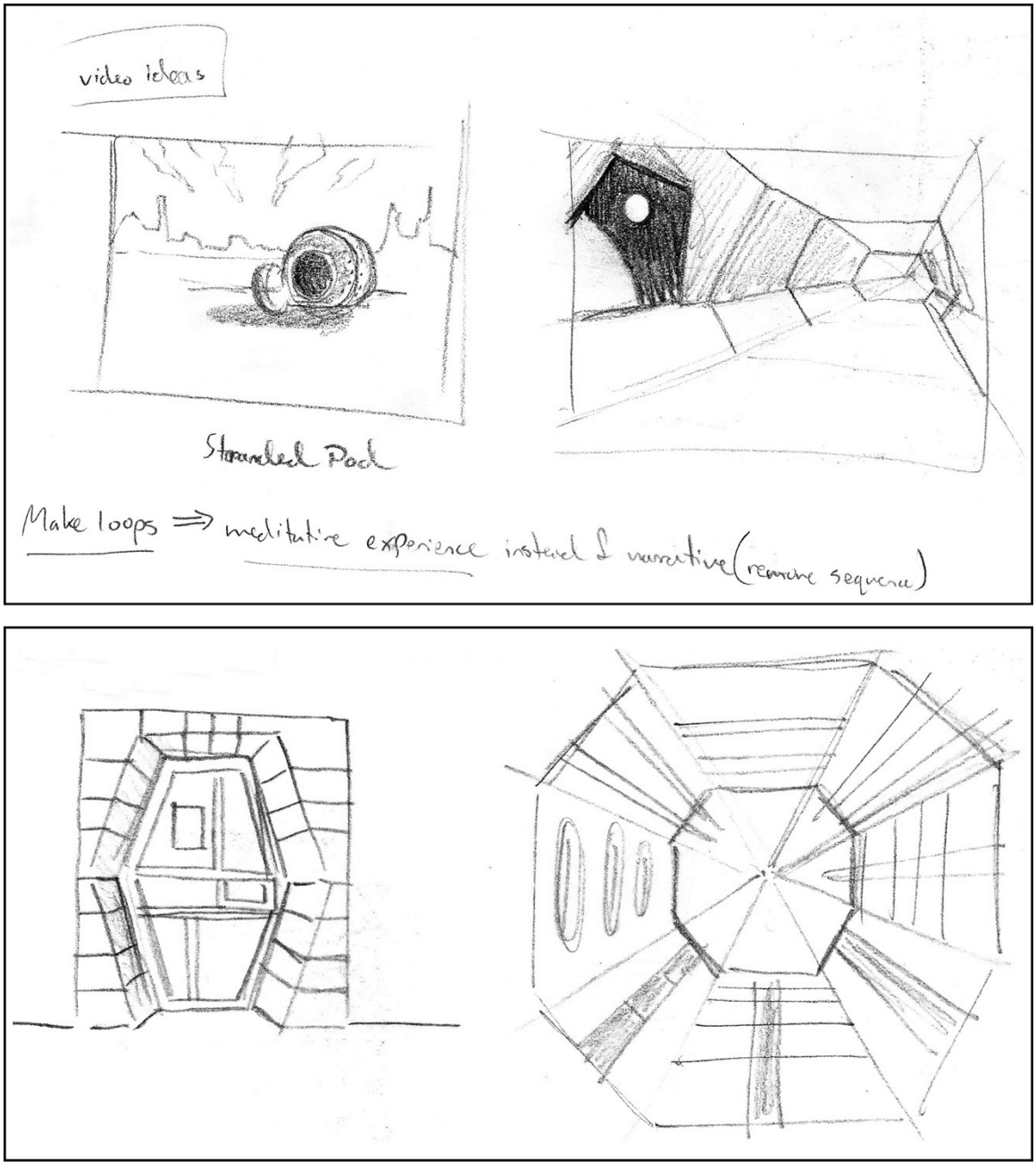

Figure 31: Preliminary drawings for corridor model used in *Long Voyage,* excerpts from sketchbook.

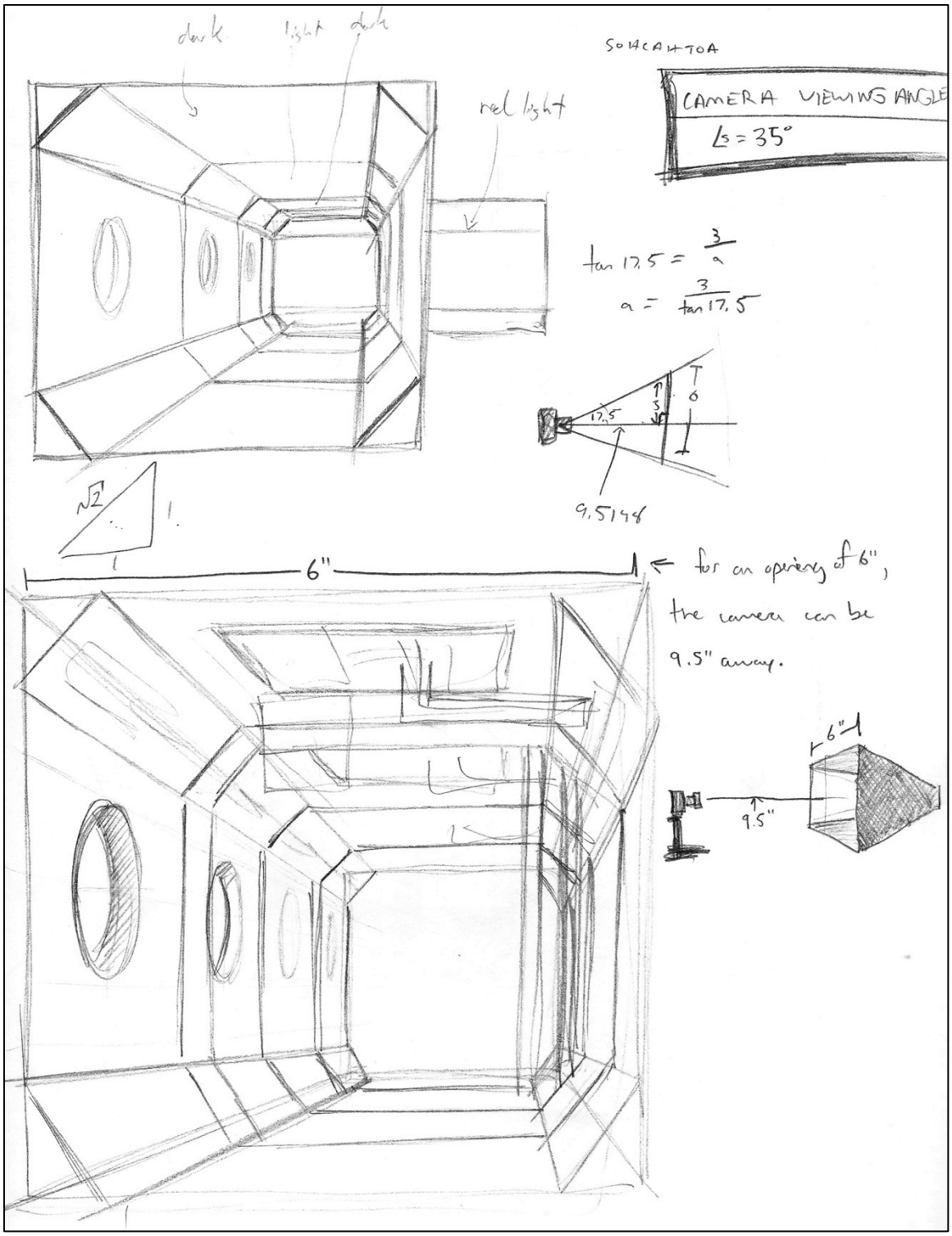

Figure 32: Preliminary drawings for corridor model used in *Long Voyage*, page from sketchbook.

Figure 33: Views of corridor model. Top view shows conical shape used to heighten the sense of perspective. Bottom view shows interior of cone.

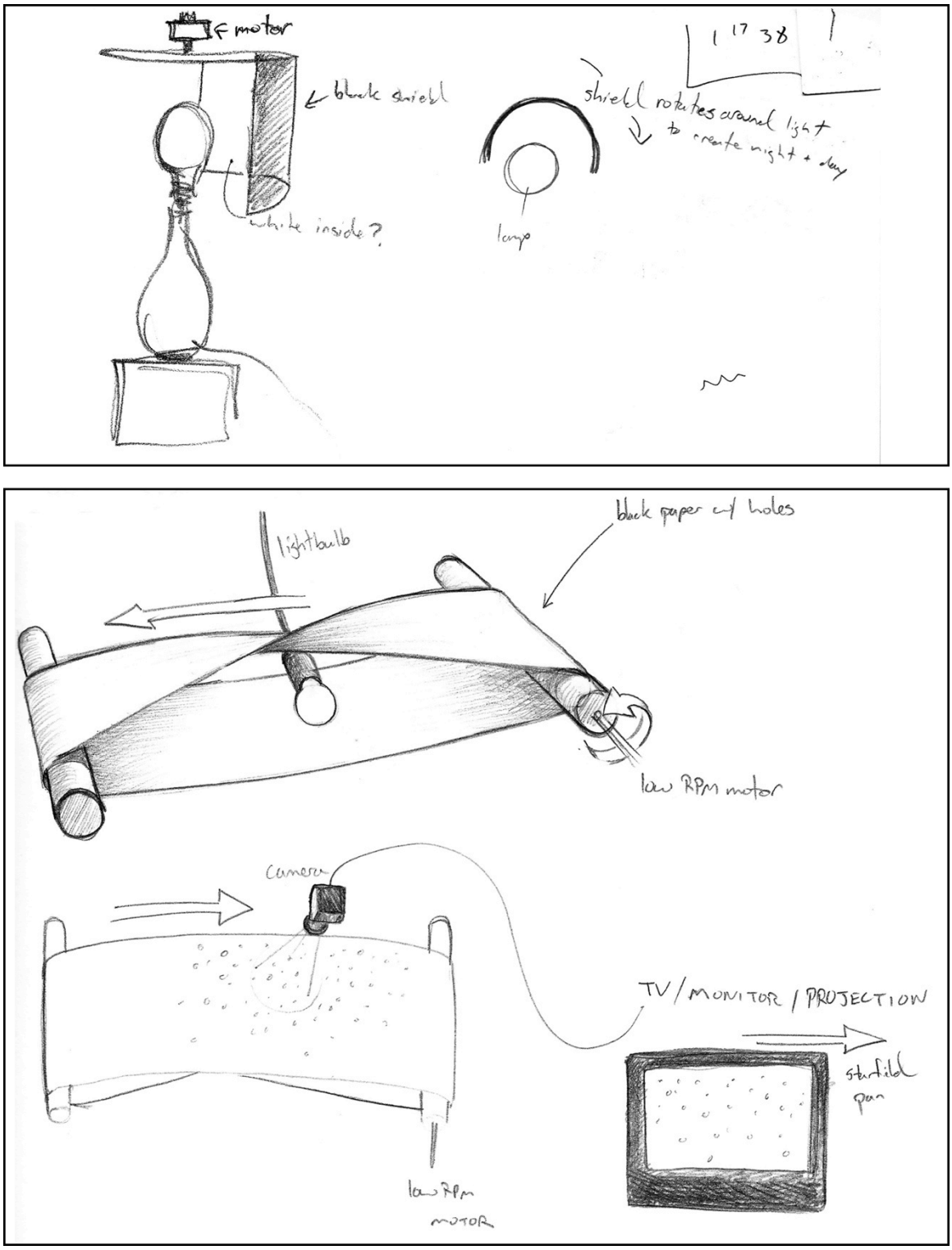

Figure 34: Early sketches of possible mechanisms to create a moving star field, excerpts from sketchbook.

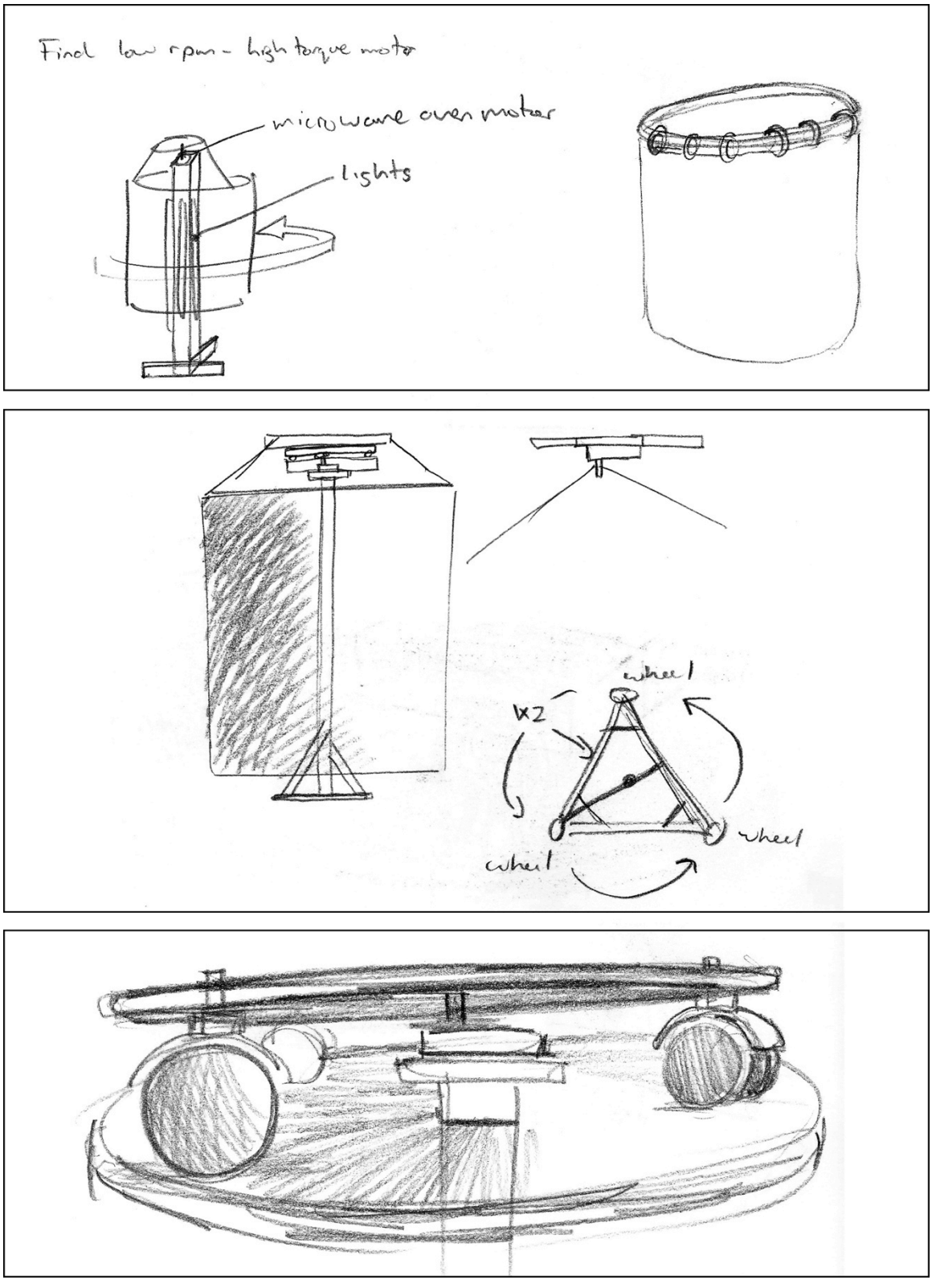

Figure 35: Diagrams of the mechanism used to rotate a hanging paper star field, excerpts from sketchbook.

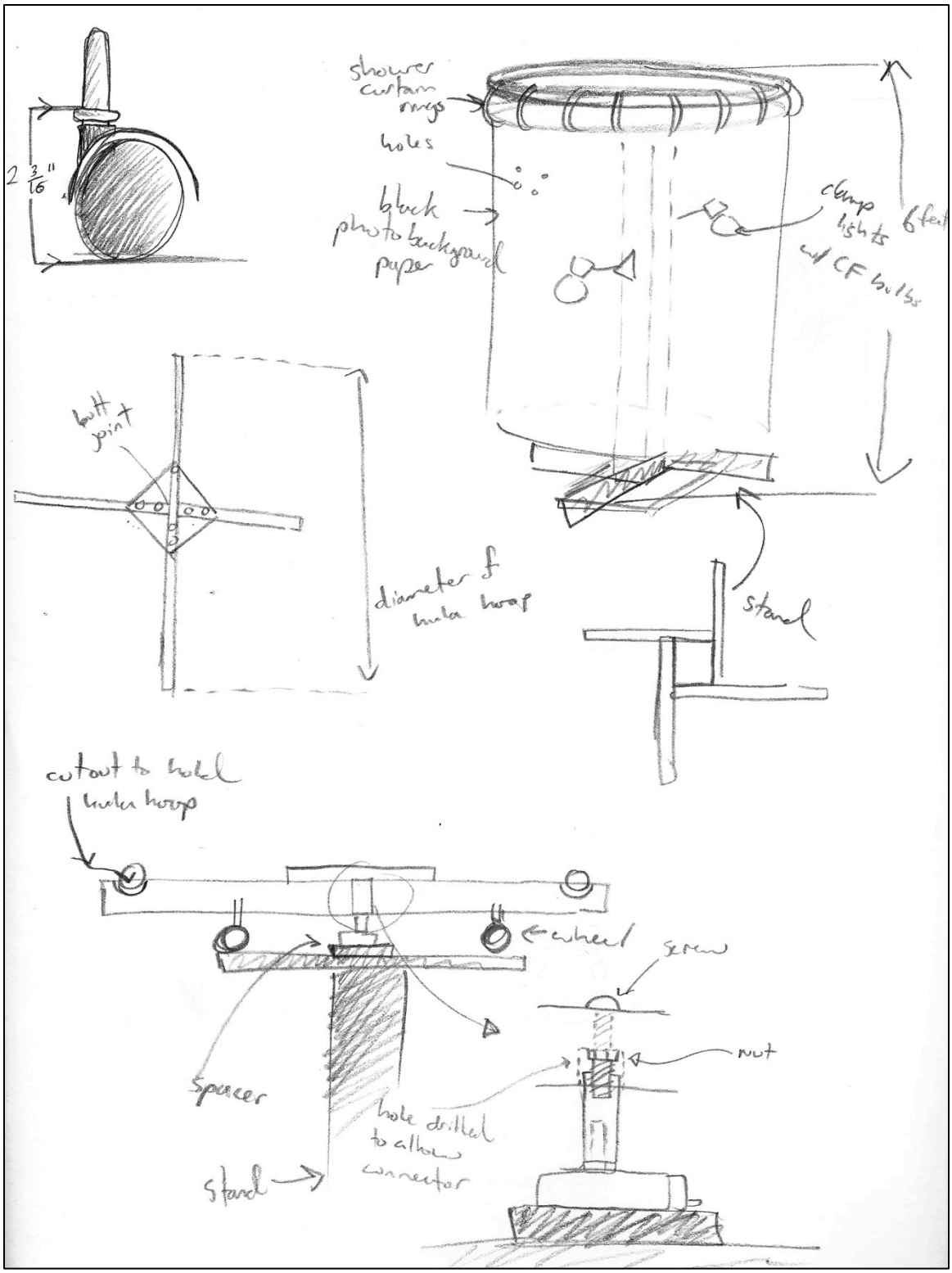

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Figure 37: Support structure for *Long Voyage* in progress, hula hoop, wheels, wood, motor.

Figure 38: Ambient "space noise" is generated when the wheels roll across the wooden platform. The sound is amplified by head phones connected to a guitar amp.

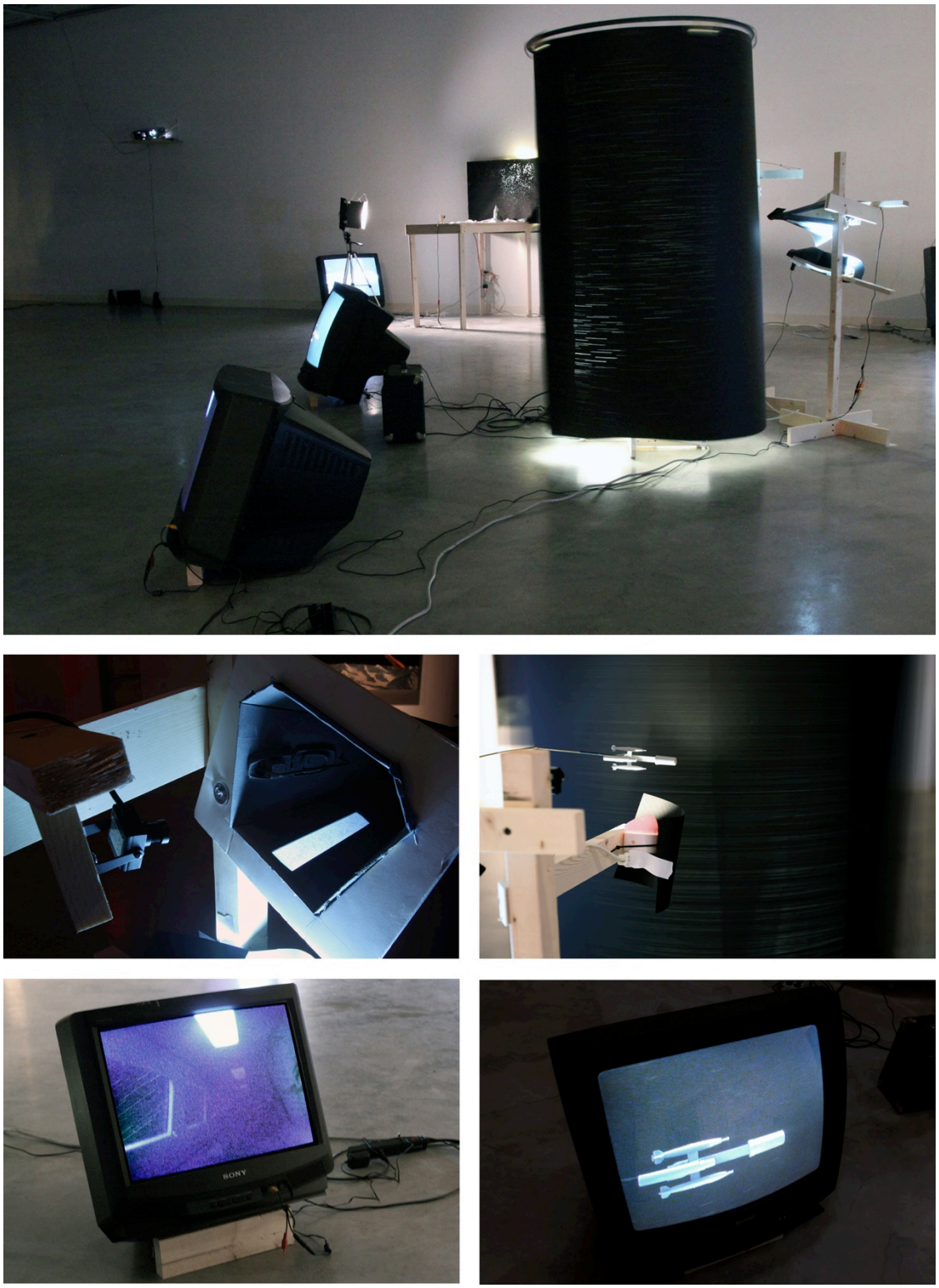

Figure 39: ***Long Voyage*****, 2012, installation views.**

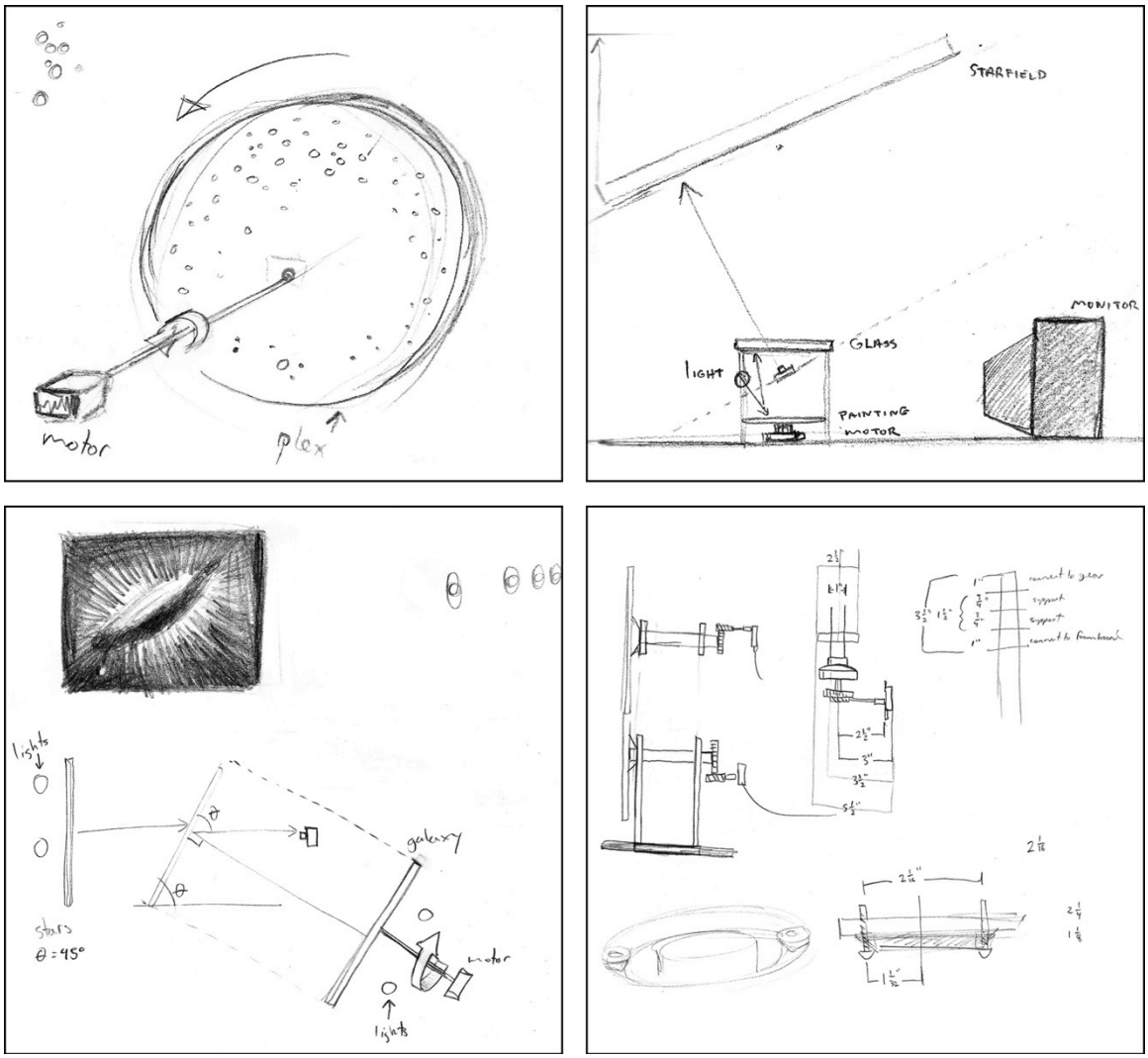

Figure 40: Preliminary drawings for mechanisms used in *Latecomers to the Universe,* excerpts from sketchbook.

Edwin Abbott explores the idea of high-dimensional beings visiting low-dimensional spaces in his novel *Flatland: A Romance of Many Dimension*s. In Abbott's story, a sphere visits Flatland, a realm made of only two dimensions, where the inhabitants are shapes instead of forms. To the inhabitants of Flatland, the appearance of every object is a line. Even the sphere that passes its round body through the plane of Flatland is perceived by the indigenous shapes to be a line. The sphere in Abbott's novel attempts to describe the appearance of its three-dimensional body to a square residing in Flatland, but the square cannot imagine what the sphere means by a third dimension. Abbott uses the square's limitations of imagination to point out the reader's similar inability to envision four-dimensional objects. As in Flatland, an intersection of different spatial dimensions occurs in my contraptions: three-dimensional structures generate two-dimensional images on television monitors.

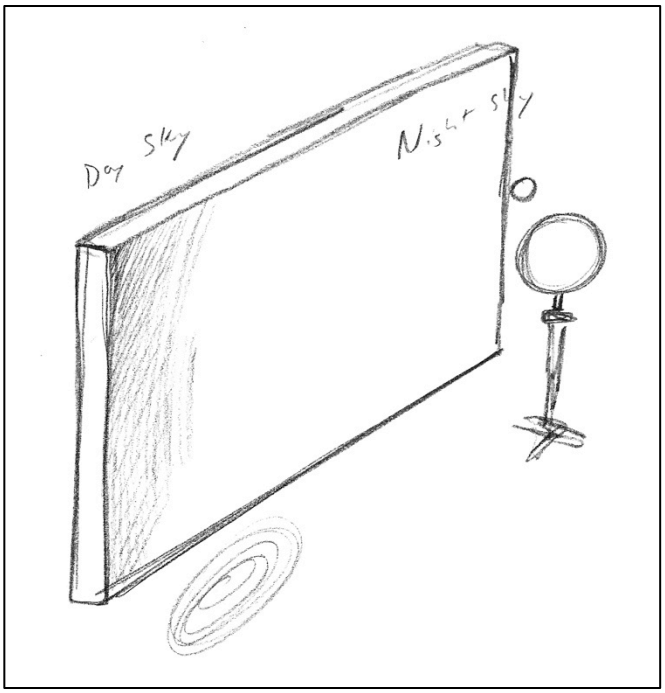

Figure 41: Preliminary sketch of installation of *Latecomers to the Universe.*

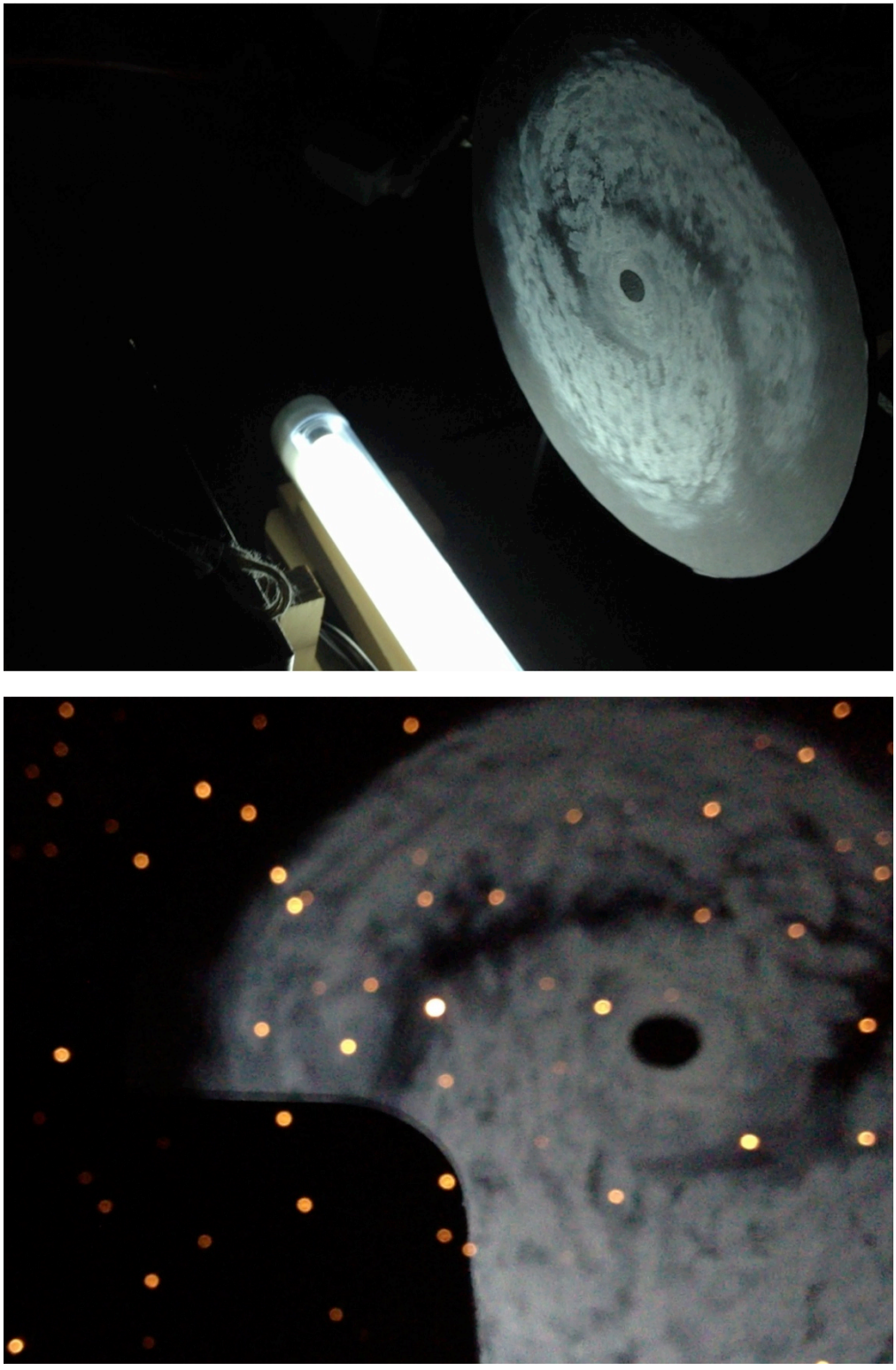

Figure 42: Experiment using glass to composite a reflection of a painting of a galaxy over a background of stars.

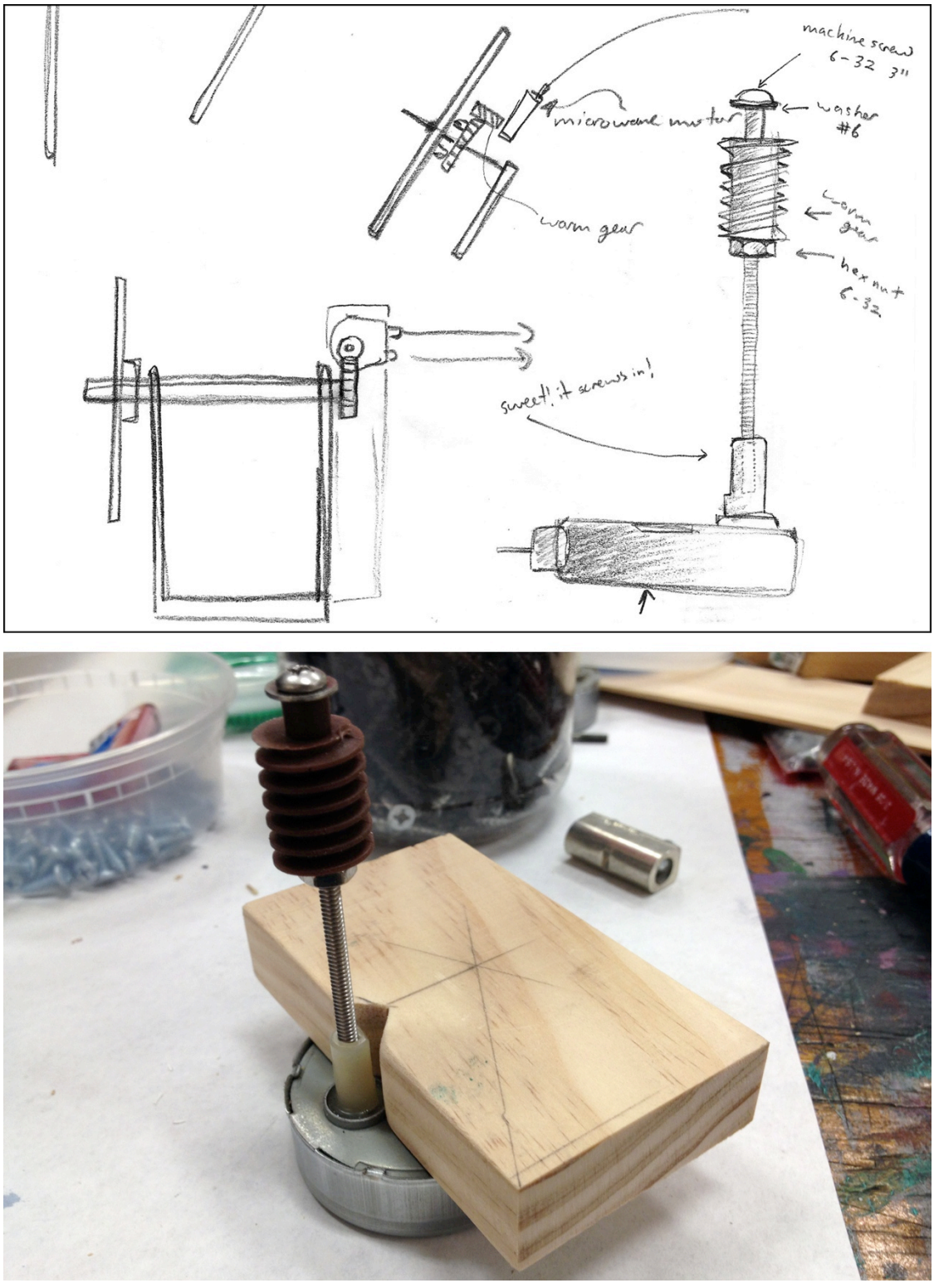

Figure 43: Sketch and construction of motor assembly used to rotate the galaxy in *Latecomers to the Universe.*

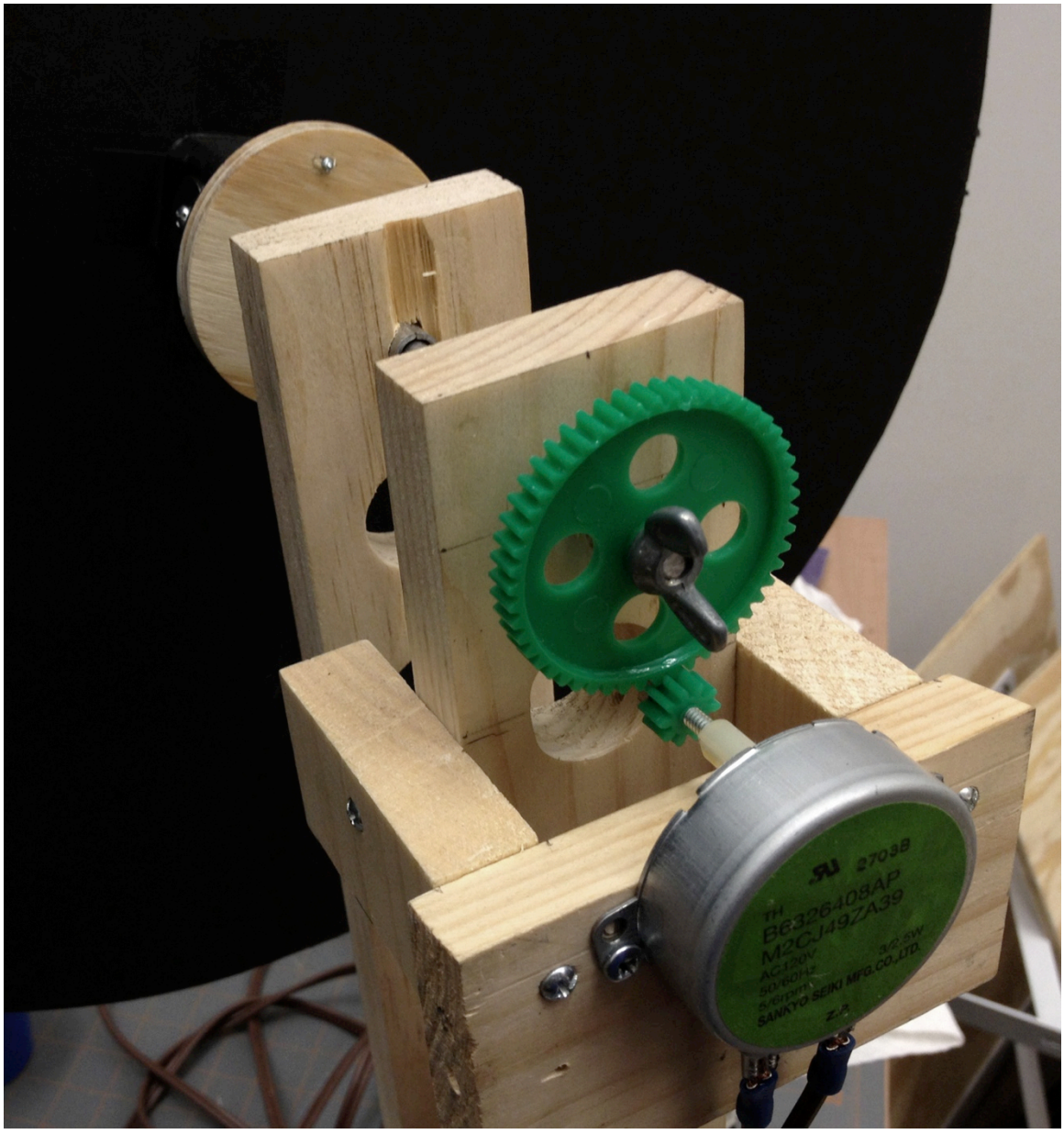

Figure 44: Motor assembly ready to rotate a galaxy in *Latecomers to the Universe.*

Figure 45: ***Latecomers to the Universe,*** **2012, installation views.**

BEHIND THE SKY: WORK IN PROGRESS

Figure 46: Foam model used as reference for the painting *Behind the Sky*, later incorporated into *Latecomers to the Universe.*

I want to create places viewers can visit and while they are there I want to show them how the places are constructed. As I work I ask myself: Does the work leave gaps for the viewer's imagination? If I use recognizable tropes from science fiction film or American landscape painting, am I repeating the code or breaking the code? Am I merely taking the "sign" and handing it back to the viewer or have I re-contextualized it? What does it mean if I place the televisions on the floor instead of on the wall or on tables?

Figure 47: Study of *Among the Sierra Nevada, California*, 1868, Albert Bierstadt, excerpt from sketchbook.

Figure 48: Preliminary drawing for painting *Behind the Sky*, page from sketchbook.

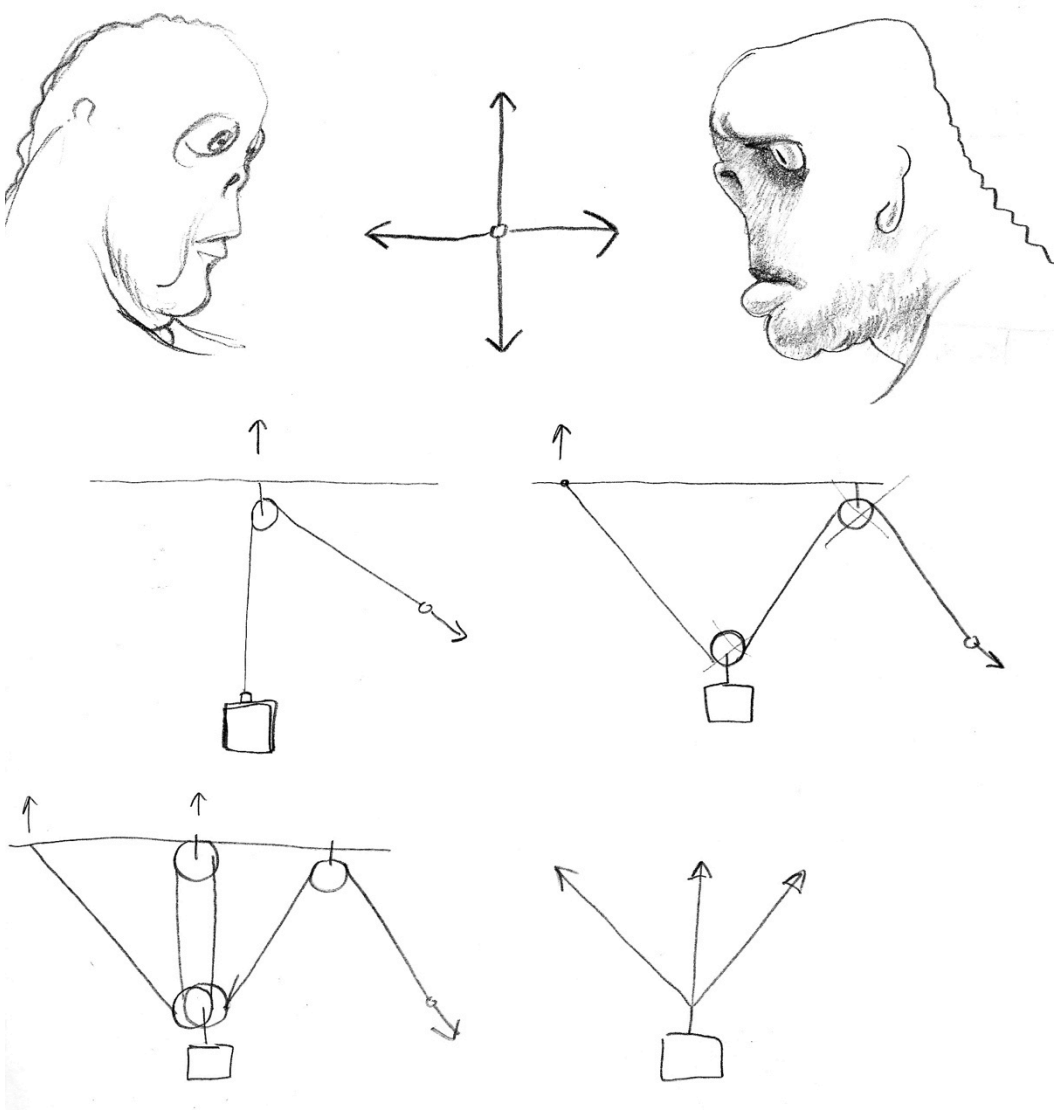

Figure 49: Diagrams of possible arrangements for pulleys, page from sketchbook.

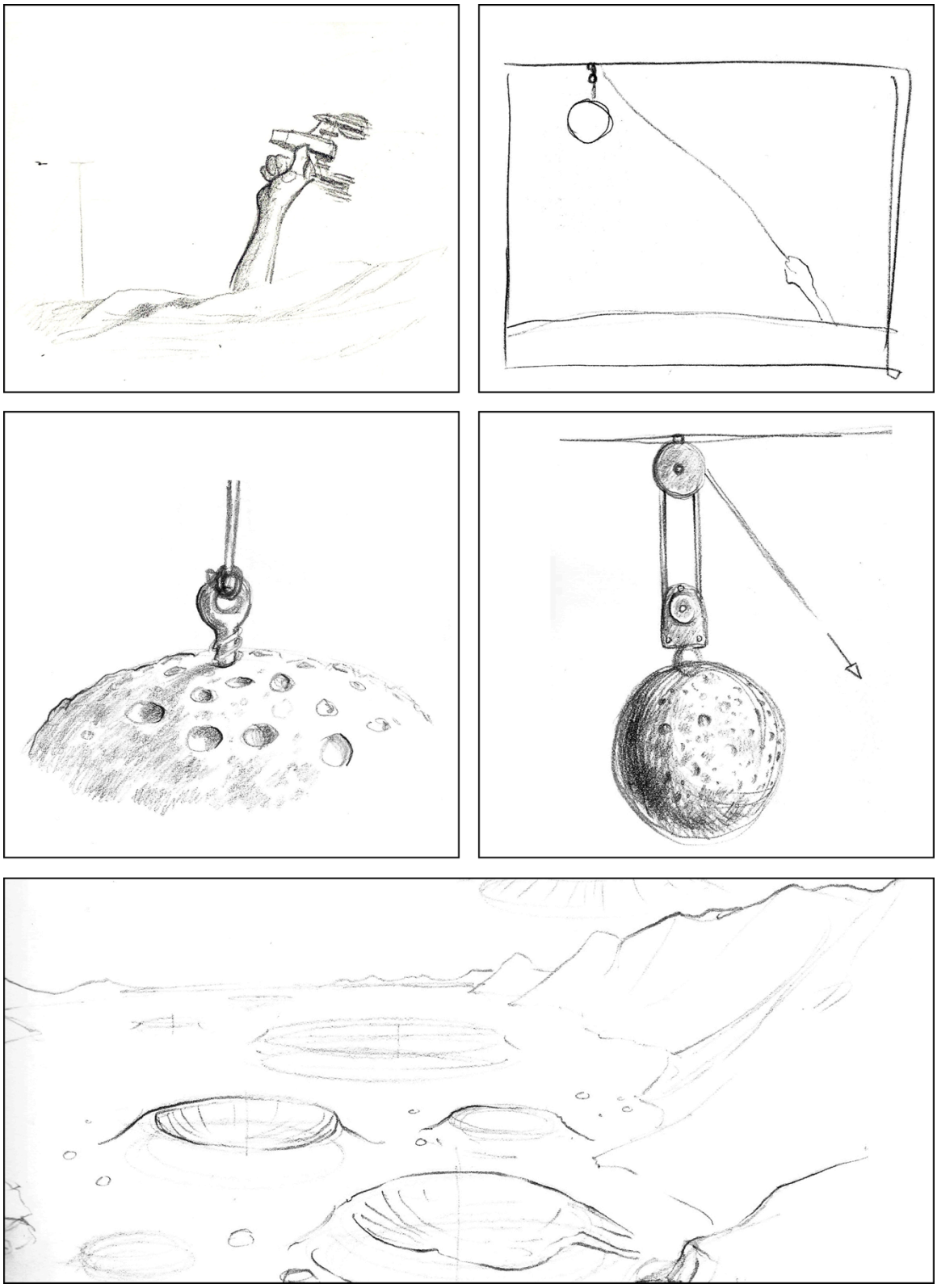

Figure 50: Preliminary drawings for painting *Behind the Sky*.

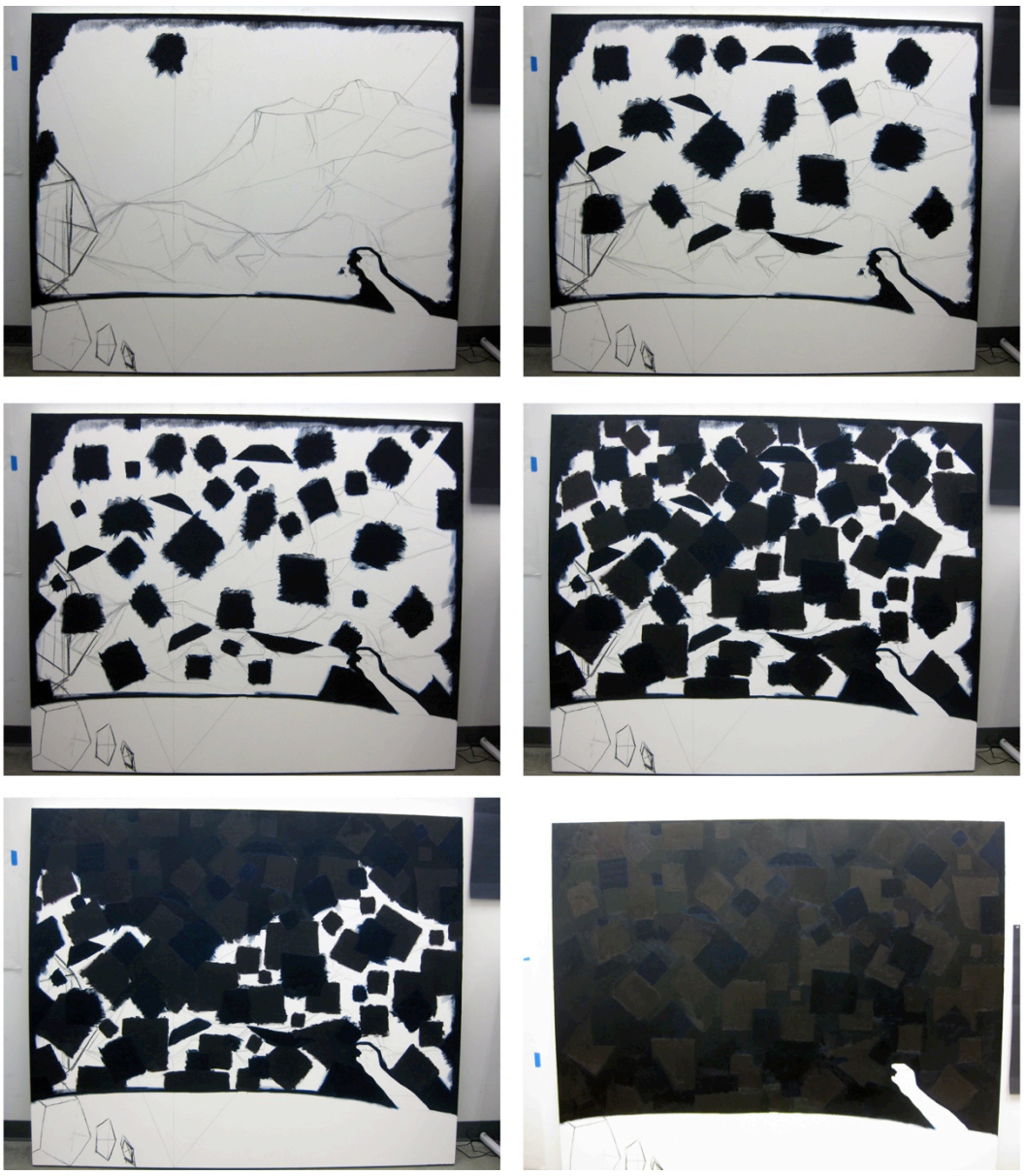

Figure 51: ***Behind the Sky,*** **painting in progress.**

Figure 52: Process of creating photographic references for painting *Behind the Sky.*

Figure 53: ***Behind the Sky,*** **2011, detail of painting.**

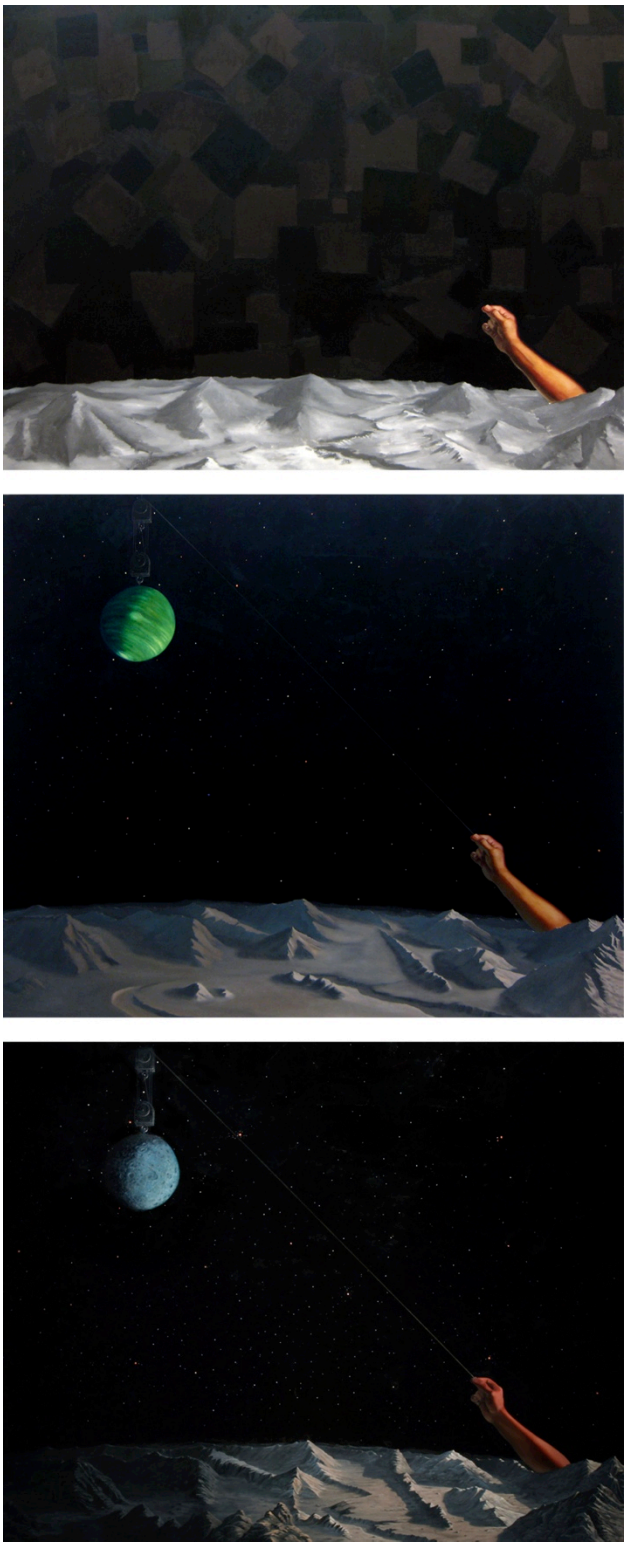

Figure 54: ***Behind the Sky*****, painting in progress.**

Figure 55: ***Behind the Sky*****, 2011, installation view.**

BEGINNING COSMOLOGY: WORK IN PROGRESS

Figure 56: ***Star Poker*****, 2011, needle, paintbrush handle, gaffer's tape.**

Werner Heisenberg's uncertainty principle shows that there are limits to what can be known about observable phenomena at subatomic scales. Specifically, the uncertainty principle says that the position and the speed of a particle cannot be known at the same time (Thornton and Rex 177-180). The limitation is due neither to the accuracy of measuring devices nor to the influence of an observer; rather, the information simply cannot be known (Hofstadter 463). As theoretical physicist Janna Levin says, "There are limits to how fast we can ever travel. We are limited by the speed of light. There are limits in quantum mechanics to how much we can ever really know. There are fundamental limits to certainty." To acknowledge the limits of what can be known, my video piece *Beginning Cosmology* uses two projections that cannot be viewed simultaneously. To create the projections, I poked holes into a sheet of paper and filmed myself with two cameras placed on opposite sides of the paper. One video shows my hand stabbing the paper while the other video shows only white points of light appearing out of darkness.

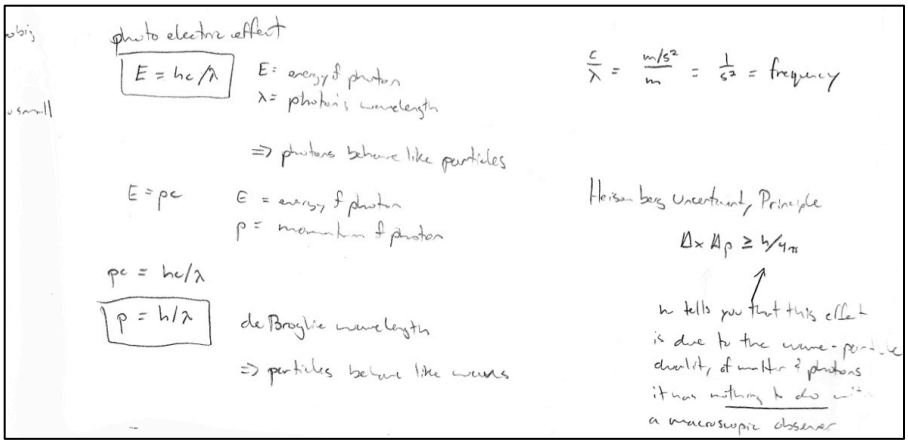

Figure 57: Notes on the uncertainty principle, excerpt from sketchbook.

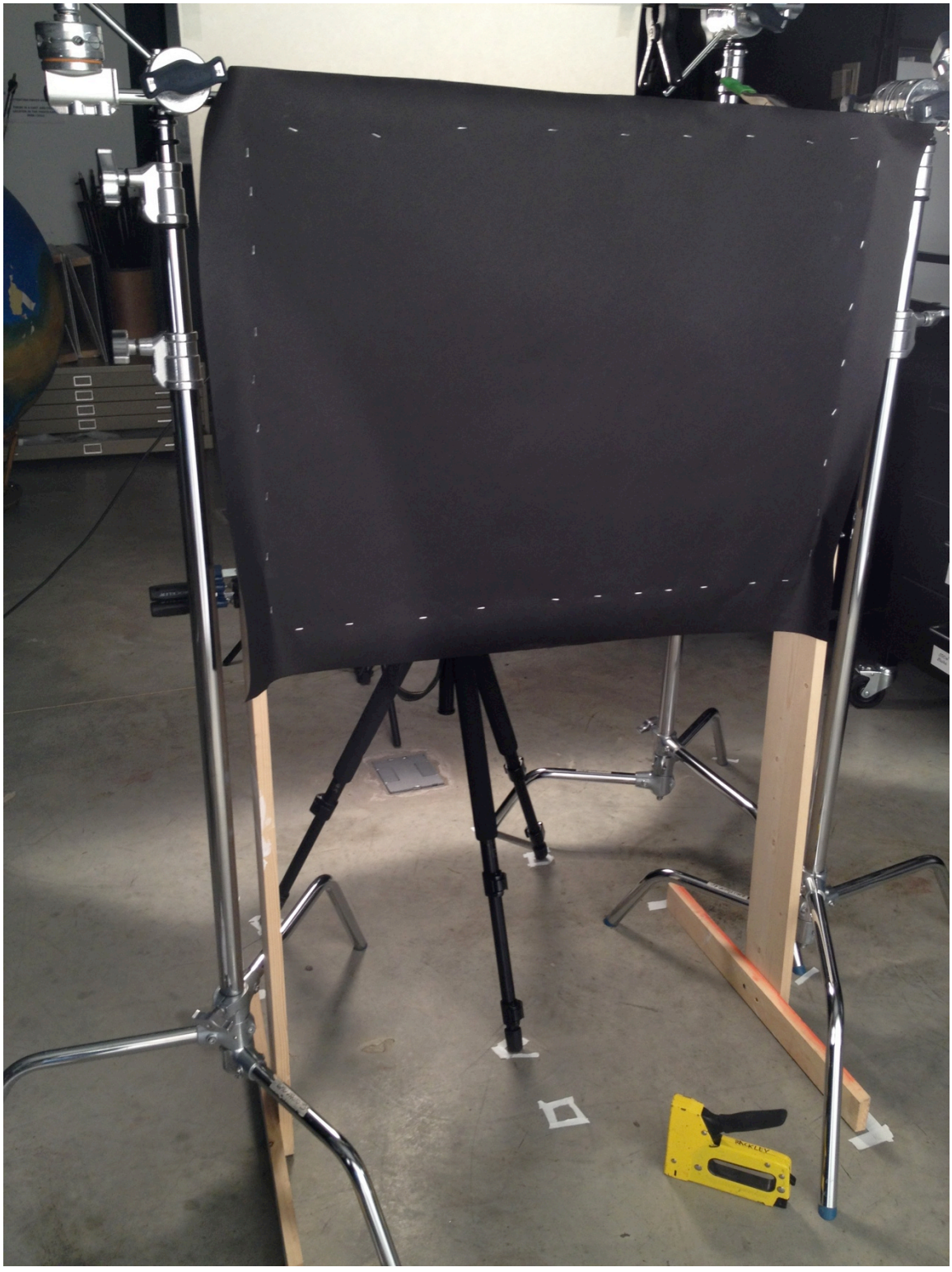

Figure 58: Paper ready to be punctured by *Star Poker*.

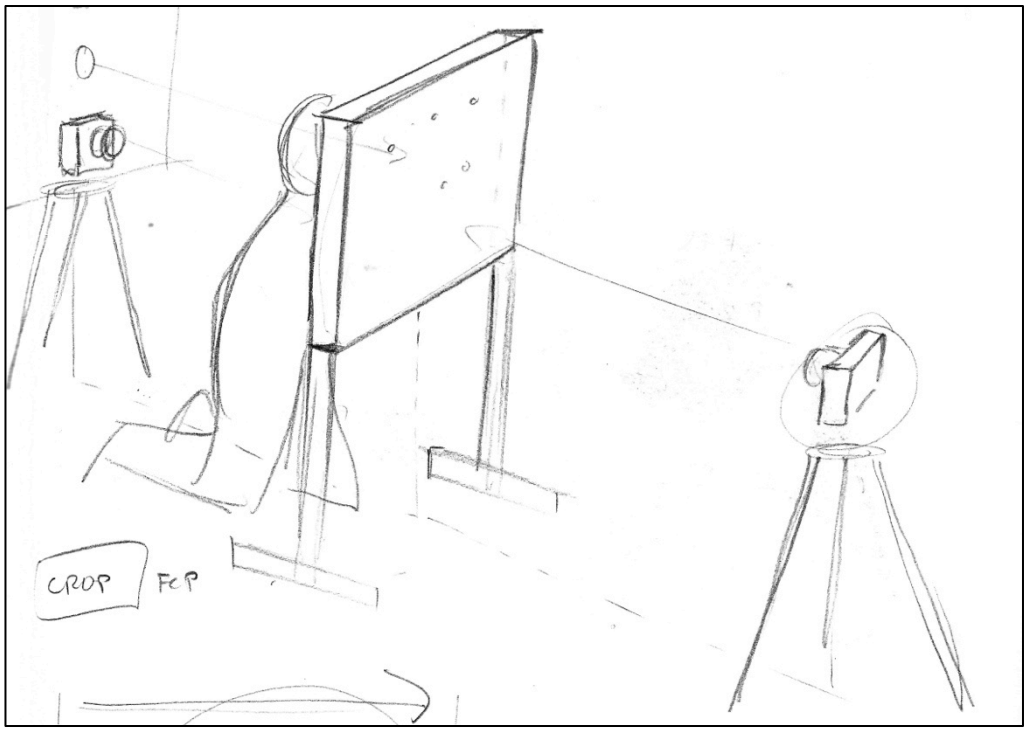

Figure 59: Diagram of arrangement of cameras and star field, excerpt from sketchbook.

Figure 60: Set up for filming *Beginning Cosmology.*

Figure 61: ***Beginning Cosmology*** **(Hand side), 15:22 minutes, video still.**

Figure 62: ***Beginning Cosmology*** **(Star side), 15:22 minutes, video still.**

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CURRICULUM VITAE

Christopher Rackley graduated from Davidson College in 2000. He taught K-12 art and art history at Schaeffer Academy for six years before pursuing his MFA at George Mason University.

EDUCATION:

2012 MFA Candidate, George Mason University, Fairfax, VA
2000 BA, Davidson College, Davidson, NC

SOLO EXHIBITIONS:

2012 Behind the Sky, School of Art, George Mason University, Fairfax, VA
2009 Recent Paintings, Rochester Civic Theatre, Rochester, MN

GROUP EXHIBITIONS:

2012 Elevator to the Moon: Retro-future Visions of Space, Artisphere, Arlington, VA
2011 Floating Utopia: Mobile Art Gallery Designs, Artisphere, Arlington, VA
2011 Ten Second Film Festival, Soap Factory, Minneapolis, MN
2011 The Extended Image: A Sense of Place, Mason Hall Alumni Atrium Gallery, Fairfax, VA
2011 Graduate Student Exhibition, School of Art, GMU, Fairfax, VA
2009 Salon 300, Hopkins Center for the Arts, Hopkins, MN

TEACHING:

2003 - 2009 Schaeffer Academy, Rochester, MN

PANELIST:

2011 Reading the Body in Contemporary Culture, University of Maryland, College Park, MD