

# A Practice of Light

A portfolio of artistic practice to accompany *Taking the Long View* PhD thesis.

Michaela French - May 2020

“Try though we may to split light into fundamental atomic pieces, it remains whole to the end. Our very notion of what it means to be elementary is challenged. Until now we have equated smallest with most fundamental. Perhaps for light, at least, the most fundamental feature is not to be found in smallness, but rather in wholeness, its incorrigible capacity to be one and many, particle and wave, a single thing with the universe inside.”

.....  
Arthur Zajonc, *Catching the Light: The Entwined History of Light and Mind* (New York: Oxford University Press, 1995)

## INTRODUCTION

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Artistic practice is the foundation of my ecological PhD investigation. The attentive observation of light is the foundation of my artistic practice. The artworks presented in this portfolio can be considered artefacts that have emerged from, and informed my research process. These artworks provide evidence of the evolving ideas, approaches, methods and insights that comprise my original contribution to knowledge – the Gibsonian framework for practice-based ecological artistic research.

In choosing light as the subject of my research, I ensured an experiential and ecological emphasis in my investigation. Light as an inherently ecological phenomenon exists beyond the limits of disciplinary thinking and theoretical enquiry. This study combined James J. Gibson's *The Ecological Approach to Visual Perception*<sup>1</sup> with the physical, perceptual, exploratory and experiential processes of artistic practice to investigate the experience of light from within the light-perceiver-environment nexus.

My artistic practice led to significant shifts in my thinking, and responded to my evolving theoretical investigation. The dialogue between these two ways of knowing facilitated my enquiry and resulted in the new knowledge generated in this study.

The artworks in this portfolio facilitated multiple modes of enquiry, through which the Gibsonian framework for practice-based ecological artistic research was devised, developed and tested. My practice-based artistic research served as a site to:

- collect visual and experiential data
- develop methods and strategies for rigorous subjective research
- test theory through direct perceptual interaction within the light-perceiver-environment nexus
- examine the interplay between experiential and intellectual knowing
- articulate an ecological framework for practice-based artistic enquiry
- cultivate an ecological worldview

Through my research process and the practice of observing light over a five year period, I have cultivated an ecological worldview which has fundamentally altered my artistic practice and re-framed my relationship with the world.

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<sup>1</sup> James J. Gibson, *The Ecological Approach to Visual Perception* (New York: Taylor and Francis, 1979).

Figure 1: *Daylight Observation - 21st January 2016*  
(Detail) Latitude: 51° 45' 41" N  
Longitude: 0° 00' 41" W  
Location: Hoddesdon, Hertfordshire, UK  
Direction of View: 124° E





## PROJECT 01 - A YEAR OF LIGHT

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### Establishing an Artistic Research Direction

The artistic practice of observing light is central to this PhD investigation. The artistic experience and knowledge I've developed over my 25-year career as an artist provided the foundation and often the direction for my research. The intuition, exploration, observation and creativity inherent in my practice served as my compass, guiding the specific path of enquiry I followed in my study.

The visual data I gathered, my evolving perceptual experience, and the emergent patterns of interconnection and complexity that emerged from

the seemingly simple act of looking during my first year of observing light established the ongoing process and rhythm of my research.

My initial practice-based artistic research project, *A Year of Light* (2015) was a year-long investigation that examined how the interrelation between light and a perceiver could be elucidated through the artistic observation of light. Each day I observed and recorded a single observation of light using attentive observation as my primary method. The visual data samples I collected were drawn from natural and technologically mediated light sources, such as light bulbs, screen emissions and illuminated signage.

Figure 2: *A Year of Light* 66/365 (2015)





## PROJECT 01 - A YEAR OF LIGHT

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“The continuous act of perceiving involves the co-perceiving of the self. At least, that is one way to put it. The very term perception must be redefined to allow for this fact.”

James J. Gibson, *The Ecological Approach to Visual Perception* (New York: Taylor and Francis, 1979), p.240.

Figure 4: *A Year of Light 365 Observations* (2016),  
The Observer Effect, Hockney Gallery, London.



## PROJECT 01 - A YEAR OF LIGHT

### Repetition, Sequence and Pattern

Repetition, sequencing and pattern recognition informed each stage of my research process from attentive observation, data collection and visual evaluation to the creation of the final artworks. The extended duration of *A Year of Light* project combined with the prolonged process of observing light, were effective strategies for re-framing my established patterns of perception and thinking over time. In this way, my small repetitive action of looking was applied to contribute to an expanded ecological understanding in which pattern and light were present at every level of the research experience.

The structure of the *A Year of Light Artist's Book* (2017) reflected this idea of pattern and repetition. The sequencing of images and the repeating form of pages and stitches afforded a new meta-level observation of light through direct physical engagement with the reader.

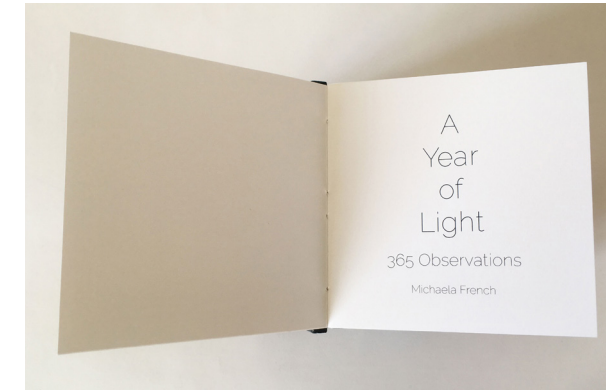


Figure 5: *A Year of Light - Artist's Book* (2017), (100mm x 100mm x 123mm) Multiple views. Photos: Michaela French.

“What [Gibson] asks us mainly to do is to unlearn. Our entire education has been geared to making us distrust our senses and slightly to look down on those who confuse their subjective experiences with objective facts.”

.....  
E. H. Gombrich, *Distinguished Dissident: Review of James J. Gibson and the Psychology of Perception*, by Edward S. Reed, *New York Review of Books*, Jan (1989), 13–15, p.13.





## PROJECT 02 - THE OLD LOOKOUT

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### Re-framing the View

In order to investigate light from an ecological perspective I developed a framework for practice-based artistic research which combined artistic and theoretical approaches to facilitate subjective experiential research. My artistic practice afforded the means to test Gibson's theory and draw out and articulate my proposed framework for ecological artistic research. My artistic practice-based enquiry used the durational observation and ecological lens methods to re-frame and expand the limits of my perception through attentive observation and education of attention.

*The Old Lookout* project took place over a ten-day period in July 2015. My intention to test three methods of recording light data using time-lapse photography, a digital light sensor and my own visual perception led to a significant shift in my role as artist-researcher. As I attuned to the diurnal rhythm of light in the Old Lookout studio my own capacity to gather information through my direct subjective perceptual interaction with my environment became my primary method for recording light data. This approach and the methods developed during *The Old Lookout* study were pivotal in devising the Gibsonian framework for ecological artistic research.

Figure 6: *A Year of Light 185/365* (2015)

## PROJECT 02 - THE OLD LOOKOUT

### Light, Time and Change

*The Old Lookout* project was an education of attention in an immersive field of light. Guided by Gibson's principles, I began learning to see ecologically. This intensive study of light taught me to trust and value my subjective perceptual experience and broadened my understanding of what artistic research could be.

The ecological interrelation between light, time and change were recurring themes in the artworks that emerged from this project. The first *Light Collection Samples* prints, the short films *Frame*, *Sea*, *Sky* and *Rhythm* and the light archive, *Specimen Drawer Sky and Sea* all reflected and elucidated various aspects of the systemically entwined perceptual experience of the light-perceiver-environment nexus.



Figure 7: *Frame*, (2015) Selected film stills

## PROJECT 02 - THE OLD LOOKOUT

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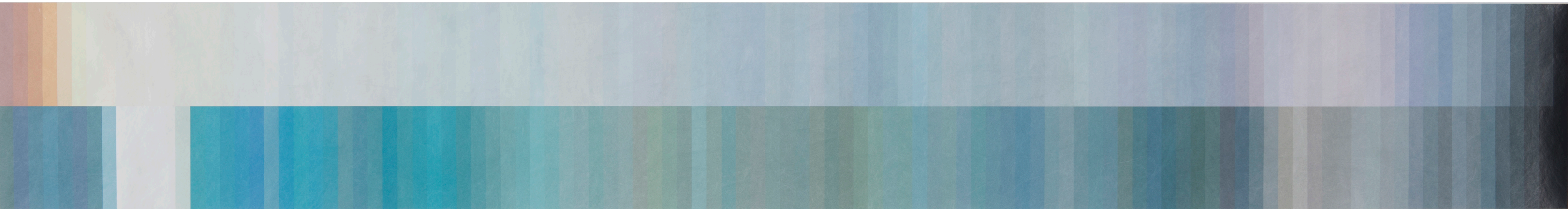


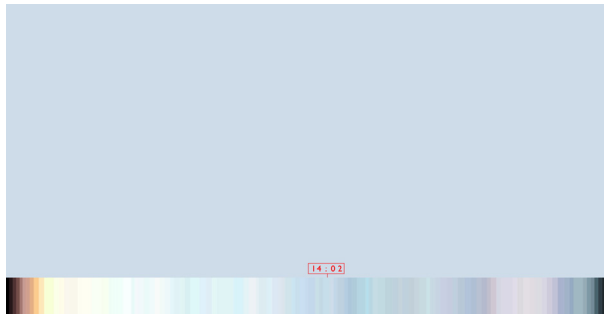
Figure 8: *Light Collection Samples* (2015) Original print on Japanese paper, the quality of this material softened the colour I had observed on location.

## PROJECT 02 - THE OLD LOOKOUT

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Figure 9: *Specimen Drawer Sky and Sea* (2015) A time-based archive of the light data samples from the *Light Collection Samples* (2015) (see Figure 7 on previous page). The Motion of Matter, Bow Arts Project Space, London.



## PROJECT 02 - THE OLD LOOKOUT

2015-07-10 14:00:39	COLOR TEMP: 20128 K	- Lux: 1600	- R: 2680	G: 3925	B: 5089
2015-07-10 14:00:50	COLOR TEMP: 21953 K	- Lux: 1592	- R: 2672	G: 3916	B: 5084
2015-07-10 14:01:01	COLOR TEMP: 16527 K	- Lux: 1625	- R: 2745	G: 3980	B: 5145
2015-07-10 14:01:13	COLOR TEMP: 17404 K	- Lux: 1619	- R: 2729	G: 3967	B: 5132
2015-07-10 14:01:23	COLOR TEMP: 17716 K	- Lux: 1613	- R: 2715	G: 3952	B: 5114
2015-07-10 14:01:33	COLOR TEMP: 17891 K	- Lux: 1613	- R: 2715	G: 3953	B: 5116
2015-07-10 14:01:53	COLOR TEMP: 18209 K	- Lux: 1609	- R: 2707	G: 3945	B: 5107
2015-07-10 14:02:03	COLOR TEMP: 18870 K	- Lux: 1607	- R: 2698	G: 3939	B: 5102
2015-07-10 14:02:13	COLOR TEMP: 19738 K	- Lux: 1599	- R: 2684	G: 3924	B: 5086
2015-07-10 14:02:24	COLOR TEMP: 19242 K	- Lux: 1601	- R: 2687	G: 3927	B: 5088
2015-07-10 14:02:34	COLOR TEMP: 19543 K	- Lux: 1600	- R: 2689	G: 3927	B: 5089
2015-07-10 14:02:44	COLOR TEMP: 20027 K	- Lux: 1596	- R: 2679	G: 3917	B: 5078
2015-07-10 14:02:54	COLOR TEMP: 20348 K	- Lux: 1593	- R: 2676	G: 3913	B: 5074
2015-07-10 14:03:04	COLOR TEMP: 20590 K	- Lux: 1584	- R: 2673	G: 3898	B: 5055
2015-07-10 14:03:14	COLOR TEMP: 20512 K	- Lux: 1583	- R: 2662	G: 3891	B: 5046
2015-07-10 14:03:24	COLOR TEMP: 20111 K	- Lux: 1587	- R: 2672	G: 3900	B: 5056
2015-07-10 14:03:34	COLOR TEMP: 21360 K	- Lux: 1585	- R: 2663	G: 3897	B: 5057
2015-07-10 14:03:44	COLOR TEMP: 20354 K	- Lux: 1586	- R: 2664	G: 3896	B: 5052
2015-07-10 14:03:54	COLOR TEMP: 20294 K	- Lux: 1587	- R: 2666	G: 3897	B: 5053
2015-07-10 14:04:05	COLOR TEMP: 21212 K	- Lux: 1588	- R: 2660	G: 3901	B: 5062

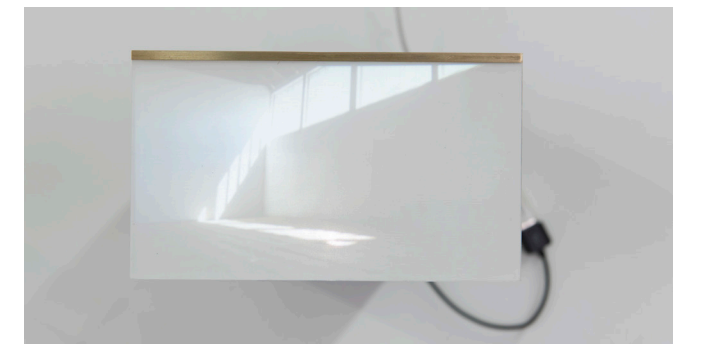
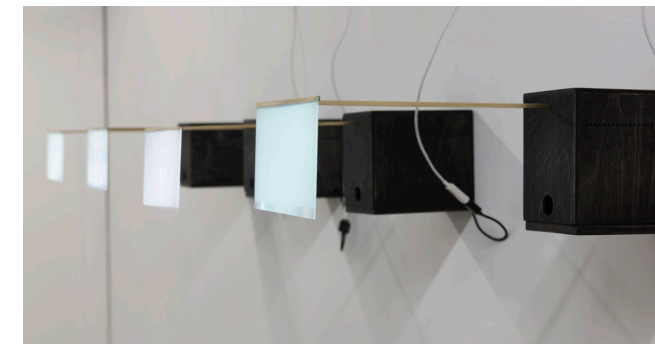
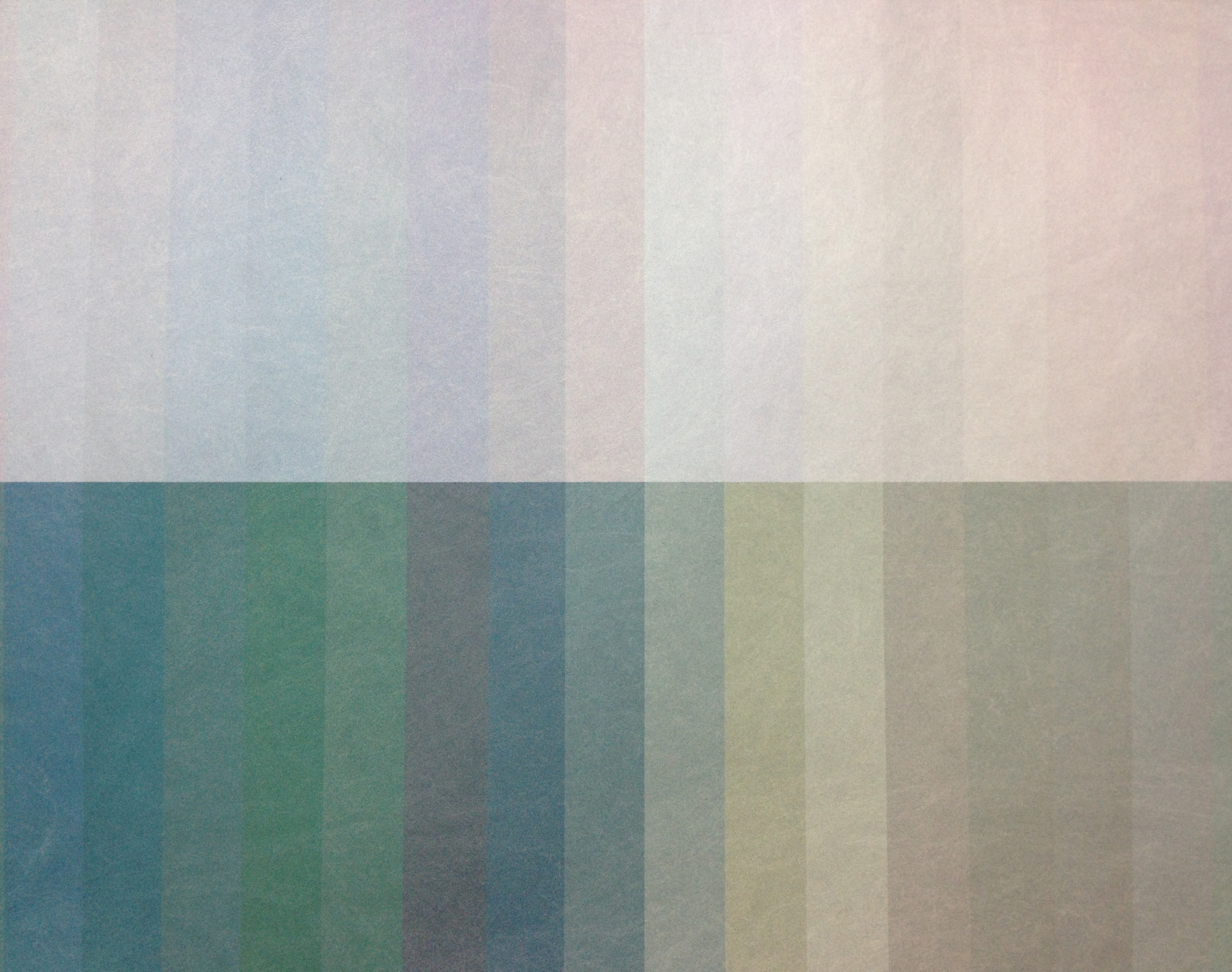


Figure 10: *Frame, Sea, Sky and Rhythm* (2015)  
Selected film stills. Exhibited using custom-made suspended micro projection systems. The Motion of Matter, Bow Arts Project Space, London.



## PROJECT 02 - THE OLD LOOKOUT

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“If [...] we let experience itself command our thinking about experience, we gain first hand information—the direct witness of experience—that stands on its own merits. In order to do this, however, we must first learn to trust that witness [...] Gibson felt that a theory of perceptual experience should begin with experience and not let primal, pre-analytic reality get fully covered over by abstraction.”

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David A. Grandy, *The Speed of Light: Constancy and Cosmos* (Bloomington: Indiana University Press, 2009). p. 104-105.,

Figure 11: *Light Collection Samples* (2015) Detail of the data set printed on Japanese paper.

# PROJECT 03 - DAYLIGHT OBSERVATIONS

## Articulating the Light-Perceiver-Environment Nexus

The *Daylight Observations* project was the first to apply the Gibsonian framework for ecological artistic research as it is presented in my thesis. The project was informed by the six Gibsonian principles and used durational observation, ecological lenses and reflective artistic practice as the methods of enquiry. The *Daylight Observations* project created balance between experiential and theoretical investigation, and marked a transition from initial exploration and development phase into the testing and consolidation phase of the research.

The observational light data that forms the foundation of the final artworks was gathered

through the direct perceptual experience of light. Attentive observation and reflective artistic practice facilitated an education of attention that significantly expanded my field of view.

Learning to see ecologically meant challenging the limits of my comprehension and unlearning what I thought I knew. This was an uncomfortable and humbling experience, but the value of prolonged, attentive, focused observation in educating my perceptual system was evident. The resulting artworks *The Orbit Series* applied this new knowledge to successfully and succinctly elucidate and articulate the complex systemic interrelation between light, perceiver and environment.

Figure 12: *Daylight Observation December 21st* (2016)

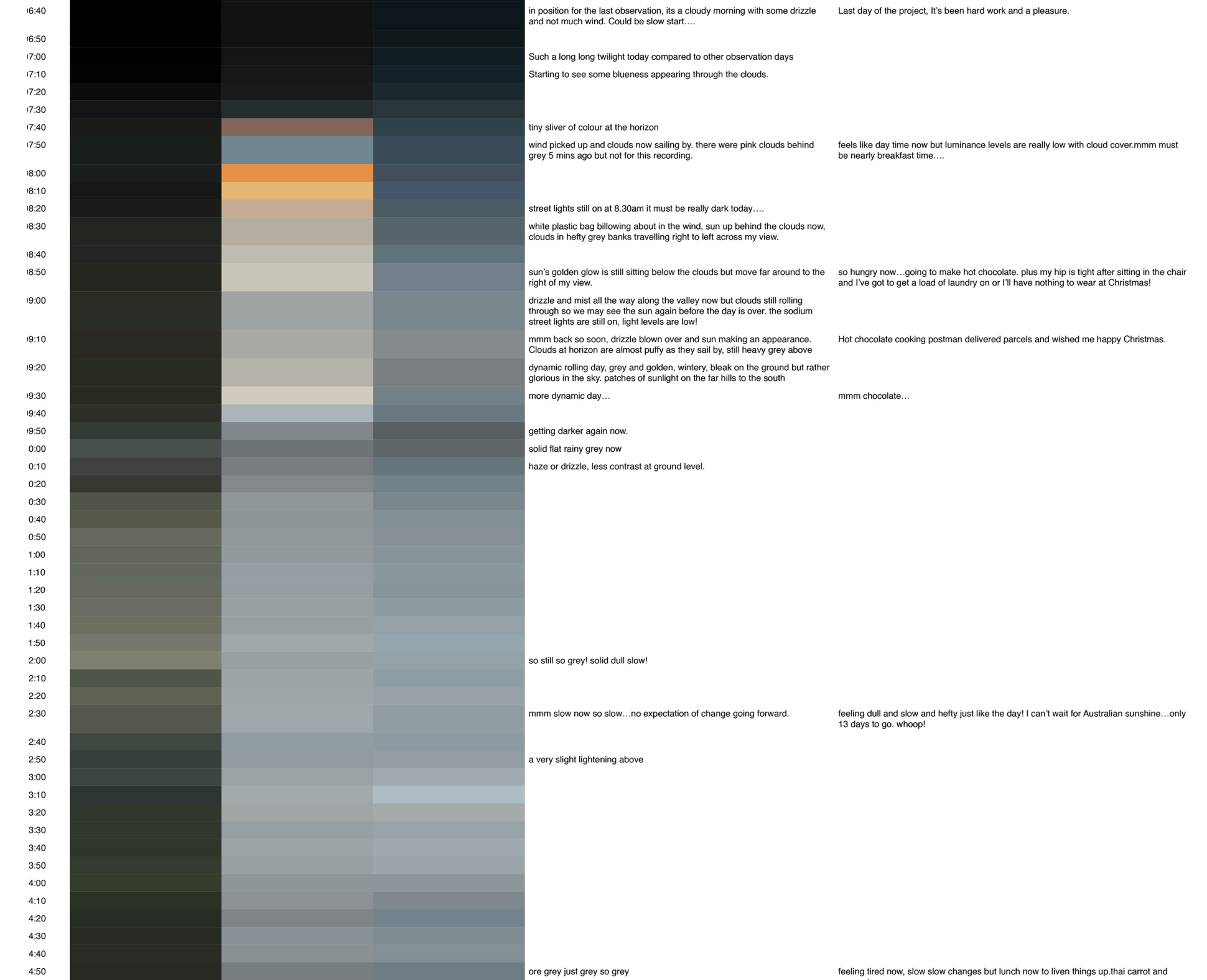
Latitude: 51° 45' 41" N

Longitude: 0° 00' 41" W

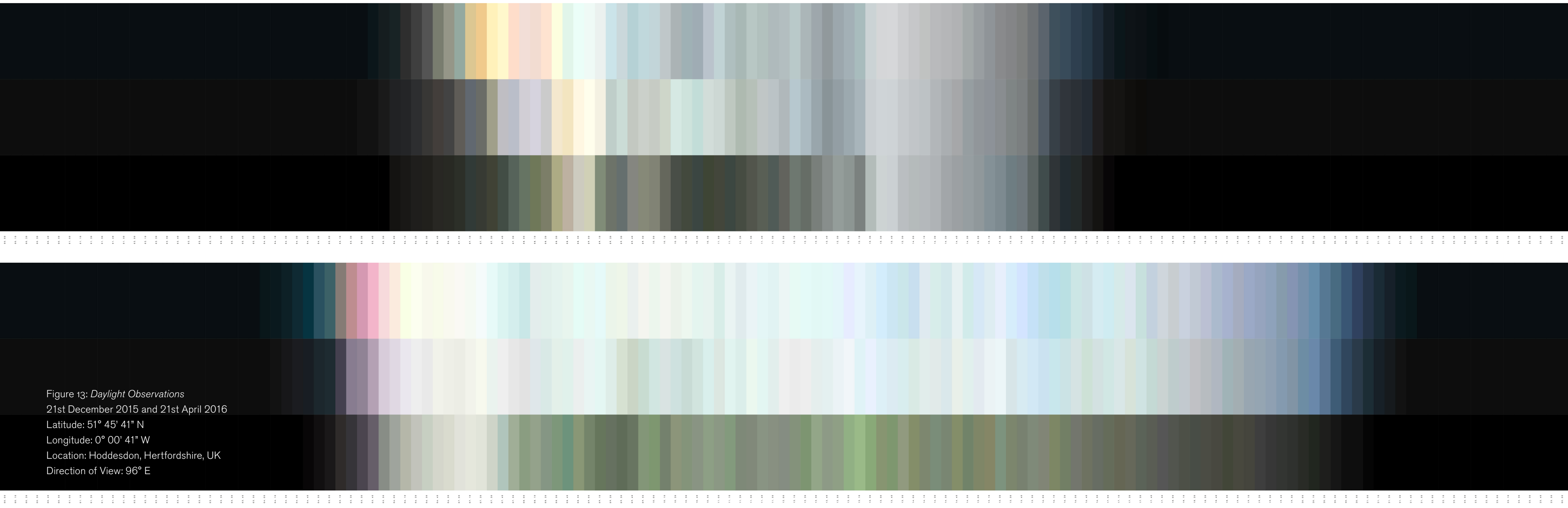
Location: Hoddesdon, Hertfordshire, UK

Direction of View: 96° E

(Detail of visual data set)



# PROJECT 03 - DAYLIGHT OBSERVATIONS







## PROJECT 03 - DAYLIGHT OBSERVATIONS

Figure 14: *Orbit No.3 - 21st February 2016 (detail)*

Latitude: 52° 31' 21" N

Longitude: 13° 24' 20" E

Location: Berlin Germany

Direction of View: 53° NE



## PROJECT 03 - DAYLIGHT OBSERVATIONS

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Figure 15: *The Orbit Series* (2016) with reflections.  
'Balance Unbalance, Ocean Studios, Plymouth, UK.

## PROJECT 04 - EARTH BELOW ME SKY ABOVE

### Experience as Artistic Practice

As with my previous projects, *Earth Below Me Sky Above* examined how an experiential artistic investigation based on Gibson's ecological principles might facilitate an education of attention through the rigorous observation of light. The project followed the five stages of the Gibsonian research framework outlined in my thesis, and positioned me in my role of artist-researcher in a sphere of light, on a planet orbiting in a larger universal system.

The Gibsonian principles of light as information, direct perception, perceptual maturation, ecological pattern, affordances and a new level of description guided my practice-based research. Gibson's theory was applied through artistic enquiry using the methods durational observation, ecological lens and

reflective artistic practice to precipitate an ecological understanding in which experiential and intellectual knowing coalesced. This integration facilitated an increased attunement to light, generated new ways of knowing, and enabled me to cultivate a deeply integrated ecological conception of the light-perceiver-environment nexus.

During the *Earth Below Me Sky Above* project my emphasis shifted away from the object-oriented artworks of the previous studies. This move marked a significant change, in which the attentive observation of light, and the education of attention it facilitated, itself became the artistic practice. The emergence of this experiential artistic practice provided valuable insights and learning that suggested previously unimagined directions for my future research.

Figure 16: *Earth Below Me Sky Above*, (2017)  
Light observation visual data/documentation  
Saturday 4th February 2017.



## PROJECT 04 - EARTH BELOW ME SKY ABOVE

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### An Ecological Artistic Practice

The ecological artistic practice that emerged in the *Earth Below Me Sky Above* project afforded a number of future directions for my research. The ecological principles that had driven, informed and guided my artistic investigations in my thesis remain central to my future studies. Two upcoming projects explore the potential of my emergent ecological practice, building on the conceptual and experiential learning my PhD investigation afforded.

*The Ecological Artistic Observatory* is a critical platform which integrates artistic enquiry, systems thinking and creative interdisciplinary practices to observe systemic interconnection from human to universal scales. *The Ecological Artistic Observatory* uses the Gibsonian framework for ecological artistic research to examine the increasingly important role of artists in contributing to ecological imperatives. It aims to cultivate expanded ecological perspectives that re-imagine and impact human-planetary futures.

Drawing on the visual data sets, artworks and

ecological knowledge generated in this study, *Taking the Long View* is a feature-length 360° fulldome film which explores traditional planetarium themes of humanity's relationship to light, space and the universe. Breaking with scientific conventions, these concepts are explored through the lens of a systemic ecological worldview.

The Gibsonian framework that underpins these two projects is based in the direct perception of light and offers a rigorous model for experiential academic research. Language alone cannot articulate the ecological complexity of our systemically entwined experience of the light-perceiver-environment nexus. Balancing practice-based artistic enquiry with theoretical investigation proved critical in elucidating this ecological complexity – as Gibson posited, direct experience affords 'the simplest and best kind of knowing'.<sup>2</sup>

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<sup>2</sup>Gibson, 1979, p. 263.