IN THE WAKE OF THE ATMOS+SPHAIRA'

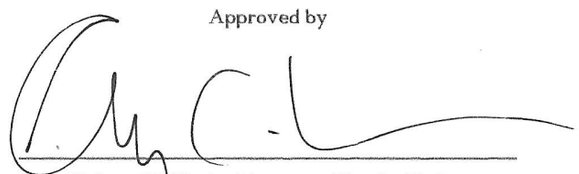
In the Wake of the Atmos+Sphaira' is an architectural thesis that investigates the roles of atmospheric events in reimagining architectural space. The framing of events is the subject of revision, where atmosphere emerges as both spatial content and container. This architecture of atmosphere reconstructs the dialogue between body and space, creating a new trilogy of relationships: space, atmosphere and event. The thesis developed an apparatus that has the operational capacity to capture, orient, determine, intercept, model, control, categorize and diverge atmospheric events into two predetermined conditions: temperature and temperament. Positioned between the technical and the aesthetic, temperature and temperament bring the quantitative and qualitative dimensions of atmosphere into dialogue with one another. The byproduct of the convergence between temperature and temperament is a Temperamental Architecture' - an architecture that reclaims space as atmosphere.

IN THE WAKE OF THE ATMOS+SPHAIRA'

A thesis presented in partial fulfillment of the requirements for the degree of Master of Architecture in the Department of Architecture of the Rhode Island School of Design, Providence, Rhode Island

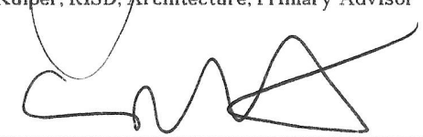
By
Jesús M. Meléndez Vázquez
2019

Approved by



Amy Kulper, RISD, Architecture, Thesis Chair

Amy Kulper, RISD, Architecture, Primary Advisor



Carl Lostritto, RISD, Architecture, Secondary Advisor

IN THE WAKE OF THE ATMOS+SPHAIRA'

Author: Jesús M. Meléndez Vázquez
Primary Advisor: Amy Kulper
Secondary Advisor: Carl Lostritto

"Inebriate of air am I."

-Emily Dickinson

TABLE OF CONTENT

SYNOPSIS

In the Wake of the Atmos+Sphaira' is an architectural thesis that investigates the roles of atmospheric events in reimagining architectural space. The framing of events is the subject of revision, where atmosphere emerges as both spatial content and container. This architecture of atmosphere reconstructs the dialogue between body and space, creating a new trilogy of relationships: space, atmosphere and event.

Initially, this thesis developed an apparatus that has the operational capacity to capture, orient, determine, intercept, model, control, categorize and diverge atmospheric events into two predetermined conditions: temperature and temperament. Positioned between the technical and the aesthetic, temperature and temperament bring the quantitative and qualitative dimensions of atmosphere into dialogue with one another. The byproduct of the convergence between temperature and temperament is a Temperamental Architecture' - an architecture that reclaims space as atmosphere.

My thesis scrutinizes our discipline's representational techniques, seeking the appropriate conventions for the depiction of architecture at the scale of atmosphere. It reclaims and engages two subnatural atmospheres: exhaust (vaporous and malodorous) and dankness (dark, wet, and cool). The interaction of these forgotten atmospheres creates the potential for a third atmosphere, where body and use, and content and container intermingle.

This thesis tests these premises through the revision of precedents that embody the disappearance of atmosphere the Kanagawa Institute of Technology by Junya Ishigami and Mies van der Rohe's Farnsworth House creating plausible fictions of architectural futures that seamlessly incorporate atmospheric events.

ACKNOWLEDGMENTS

In the Wake of the 'Atmos+Sphaira' was realized with the inspiration, commentary, and support of numerous people. First and foremost, I would like to thank to God Almighty for giving me the strength, knowledge, ability to undertake this thesis and to persevere and complete it satisfactorily. Without his mercy and providence this achievement would not have been possible. Good friends that either discussed the material with me provided welcome respites from work-related discussion include Colin Christensen, Sara Naja, Hannah Winders, Corey Weiss, Rob Diaz, Cam Leandri, Sam Wesselman, Andrea Dragani, Sung Hong, Dewen Ju, Diyi Zhang, Patricia Salas Silva, Wilfred Rodriguez Marrero, Pablo Herraiz Garcia de Guadiana, Jose Luis Rivera Colon, Jesus J. Alfonso, Madison Blaize Russ and Kyna Leski. Special thanks for Luis V. Badillo Lozano, my mentor, the person who showed me the world of architecture with different eyes. Last but not least, to my beloved *Revisionist Histories* friends, thanks for giving me the best thesis experience that a seeker of knowledge would ever ask, thanks for all the conversations and collaborations that provided great feedback for this thesis, thanks Montana Gray, Vuthy Lay, Louna BouGhamen, Daedalus Guining Li, Yixuan Cai, David Amdie, Aniebiet Celebb Ekong and our Thesis Advisor, Professor and now our mentor Amy Kulper. Thank you so much for all those valuable lessons that will guide us for the rest of our professional life. Special thanks for my academic advisor and secondary thesis advisor Carl Lostritto for your constant support and encouragement in any idea, project or thoughts through my two years at RISD. I would like to thank my family, for the uninconditional support and love, particularly Nitza M. Vazquez Cruz and Manuel E. Melendez Velazquez, my parents who has patiently endured my work schedule. This thesis is dedicated to my family who believed in me when no one did, they are the true heroes of my life.

Introduction

Weather- State of the Atmosphere

INTRODUCTION

Weather-State of the atmosphere

Have you ever wonder why architects are bad architects? we spend most of our time talking, theorizing, drawing and then, constructing whatever the outcome is. This is very dangerous. And you know what is the dangerous part? That we often ignore the site, the place and most important we do not contemplate the outer context of any architecture: the atmosphere and its events.

A year ago, I began a thesis between the subjects of architecture, weather, atmosphere, space and event, but like David Gissen on his book *Subnature Architecture's other enviroments*, "I was not entirely certain what I would explore" (Gissen, 2009). In that atmosphere of uncertainty, specific questions were a constant:

What happen with weather?
What is weather for us?
What is atmosphere?
What is event?
...and when you join this two words,
What is Atmospheric Event for us?

Why weather matters-

I can answer the first two questions, but I'm certain that the last three questions will be a challenge and like this thesis, I accept that challenge.

Just to give a historical context, since the beginning of human civilization, humanity have been negotiating the basic conditions of temperature, humidity and seasonal climate (Eliasson, 2003). In other words, this is known as weather, or how I like to call it: the basic recipe of weather.

I would say that weather have been fundamental for the understanding of civilizations and space through our history. (Eliasson, 2003) Weather is part of our reallity! We can't denied it. Weather or climate phenomena have been so politicized that it have become a subnature. Something that exist, but have been forgotten.

Here, climate change have a pivotal role on changing the paradigm and our relation with weather and space; is intense and more dramatic. The spatial consecuences and atmospheric recoveries are more complicated to resolve. That's what climate change have done so far.

However, this post-apocaliptical tone resonates with a tragic atmosphere, but lets remove the political, cultural and economical aspects of climate change and let us focus on the scale for a moment.

Today, we experience a rise in global temperature, warming oceans, glacial retreat, Sea level rise, ocean acidification, hurricanes and tsunamis (NASA, 2019) and other more extreme events.

This is the new scale of our current state of the atmosphere. We need to take it seriourly! Most important, we need to recognize a potential on extreme climate phenomena as not only a design factor but to develope a design principle from it. Atmospheric events can be a tool and resource for material imagination which will affect the conception and representation of architecture.

What is Atmosphere?-

If you search for the ethimological meaning of atmosphere and divide the word in two, we have:

ATMOS: meaning Vapor
SPHAIRA: meaning Globe

-Oxford English Dictionary (2019)

In a way, atmosphere means vapor-globe. *A Globe made of Vapor*, which has his own temperament and mood.

This reminds me to a quote from the book *The Invention of Clouds* by Richard Hamblyn that mention:

> *"In sharp contrast to such harmonious conceptions, much of the moral power of the Old Testament religion derived instead from the narration of extreme and persecutory weather events. From the Flood of Genesis to the plagues and hail/storms of Exodus, the books of Moses and the Prophets resound with the terrible weather of vengeance, much of which was brought to pass by violent winds from the east ." (pag.18)*

This temperamental vapor, being the most traumatic of these episodes seem to say,

> *"is the one great precondition on earth, the one persistent feature of the natural world that cannot, that will not, be controlled." (pag.18)*

Make sense to realize that the atmosphere is indeed spatial content and container, and at the same time is event-maker.

What is event?-

I would like to bring and quote the held definition of event from the Architect and theorist Bernard Tschumi in his Book *The Manhattan Transcripst*:

> *"Event: an incident, an ocurrence; a particular item in program. Events can encompass particular uses, singular functions or isolated activities. They include moments of passion, acts of love and the instant of death. Events have an independent existence of their own. Rarely they are purely the consequences of their surrounds. Event have their own logic, their own momentum. In literature, they belong to the category of the narrative." (pag. 21)*

This by far is a very provocative definition of event, but what is truly interesting is the final part: *"(...) events have an independent existence of their own."*

Now, we know that Tschumi's event rely and exist on the immediate context provided by architecture, and to say more, architecture is conceived as not defined by it formal container, but rather by its combination of Tschumi's trilogy: space, movement and event (Tschumi, 2019). Where event-making exist by the interactions of the bodies in space or Architecture in the context of violence -bodies violating space- and of course, they act as spatial epicenters.

What is Atmospheric event?-

In the case of Atmospheric events, they are different, they don't need human intervention in order to be (in order to exist). This thesis reformulate Tschumi's definition of event and express it as: atmospheric events have an independent existence of their own, they have their own logic and momentum. They are their own content, therefore, they are their own events.

This means that exist a potential to study the atmospheric event as spatial epicenters, that doesn't need the existence of human bodies in space, because the atmosphere itself provide meaning. This bodiless realm reclaim space as atmosphere.

In other words, atmospheric events are capable to transform reality changing the way the body interact with space. Which in the case for architecture opens the opportunity and potential to investigate the role of atmospheric events in reimagining architectural space, creating plausible fictions of architectural futures that seamlessly incorporate atmospheric events.

Producing what in the thesis *In the Wake of the Atmos+Sphaira* proclaimed as a *Temperamental Architecture*.

Part I

Apparatus- Origin and Speculation

PART I

Apparatus-Origin and Speculation

Thought on the apparatus...

> "(...) the nature of an apparatus is essentially strategic, which means that we are speaking about a certain manipulation of relation of forces, of a rational and concrete intervention in the relation of forces (...)."
>
> -Giorgio Agamben

This thesis developed an apparatus that has the operational capacity to capture, orient, determine, intercept, model, control, categorize and diverge atmospheric events into two predetermined conditions: temperature and temperament. Positioned between the technical and the aesthetic, temperature and temperament bring the quantitative and qualitative dimensions of atmosphere into dialogue with one another. The byproduct of the convergence between temperature and temperament is a Temperamental Architecture' - an architecture that reclaims space as atmosphere.

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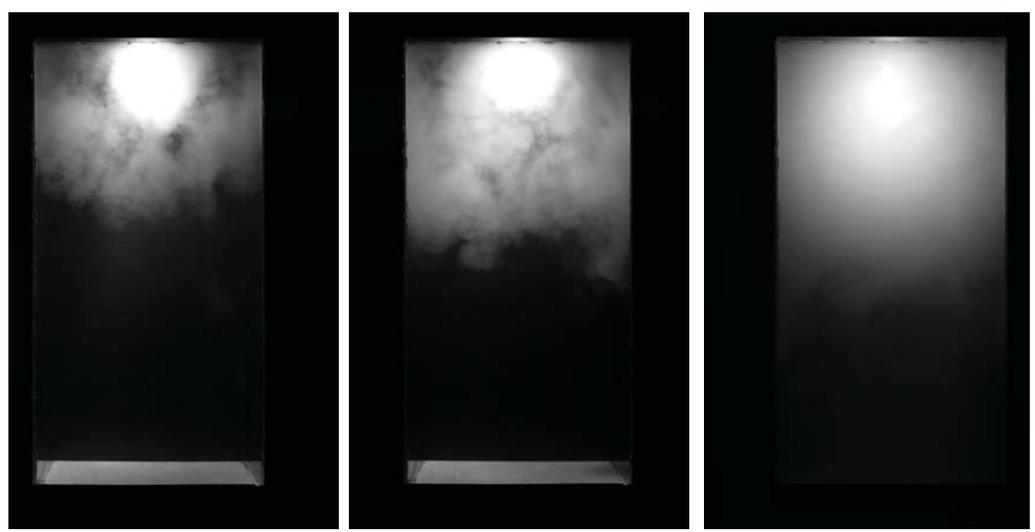
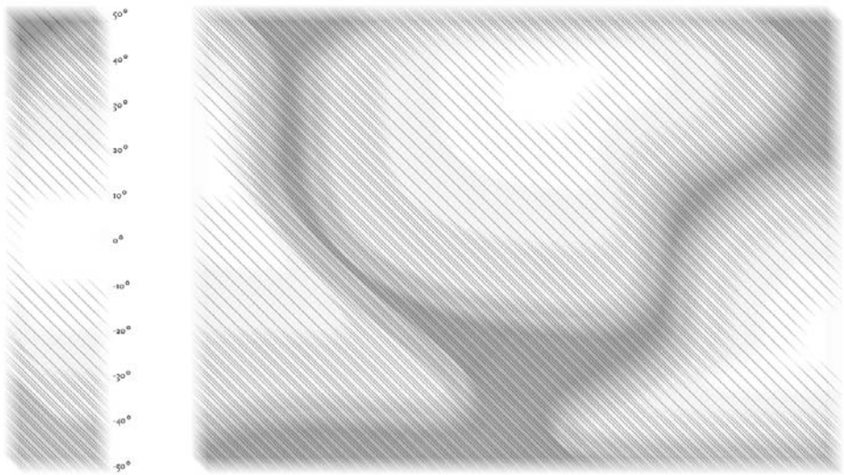
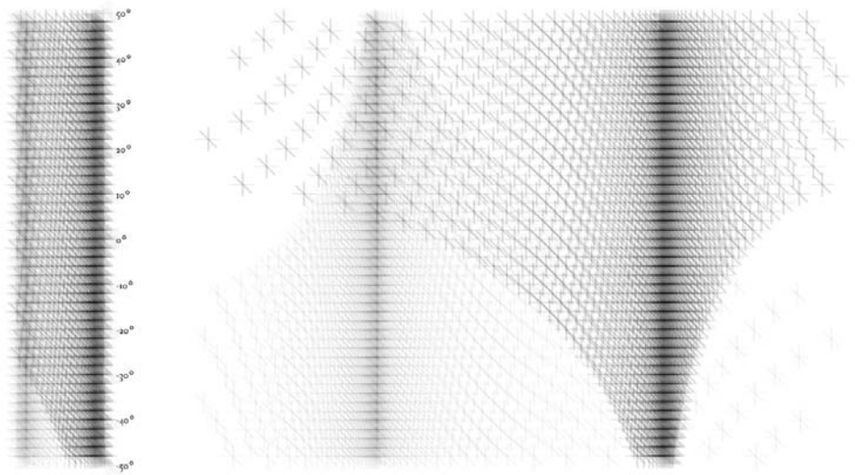
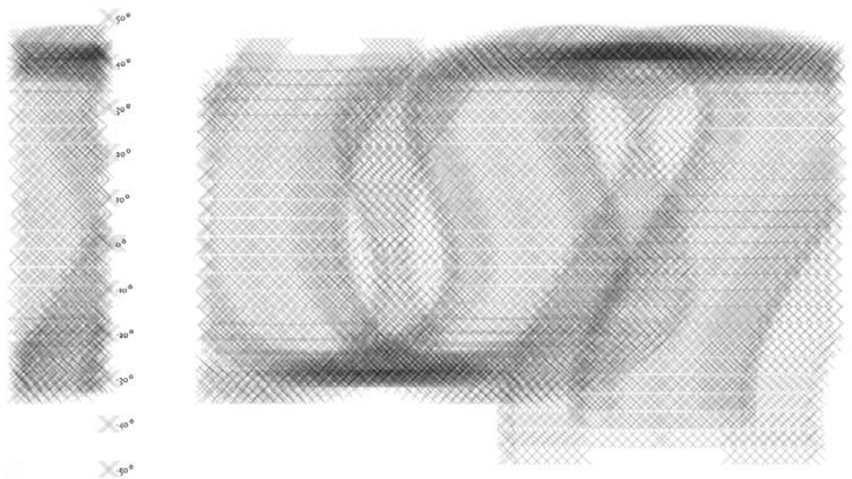




Study #01 of representation testing origins and predetermined conditions for a potential drawing techinique for the depiction of thermal energies.



Study #02 of representation testing origins and predetermined conditions for a potential drawing techinique for the depiction of thermal energies.



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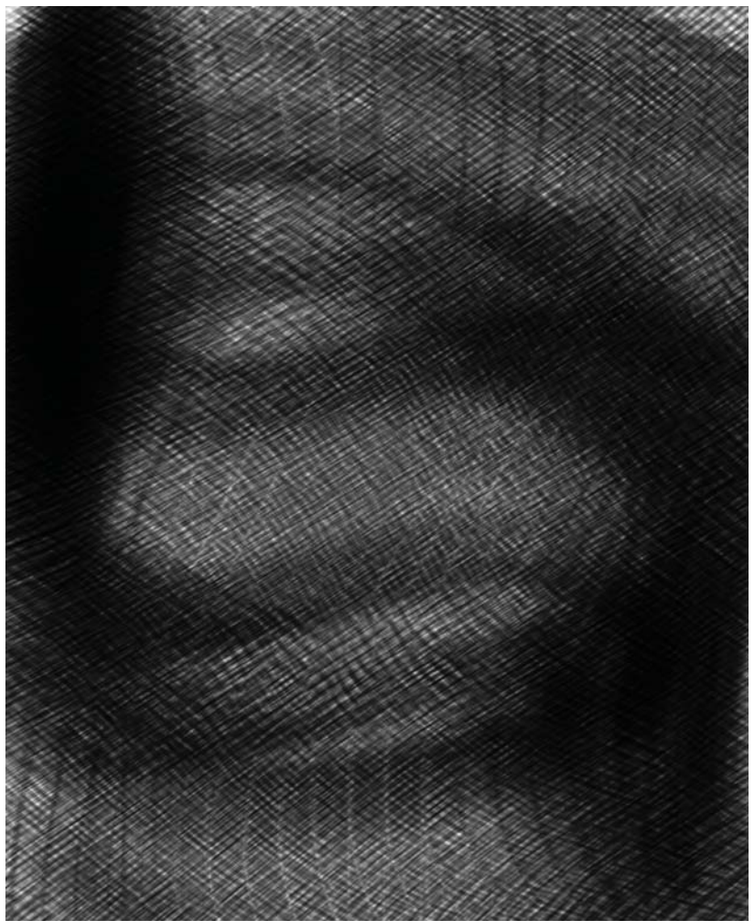
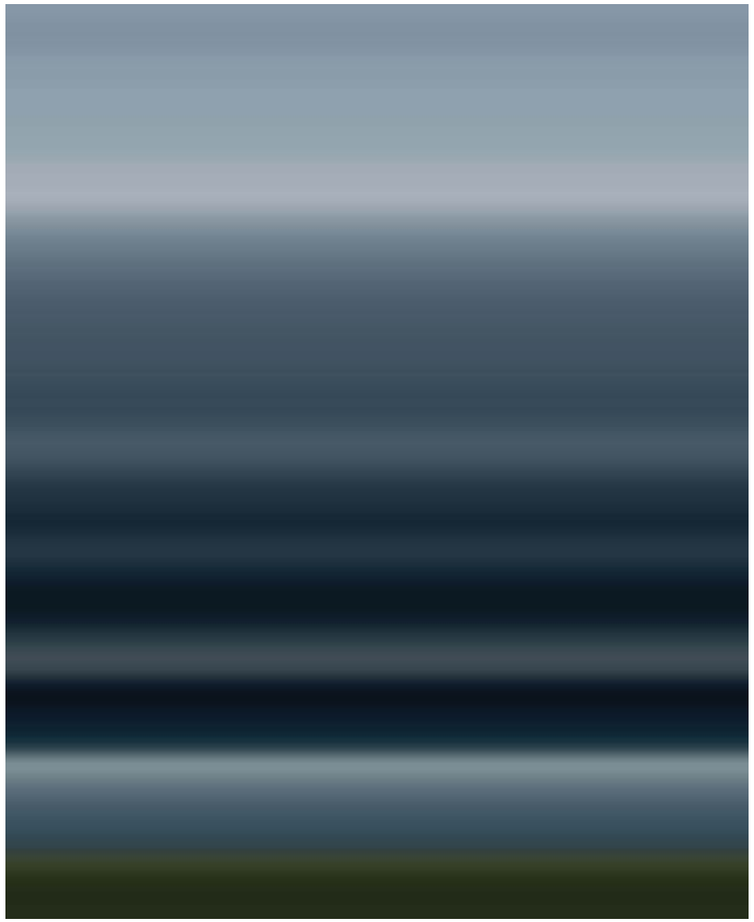


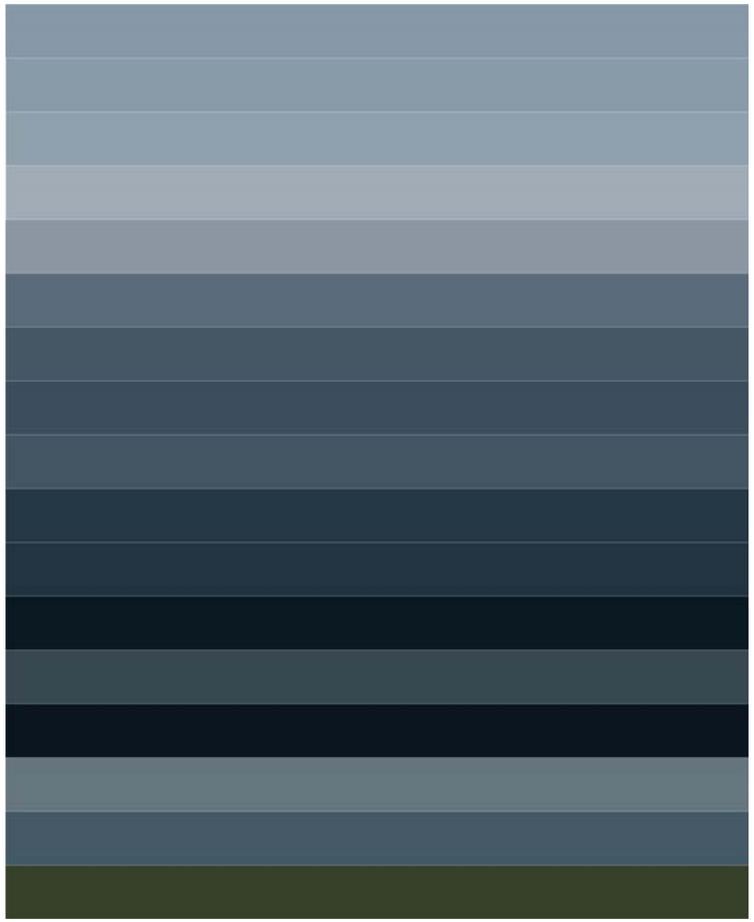
Drawing generated by the tools and instruments to define a representational technique as hypothesis.

Fig. 1
Observing tornado with violent winds and subsequent floods in El Reno, Oklahoma.

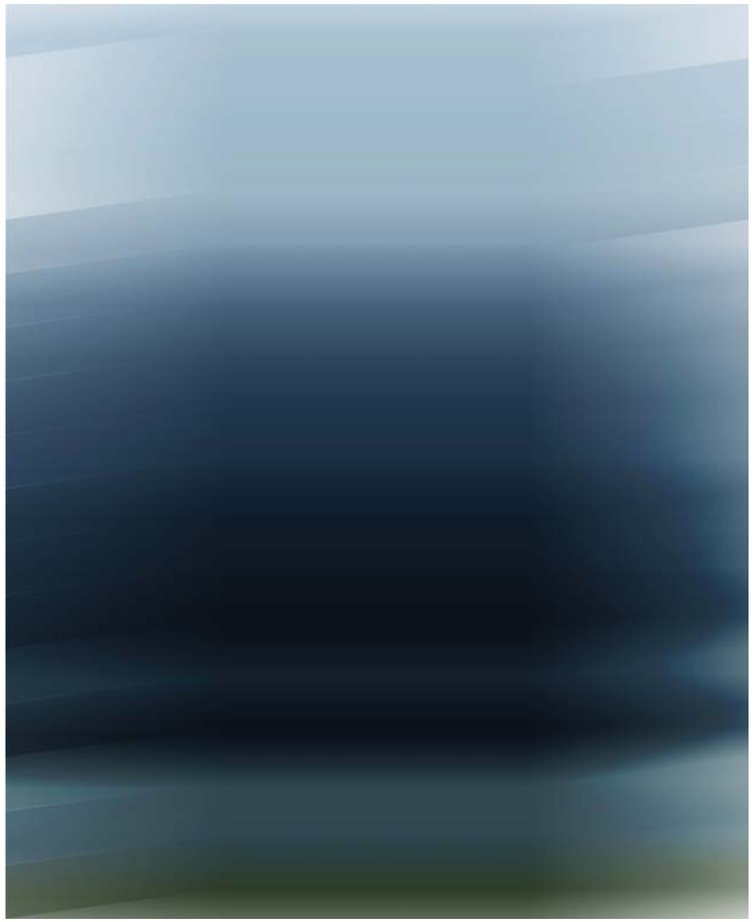
-Image taken in https://www.smithsonianmag.com/science-nature/how-storm-chaser-changed-face-tornado-science-180968688/



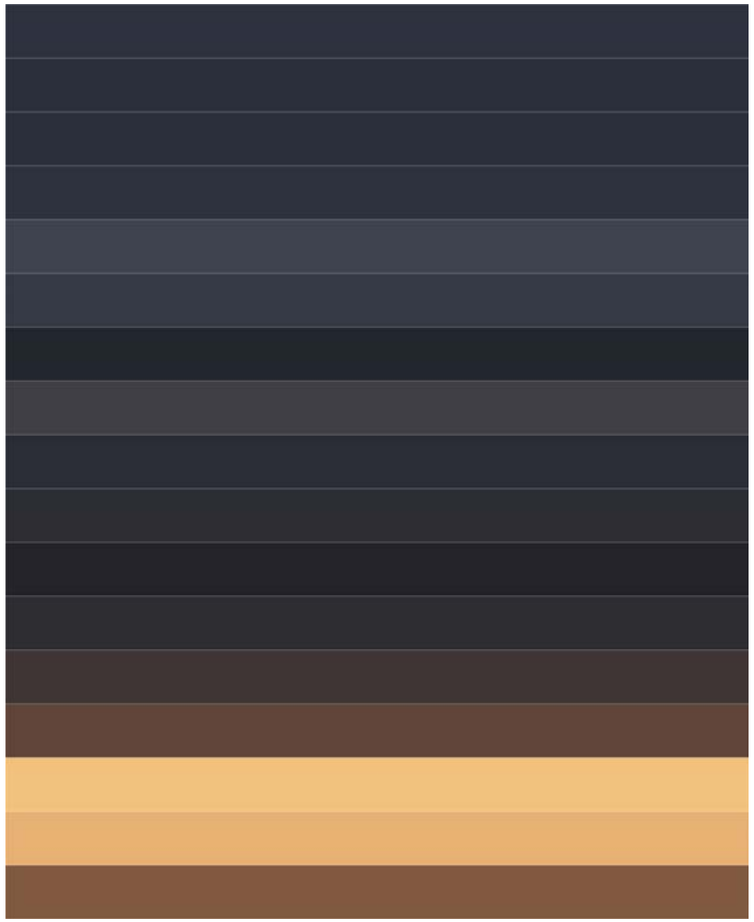
Pixel selection of colors from a real atmospheric event and then streched.



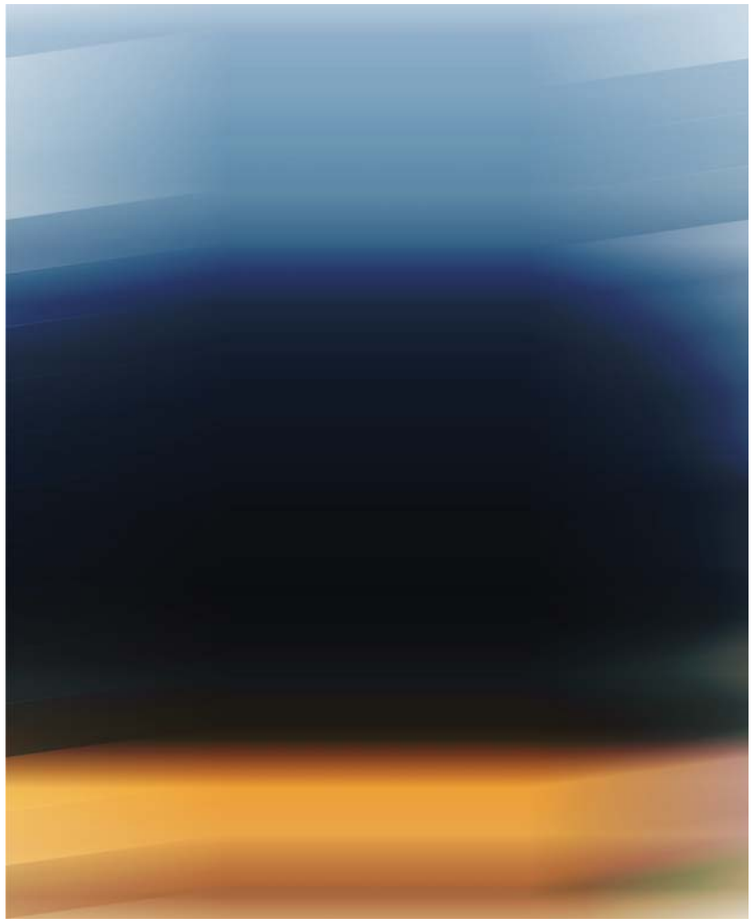
Color pixel selection every one inches to sinthetize and categorize samples of the natural atmospheric event.



Pixel manipulation where the pixel is relocated through algorithms and produce an artificial atmospheric event from the natural one.



Color pixel selection every one inches to sinthetize and categorize samples of the natural atmospheric event.



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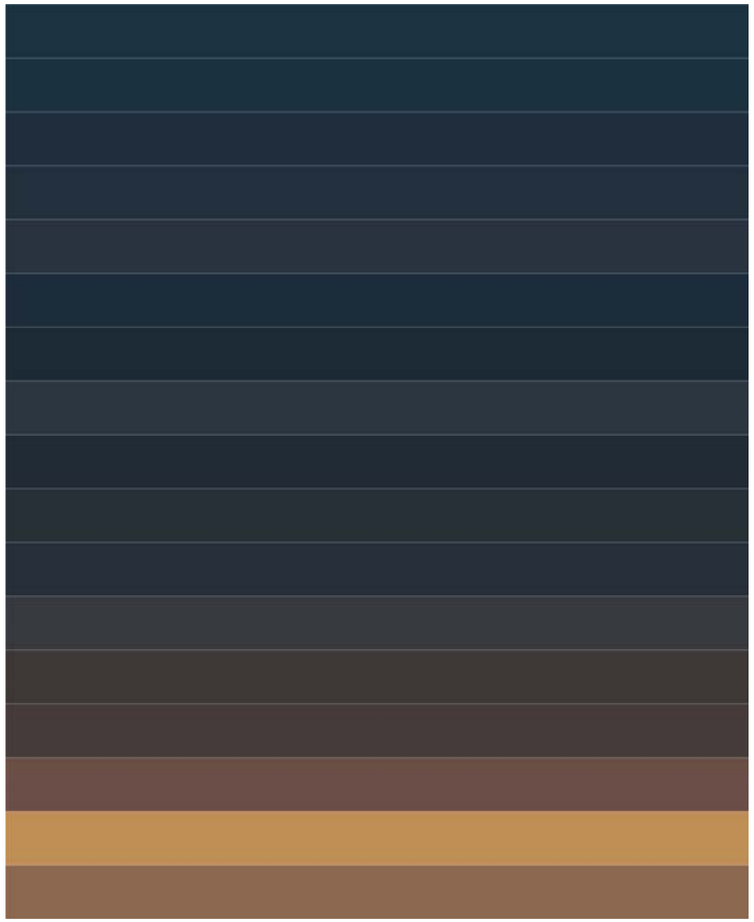

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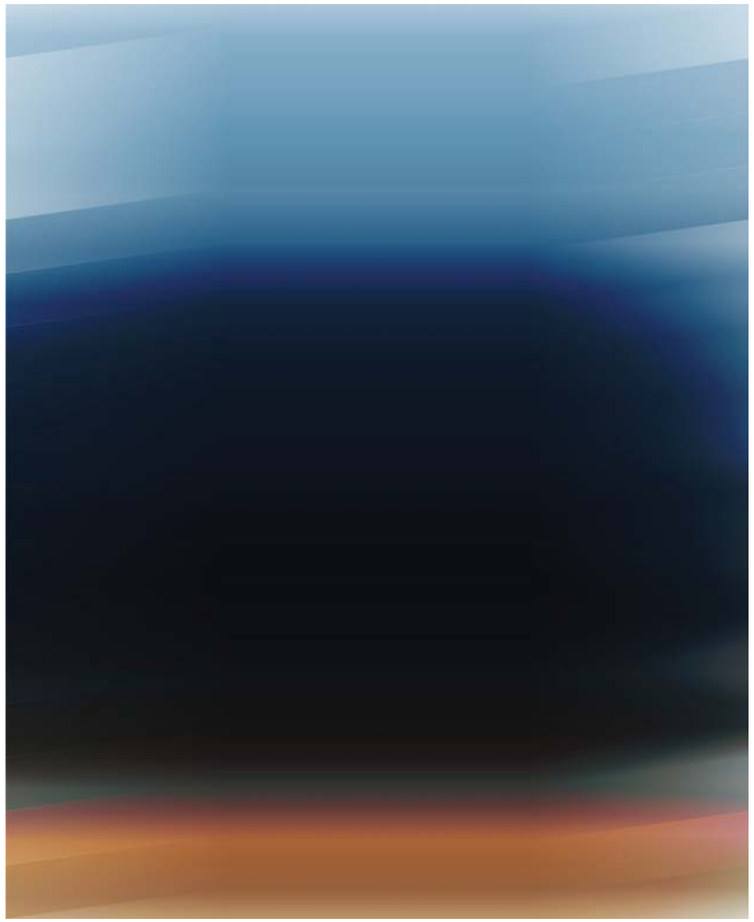


Pixel manipulation where the pixel is relocated through algorithms and produce an artificial atmospheric event from the natural one.

TEMPERAMENT SAMPLES#2

Sample#1

R:45
G:51
B:63

Sample#2

R:41
G:47
B:59

Sample#3

R:41
G:48
B:58

Sample#4

R:46
G:50
B:62

Sample#5

R:63
G:67
B:79

Sample#6

R:53
G:57
B:68

Sample#7

R:35
G:38
B:45

Sample#8

R:63
G:63
B:71

Sample#9

R:42
G:45
B:54

Sample#10

R:45
G:46
B:51

Sample#11

R:37
G:36
B:42

Sample#12

R:46
G:45
B:51

Sample#13

R:63
G:53
B:52

Sample#14

R:95
G:68
B:57

Sample#15

R:243
G:194
B:125

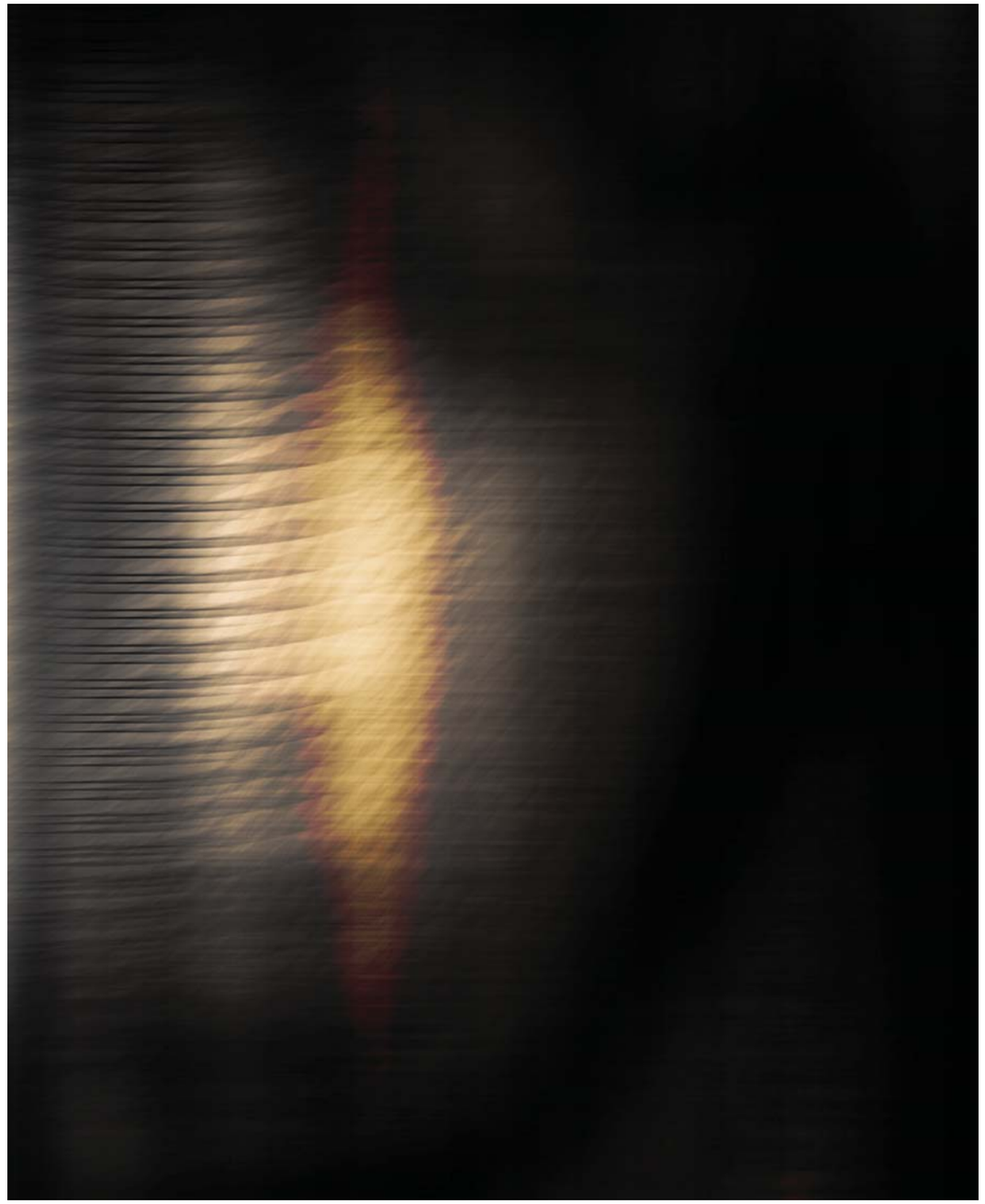
Sample#16

R:231
G:177
B:115

Sample#17

R:139
G:89
B:54

Categorized samples in order with RGB ecimal code.



Convergence
between the technical
and aesthetic as
temperamental
depiction of artificial
atmospheric event.

Convergence
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atmospheric event.

TEMPERAMENT SAMPLES#1

Sample#1

R135
G152
B168

Sample#2

R136
G154
B168

Sample#3

R143
G161
B173

Sample#4

R159
G172
B181

Sample#5

R138
G150
B162

Sample#6

R89
G106
B122

Sample#7

R69
G87
B101

Sample#8

R59
G78
B93

Sample#9

R67
G85
B99

Sample#10

R37
G55
B69

Sample#11

R34
G52
B64

Sample#12

R4
G22
B34

Sample#13

R55
G72
B80

Sample#14

R2
G17
B32

Sample#15

R101
G118
B125

Sample#16

R67
G89
B102

Sample#17

R55
G65
B41

Categorized samples in order with RGB ecimal code.

Convergence
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Convergence
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TEMPERAMENT SAMPLES#3

Sample#1

R28
G50
B64

Sample#2

R27
G49
B63

Sample#3

R33
G45
B61

Sample#4

R34
G48
B61

Sample#5

R41
G53
B63

Sample#6

R39
G45
B58

Sample#7

R39
G43
B54

Sample#8

R44
G54
B64

Sample#9

R37
G43
B52

Sample#10

R39
G48
B55

Sample#11

R39
G47
B58

Sample#12

R56
G57
B62

Sample#13

R61
G56
B53

Sample#14

R69
G59
B58

Sample#15

R107
G78
B70

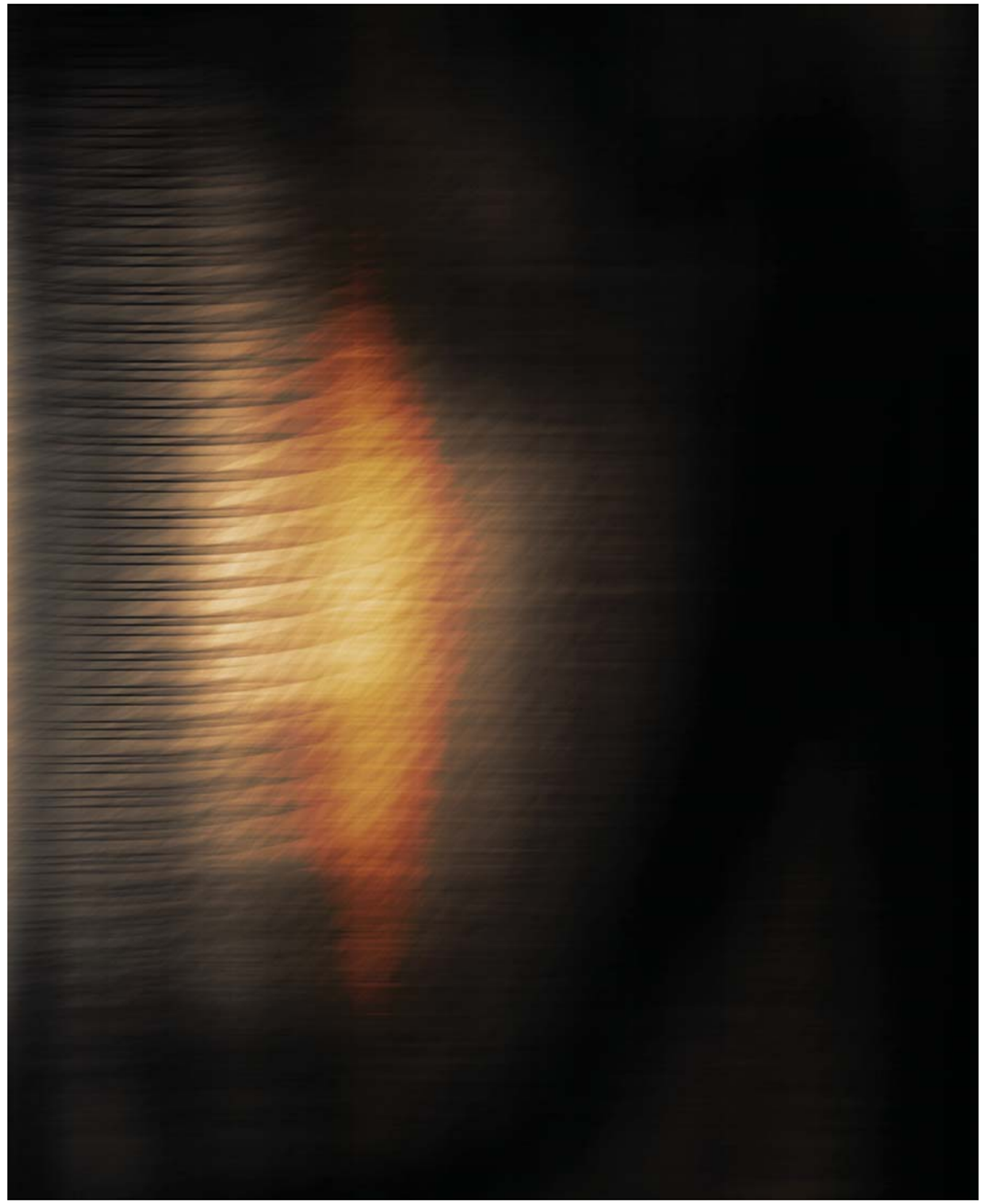
Sample#16

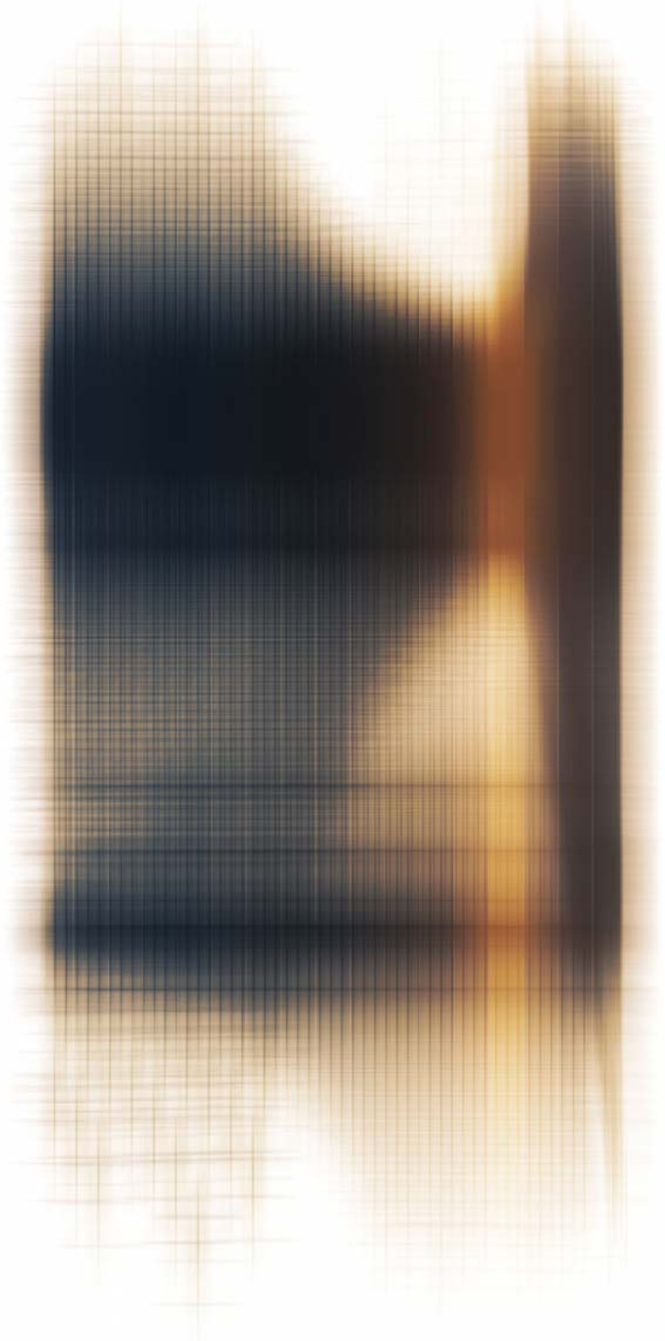
R191
G142
B86

Sample#17

R138
G104
B79

Categorized samples in order with RGB ecimal code.





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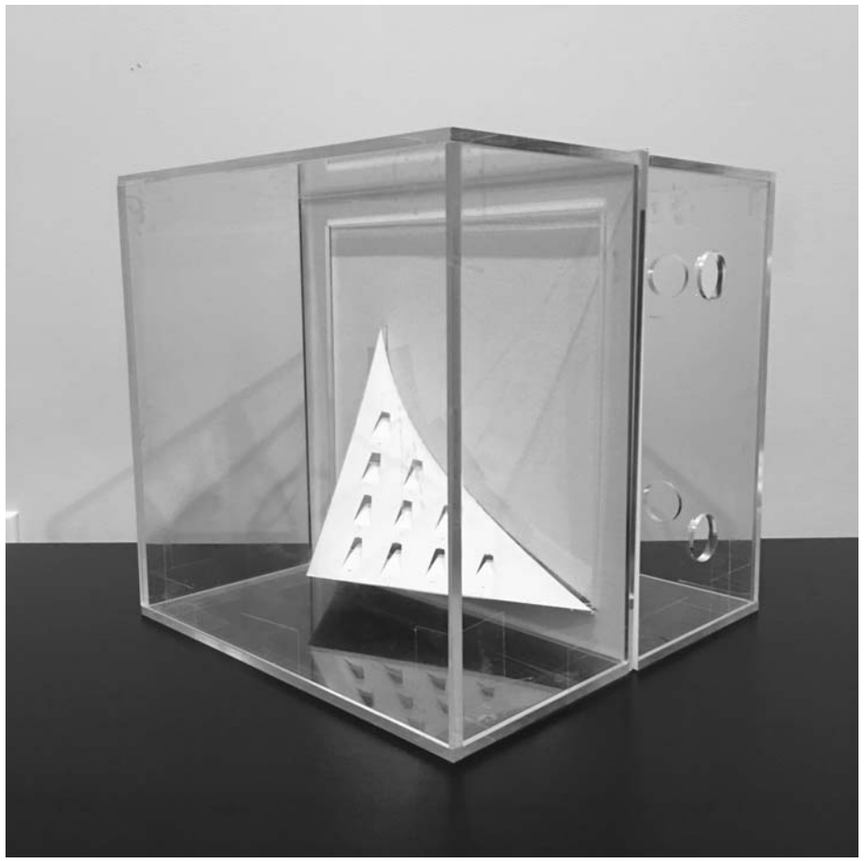
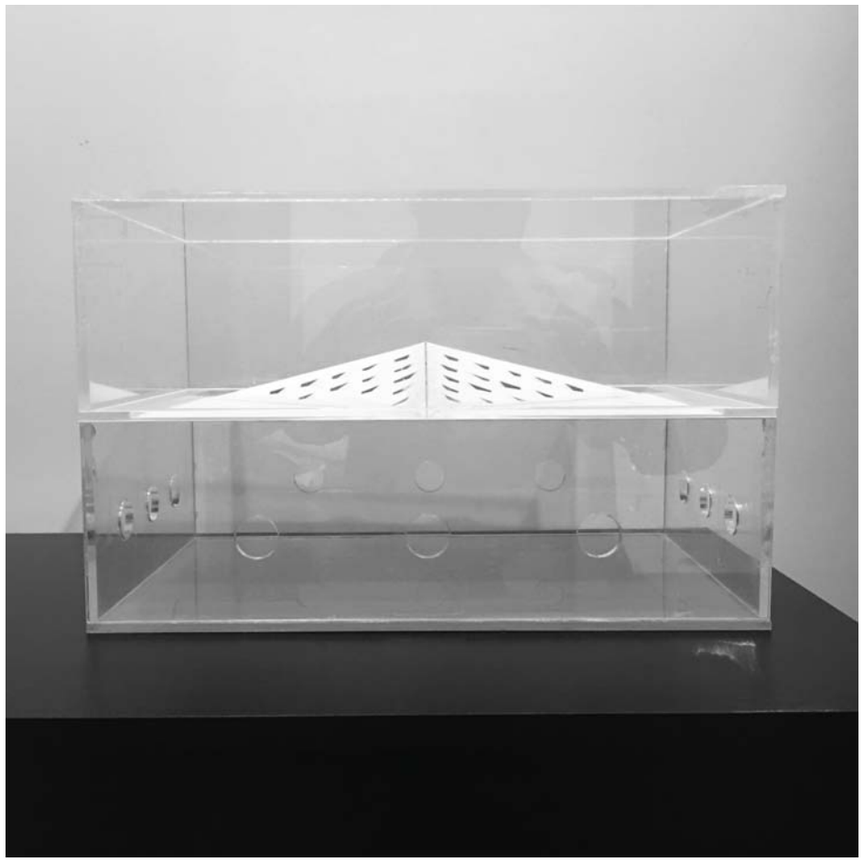


Physical Apparata to test thermal energies containes in a glass box. This apparatus test architectural elements like ceilling, wall and floors.



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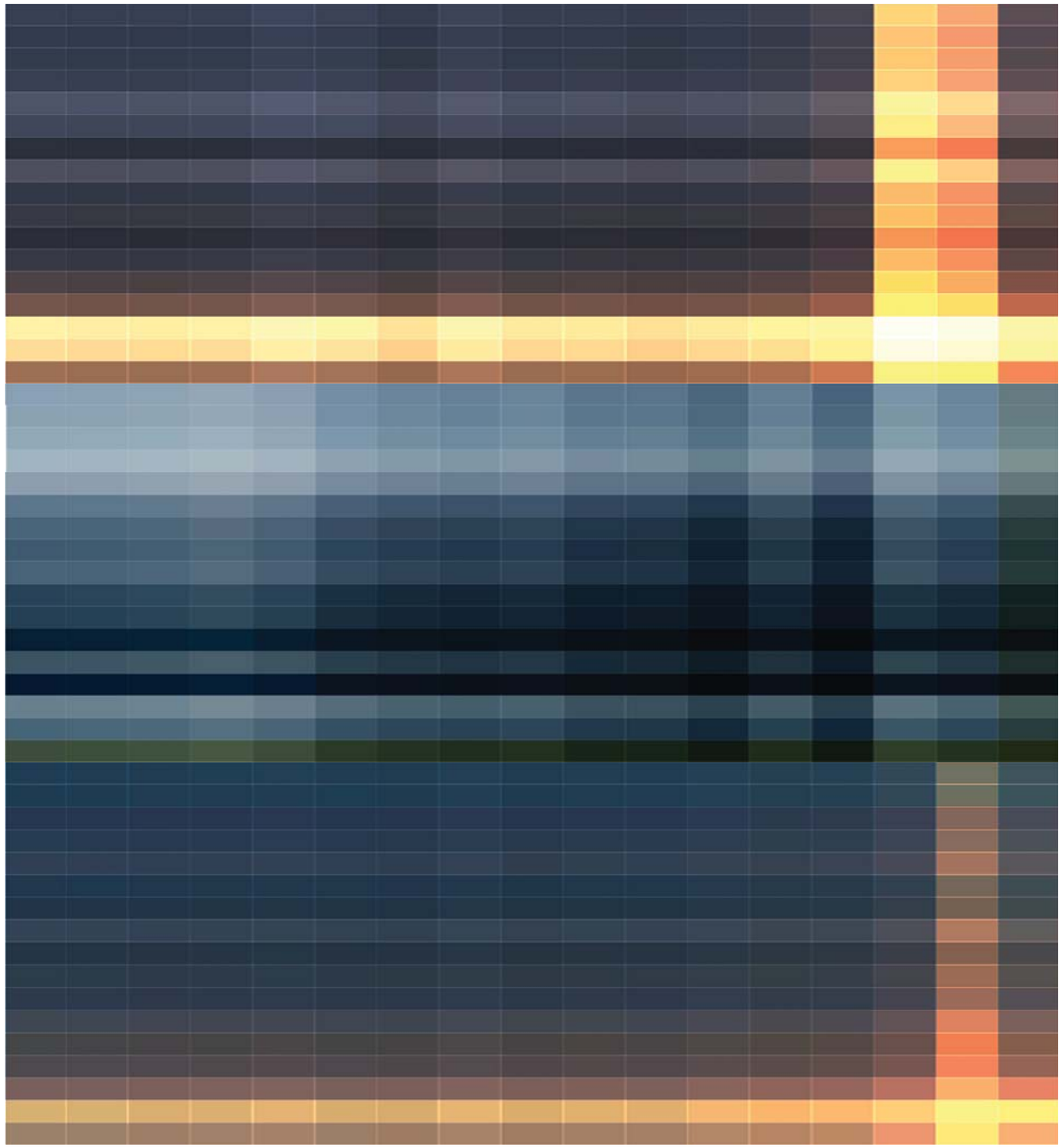
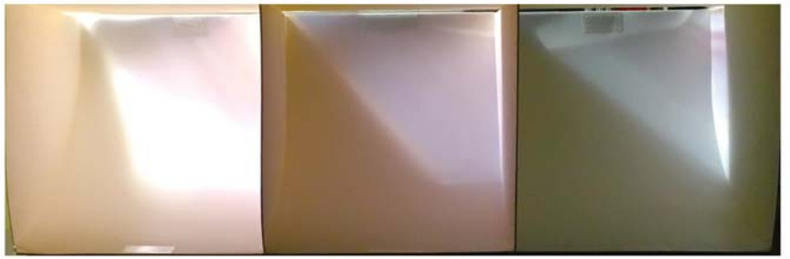


Scattered grid using temperament samples to reproduce atmospheric events as filters.

Testing Temperament
(Scattered Grid)

Sample#1



Sample#2

Sample#3

Sample#4

Part II

The Ceilling

Str. Temperament#1

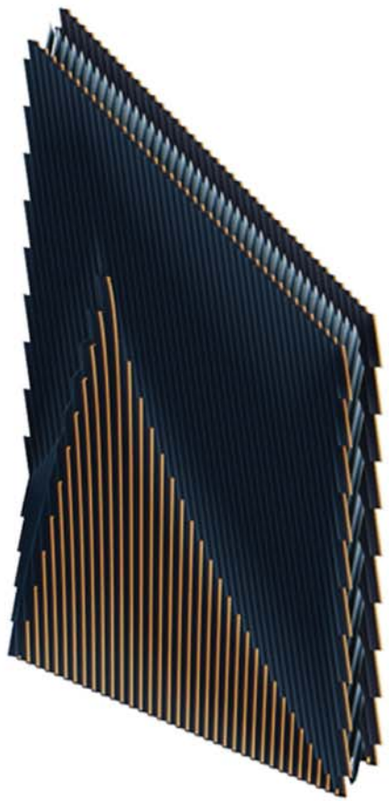
Str. Temperament#2

Str. Temperament#3

Str. Temperament#4

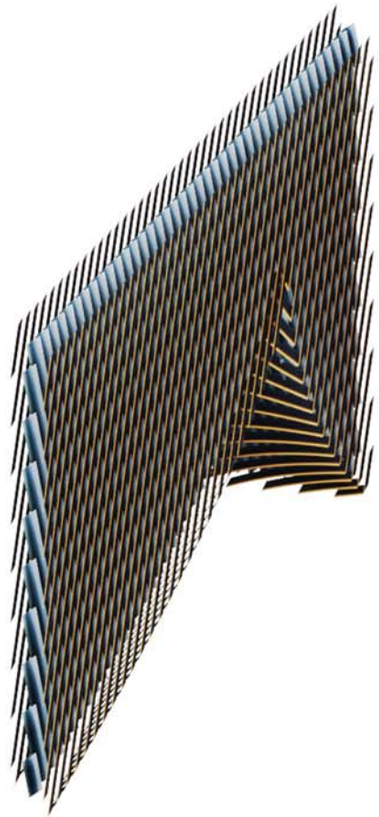
Part II

The Wall

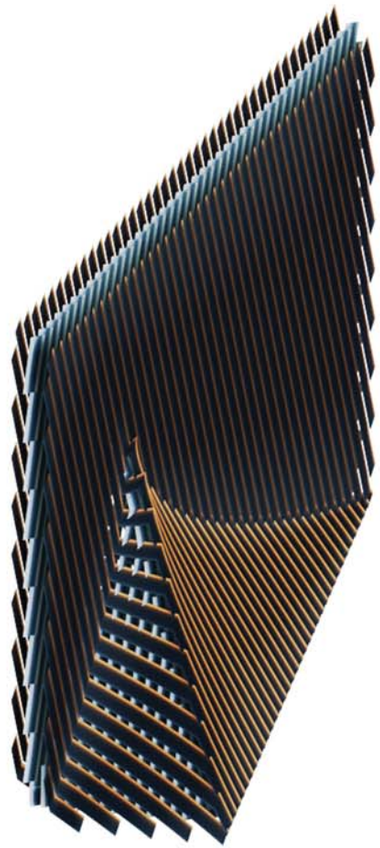


Str. Temperament#1

Str. Temperament#2



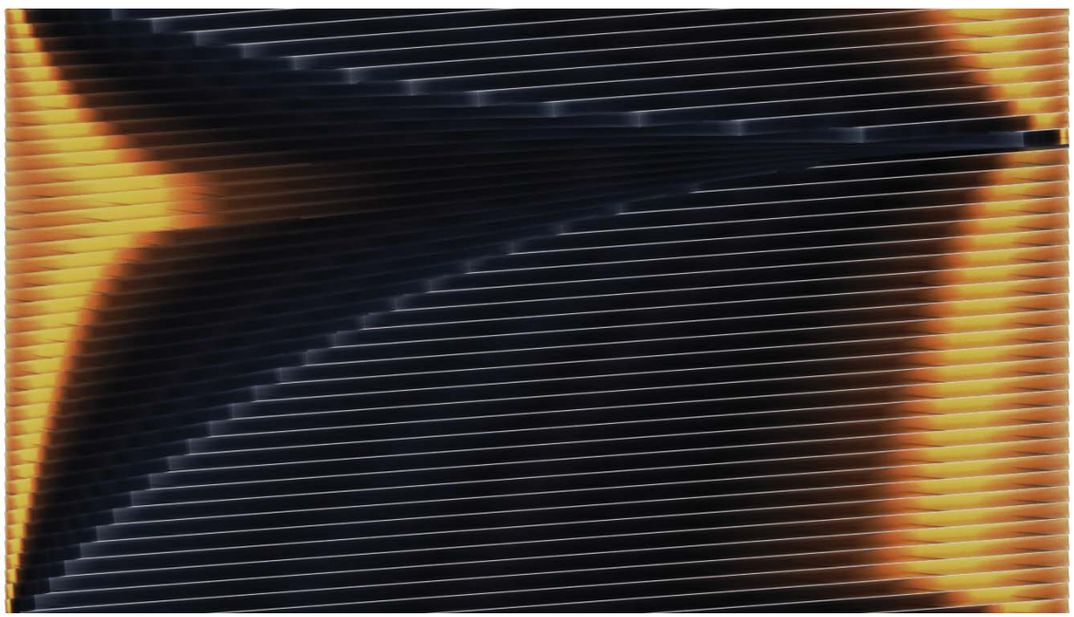
Str. Temperament#3

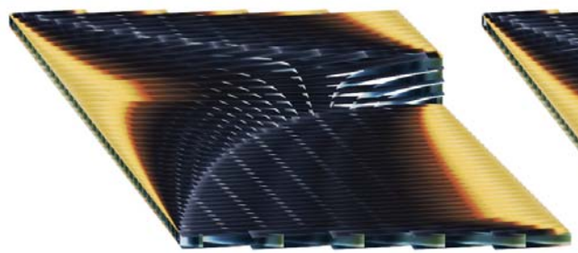


Str. Temperament#4

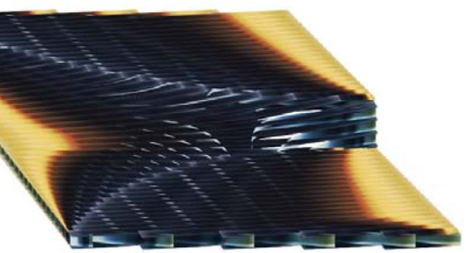
Part II

The Floor

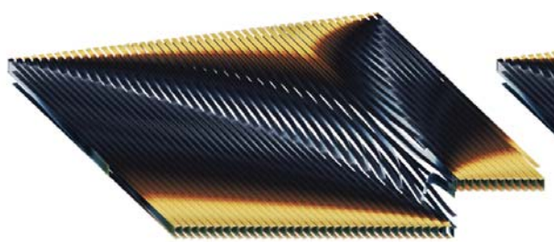




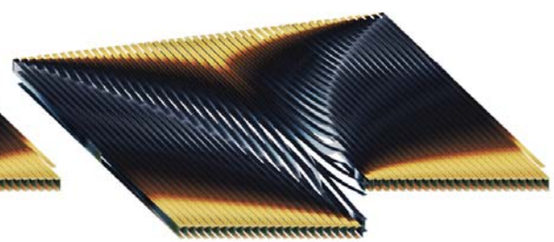
Str. Temperament#1
Variation #1



Str. Temperament#2
Variation #2



Str. Temperament#3
Variation #3



Str. Temperament#4
Variation #4

Part II

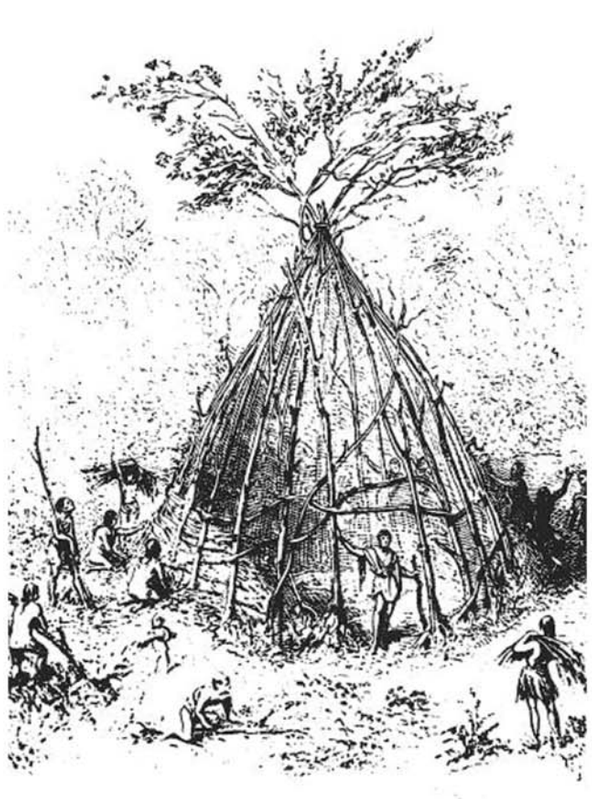
Temperamental Architecture

Temperamental Hut

Primitive Hut
Vitruvius
Marc Antoine Laugier

Fig. 2
Primitive Hut, Vitruvius, Marc Antoine Lagier.

-Image taken from https://aap.cornell.edu/news-events/philippe-rahm-preston-h-thomas-masterclass



Primitive Hut
Eugène Viollet-le-Duc

Fig. 3
Primitive Hut, Eugine Viollet-Le-Duc.

-Image taken from https://aap.cornell.edu/news-events/philippe-rahm-preston-h-thomas-masterclass

Temperamental Hut

'ATMOSPHERIC EVENTS'

'CONTENT AND
CONTAINER'

'APPARATUS'

'CAPTURE.
ORIENT,
DETERMINE,
INTERCEPT,
MODEL,
CONTROL,
,CATEGORIZE
AND
DIVERGE'

'TECHINICAL AND
AESTHETIC'

'TEMPERATURE
AND
TEMPERAMENT'

'FORGOTTEN:
EXHAUST-DANKNESS'

'THIRD
ATMOSPHERE'

'PAUSIBLE FICTIONS'

Reclaim and Engages

Fig. 4
Observing the smog-filled air of New York.

-Image taken in https://www.6sqft.com/remembering-new-york-citys-days-of-deadly-smog/gLVYTVFbx8aBKzsM8

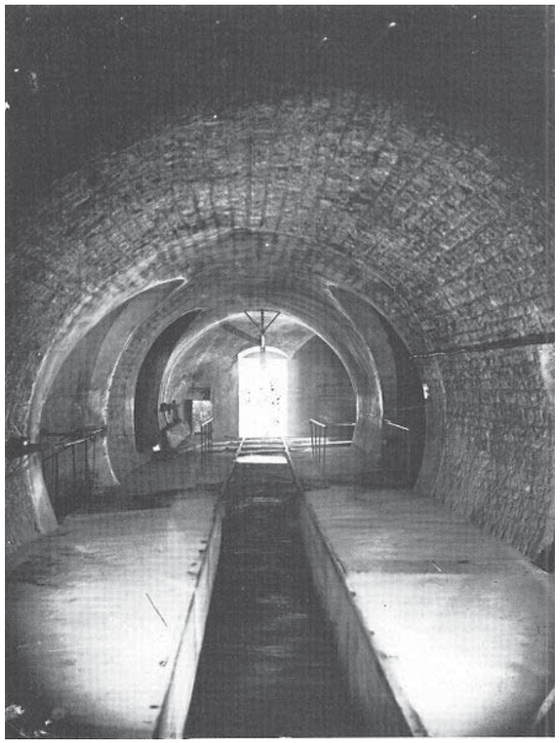


Fig. 5
Rationalizing the dark, wet, underground of Paris, interior of a sewer, Nadar, circa 1886.

-Image taken from Gissen, David, Subnature Architecture's other environments. 2009. Pag. 33.

It reclaims and engages two subnatural atmospheres: exhaust (vaporous and malodorous) and dankness (dark, wet, and cool). The interaction of these forgotten atmospheres creates the potential for a third atmosphere, where body and use, and content and container intermingle.

Revision of Precedents

Fig. 6
Kanagawa Institute of Technology (Japan) by Junyia Ishigami.

-Image taken in https://images.app.goo.gl/

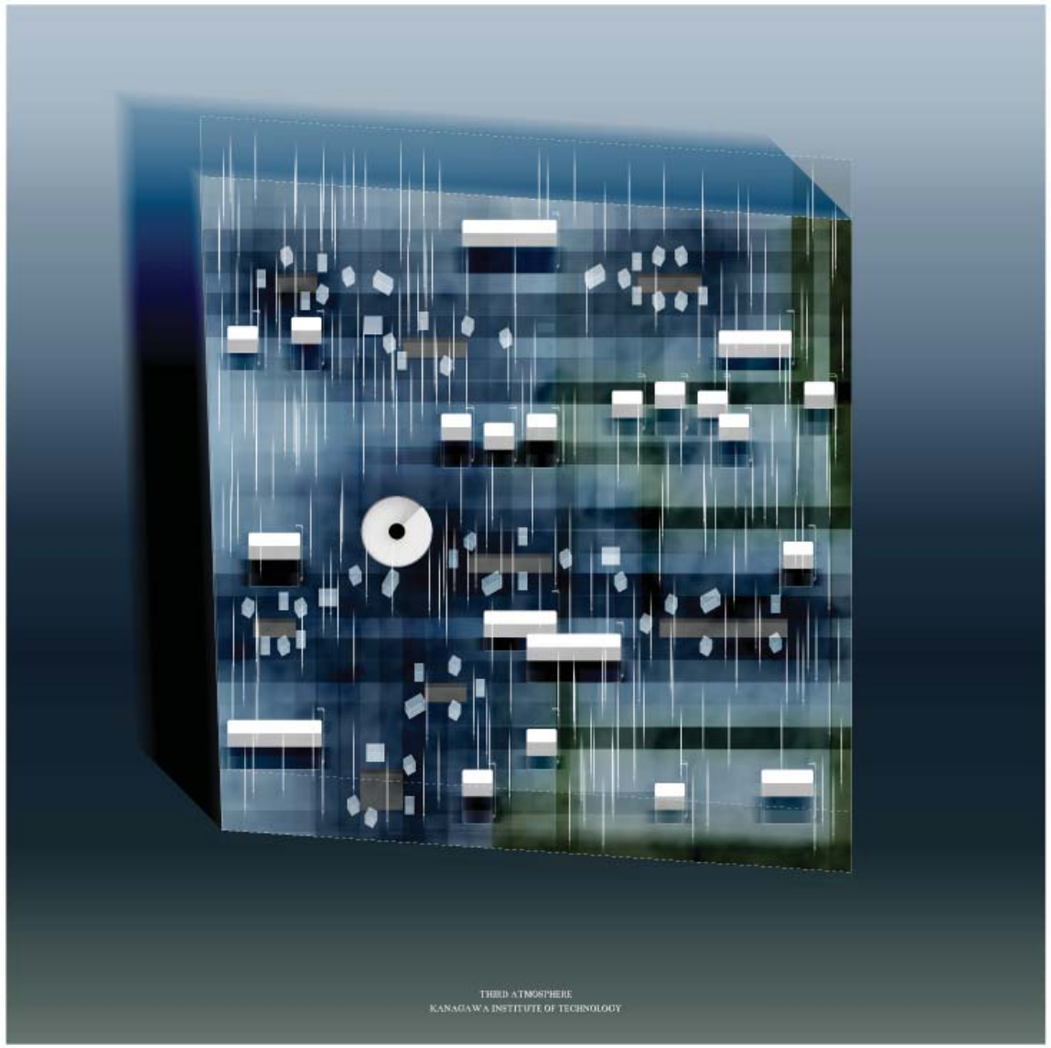
Fig. 7
Farnsworth House (Illinois) by Mies Van der Rohe

-Image take in https://www.smithsonianmag.com/science-nature/how-storm-chaser-changed-face-tornado-science-180968688/TWHzfi9ycM1VQBA08

This thesis tests these premises through the revision of precedents that embody the disappearance of atmosphere the Kanagawa Institute of Technology by Junya Ishigami and Mies van der Rohe's Farnsworth House creating plausible fictions of architectural futures that seamlessly incorporate atmospheric events.

Pausible Fictions

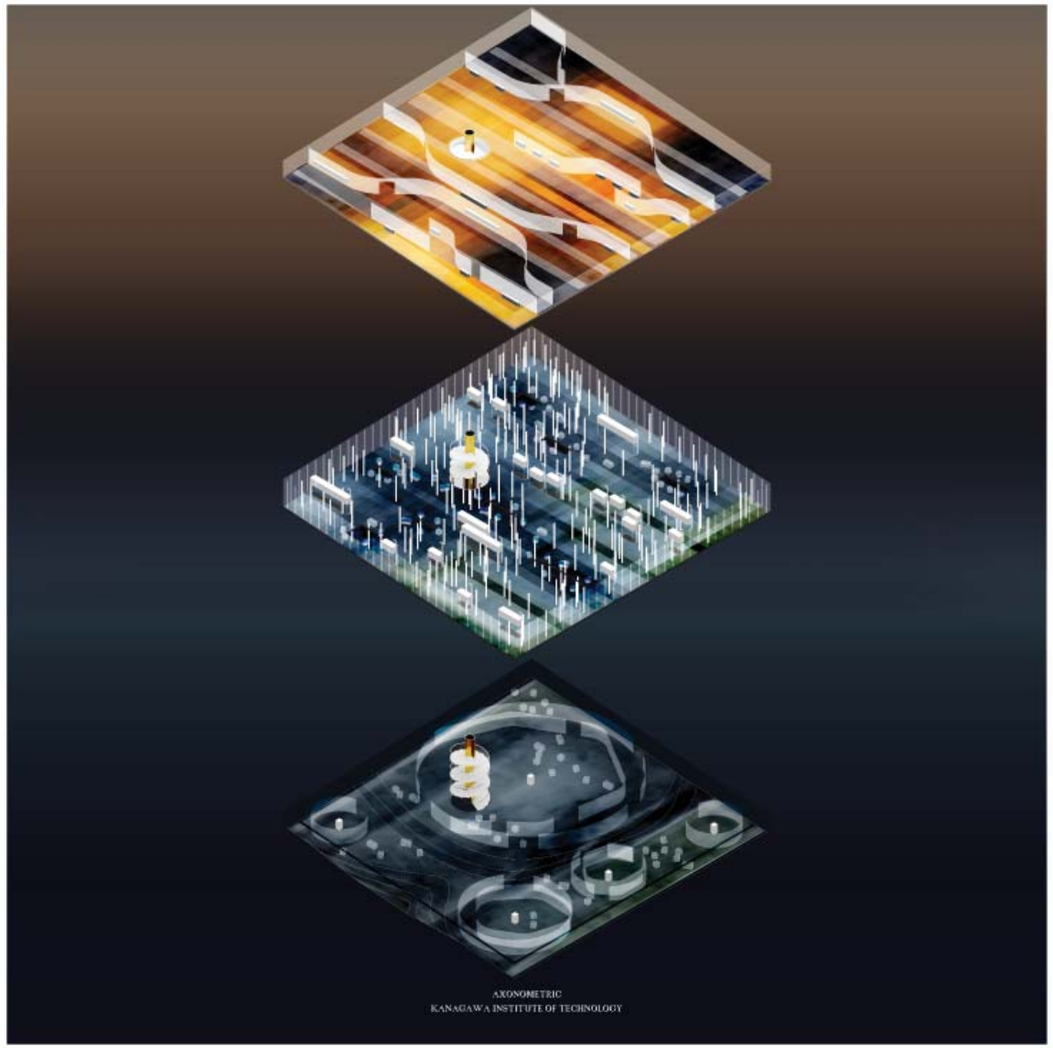
My thesis scrutinizes our discipline's representational techniques, seeking the appropriate conventions for the depiction of architecture at the scale of atmosphere.



THIRD ATMOSPHERE
KANAGAWA INSTITUTE OF TECHNOLOGY

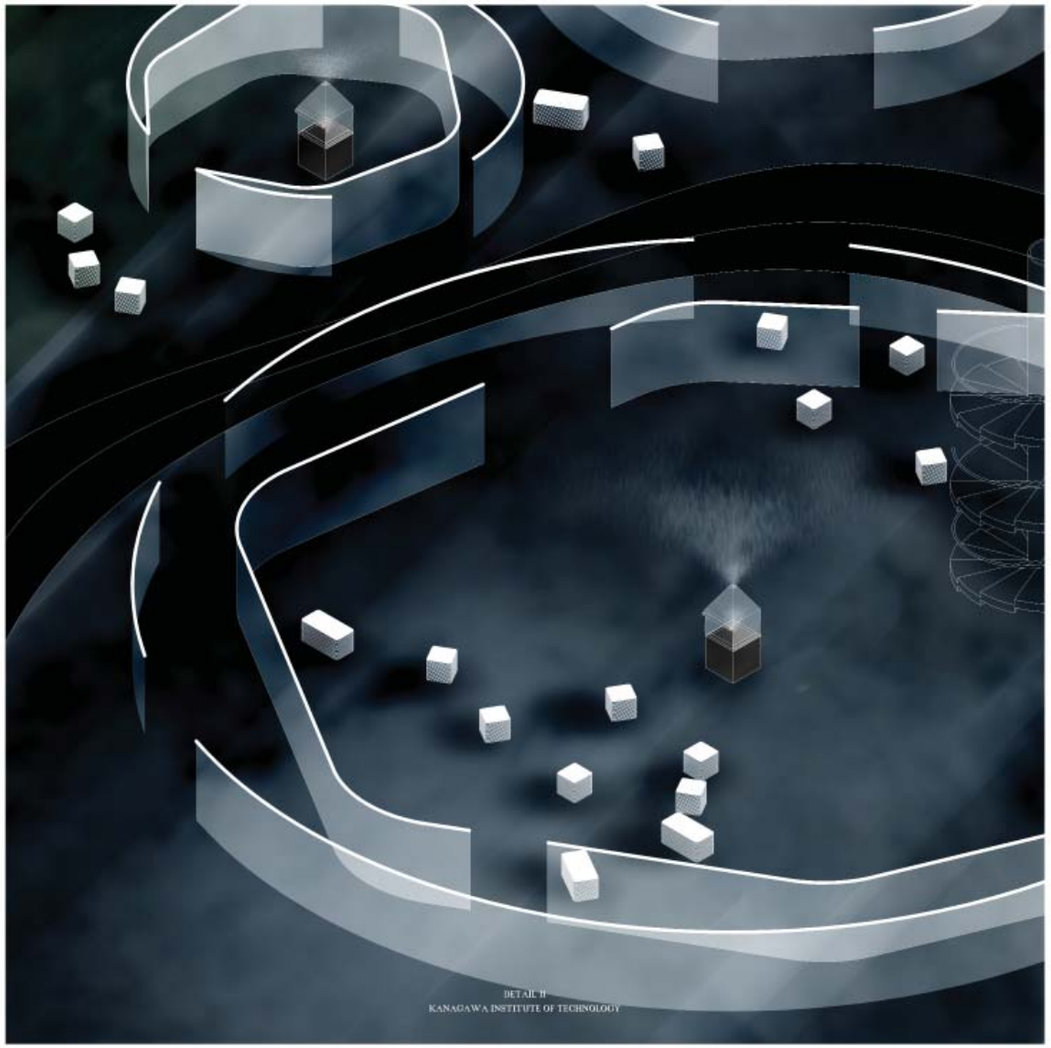
DARKNESS ATMOSPHERE
KANAGAWA INSTITUTE OF TECHNOLOGY

SECTION
KANAGAWA INSTITUTE OF TECHNOLOGY

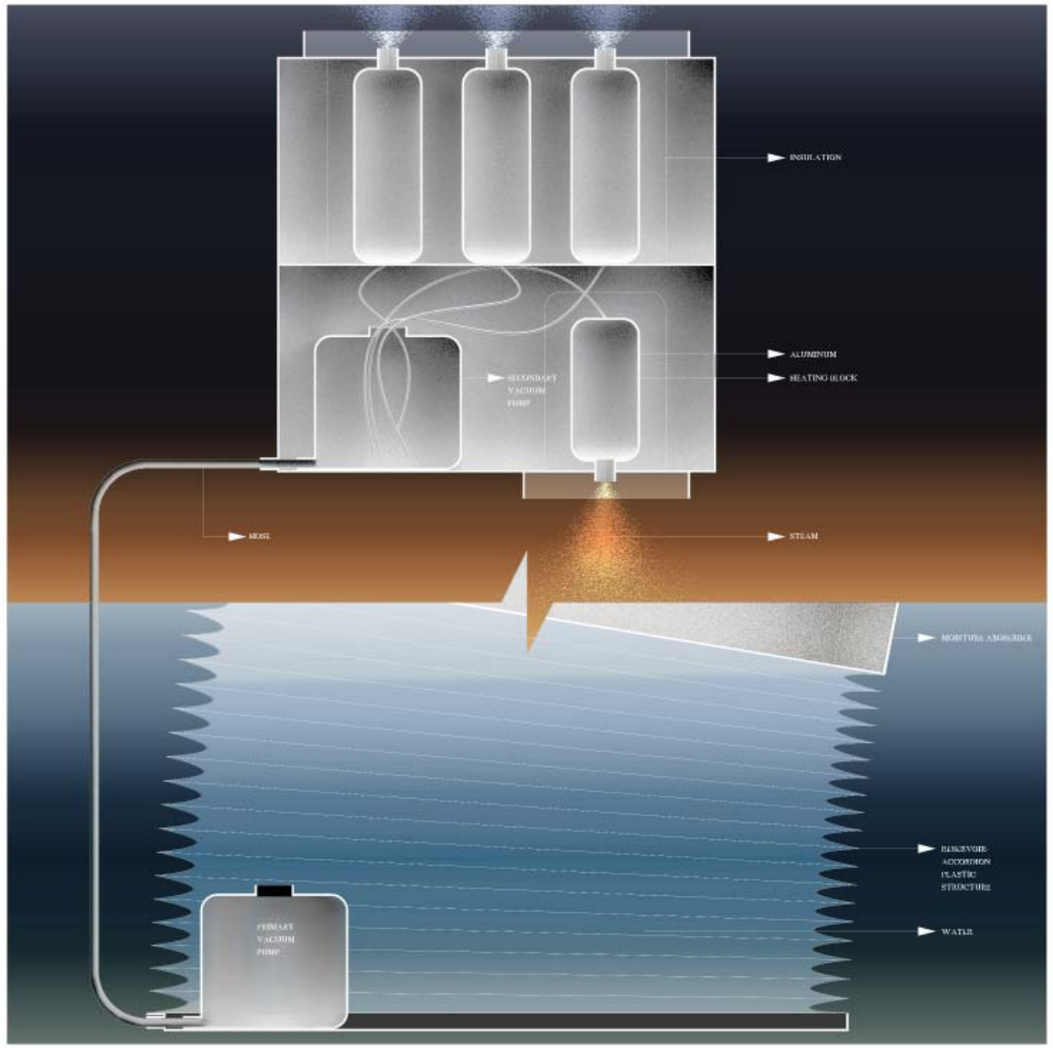


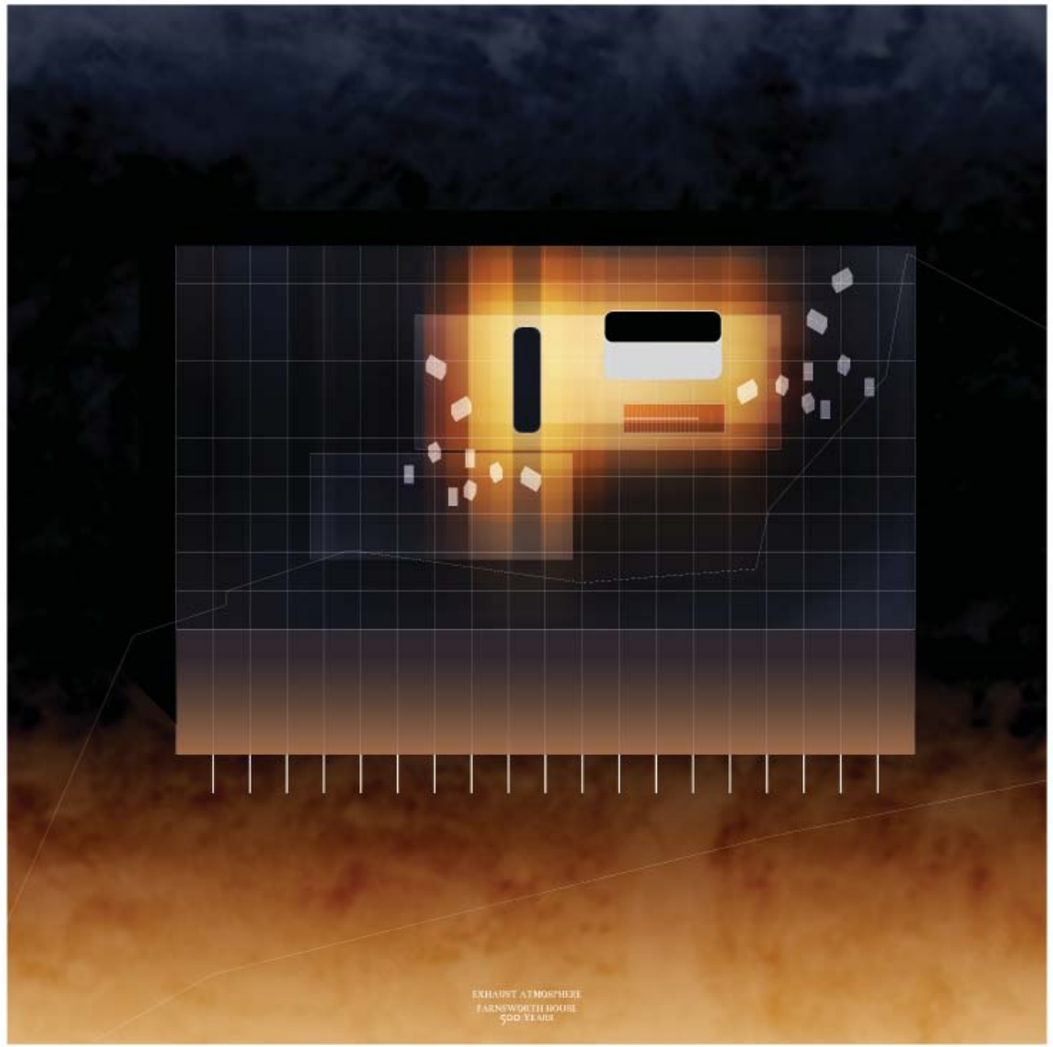
AXONOMETRIC
KANAGAWA INSTITUTE OF TECHNOLOGY

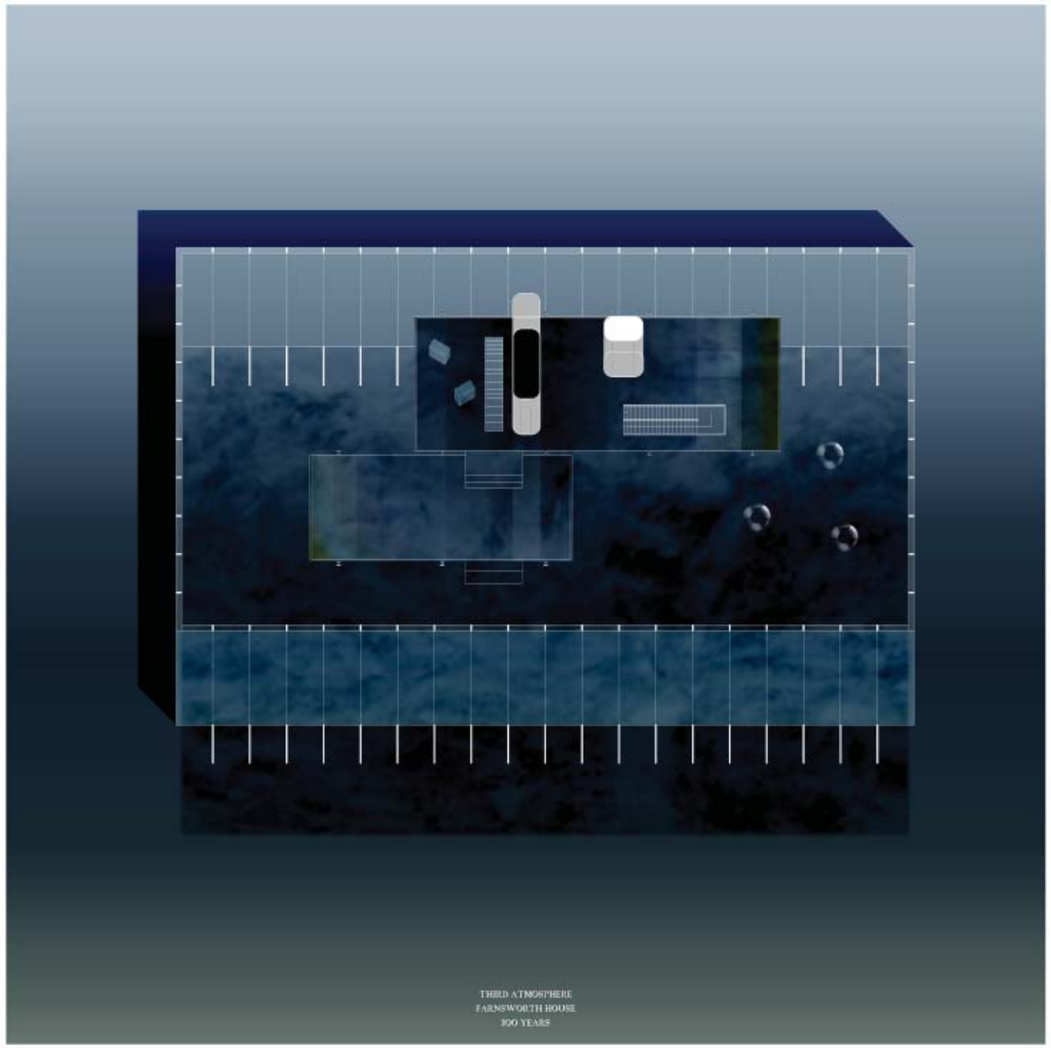
DETAIL I
KANAGAWA INSTITUTE OF TECHNOLOGY



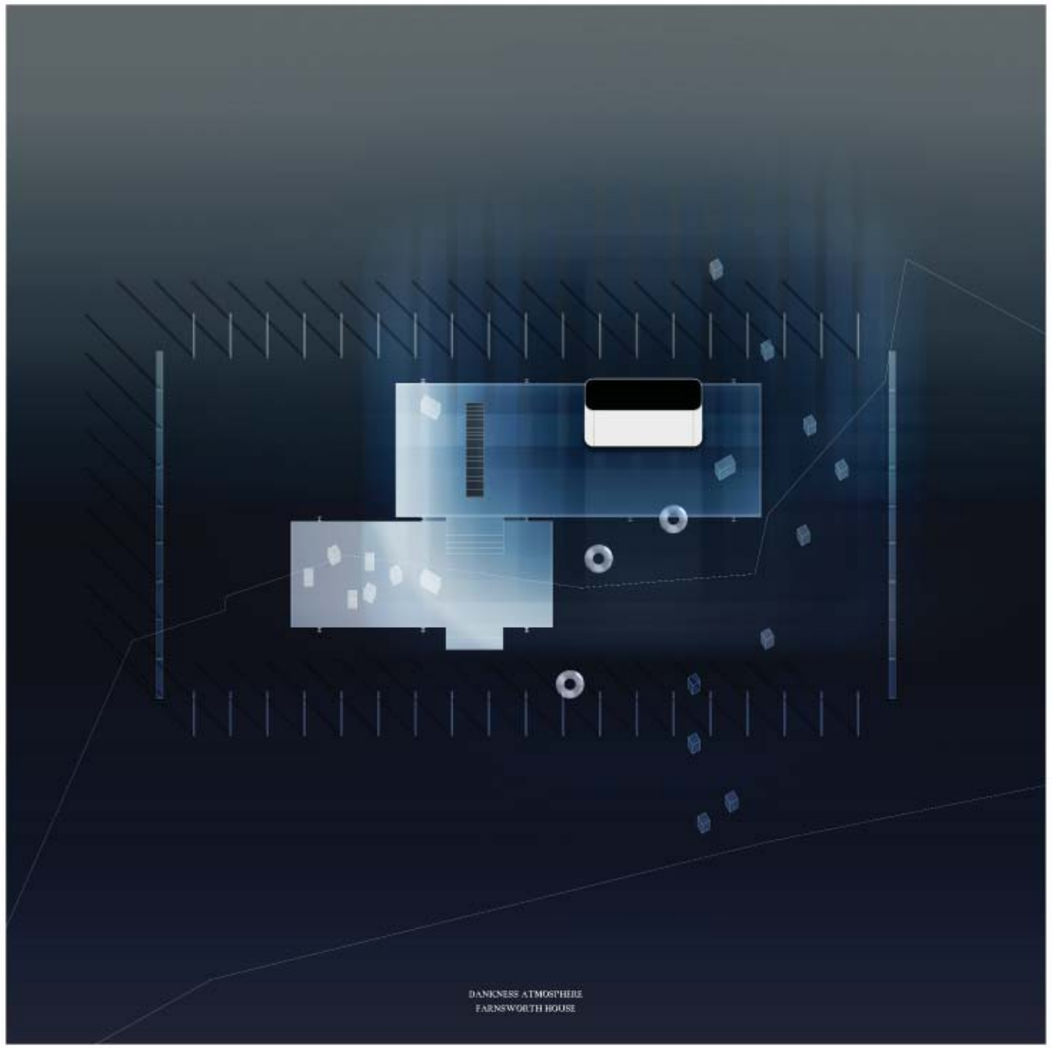
DETAIL II
KANAGAWA INSTITUTE OF TECHNOLOGY


INSULATION
ALUMINUM
HEATING BLOCK
SECONDARY VACUUM PUMP
HOSE
STEAM
MOISTURE ABSORBER
RESERVOIR: ACCORDION PLASTIC STRUCTURE
WATER
PRIMARY VACUUM PUMP

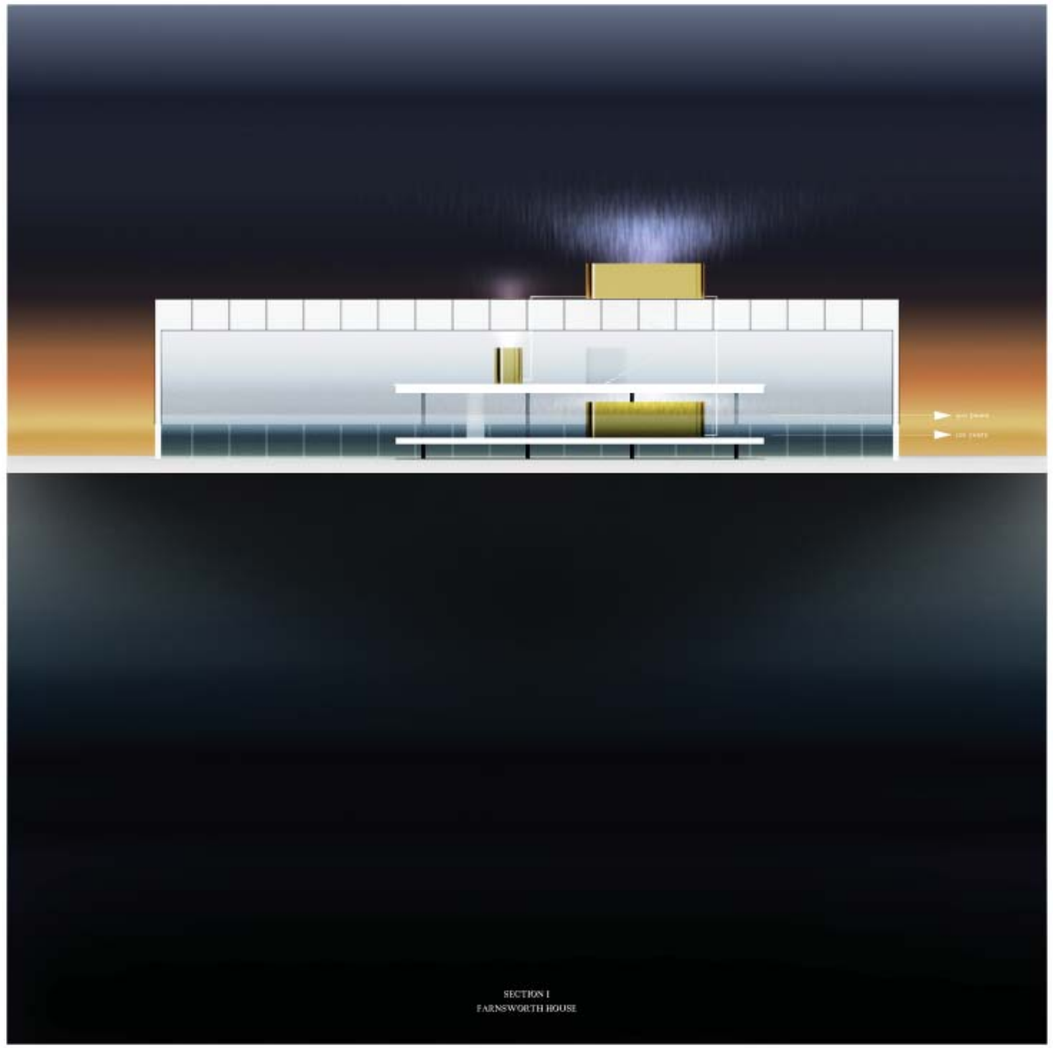

EXHAUST ATMOSPHERE
FARNSWORTH HOUSE
500 YEARS



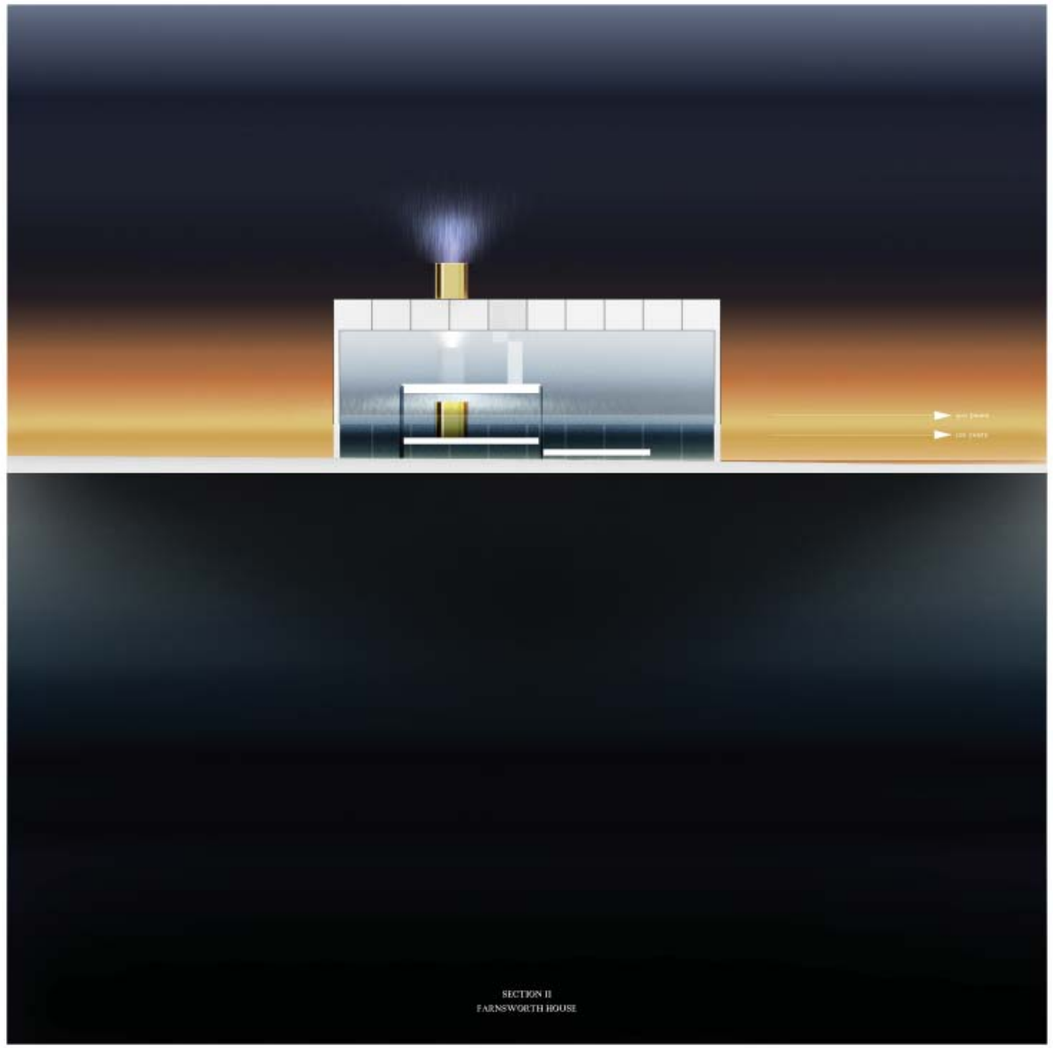
THIRD ATMOSPHERE
FARNSWORTH HOUSE
100 YEARS



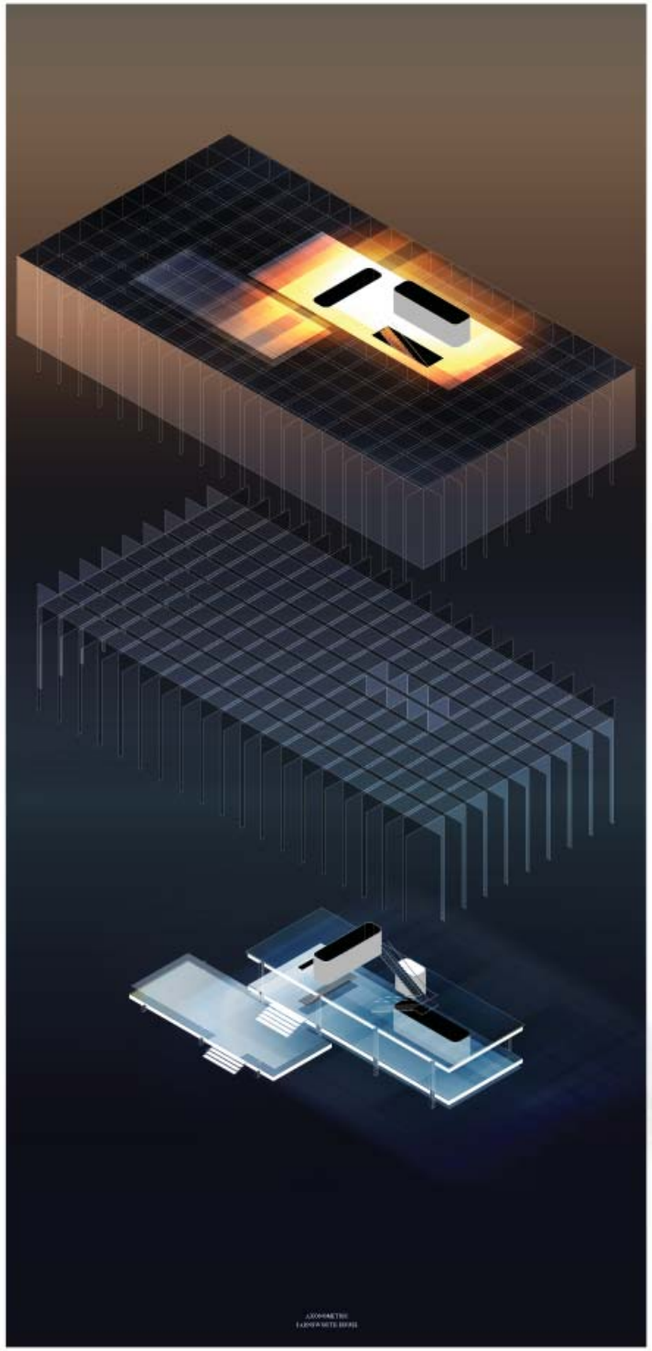
DANKNESS ATMOSPHERE
FARNSWORTH HOUSE



SECTION I
FARNSWORTH HOUSE



SECTION II
FARNSWORTH HOUSE



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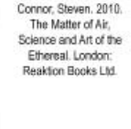
Atmospheric Event 1.



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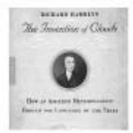

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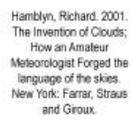

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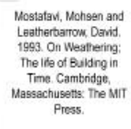

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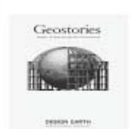

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Klein, Yves. 1960. Leep into the Void.

Marcel Breuer, A. Elzas. 1955-1957. De Bijenforf Department Store

IMAGE CREDIT

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Observing tornado with violent winds and subsequent floods in El Reno, Oklahoma.
Image from https://www.smithsonianmag.com/science-nature/how-storm-chaser-changed-face-tornado-science-180968688/

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Jesús M. MeléndezVázquez

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