

NED 6TH INTERNATIONAL SYMPOSIUM
APRIL 15-22, 2018 VARADERO, CUBA

THE ART OF COMMUNICATING SCIENCE

ÁGNES MÓCSY
www.agnesmocsy.com

NED 6TH INTERNATIONAL SYMPOSIUM
APRIL 15-22, 2018 VARADERO, CUBA

COMMUNICATING SCIENCE THROUGH ART

ÁGNES MÓCSY
www.agnesmocsy.com

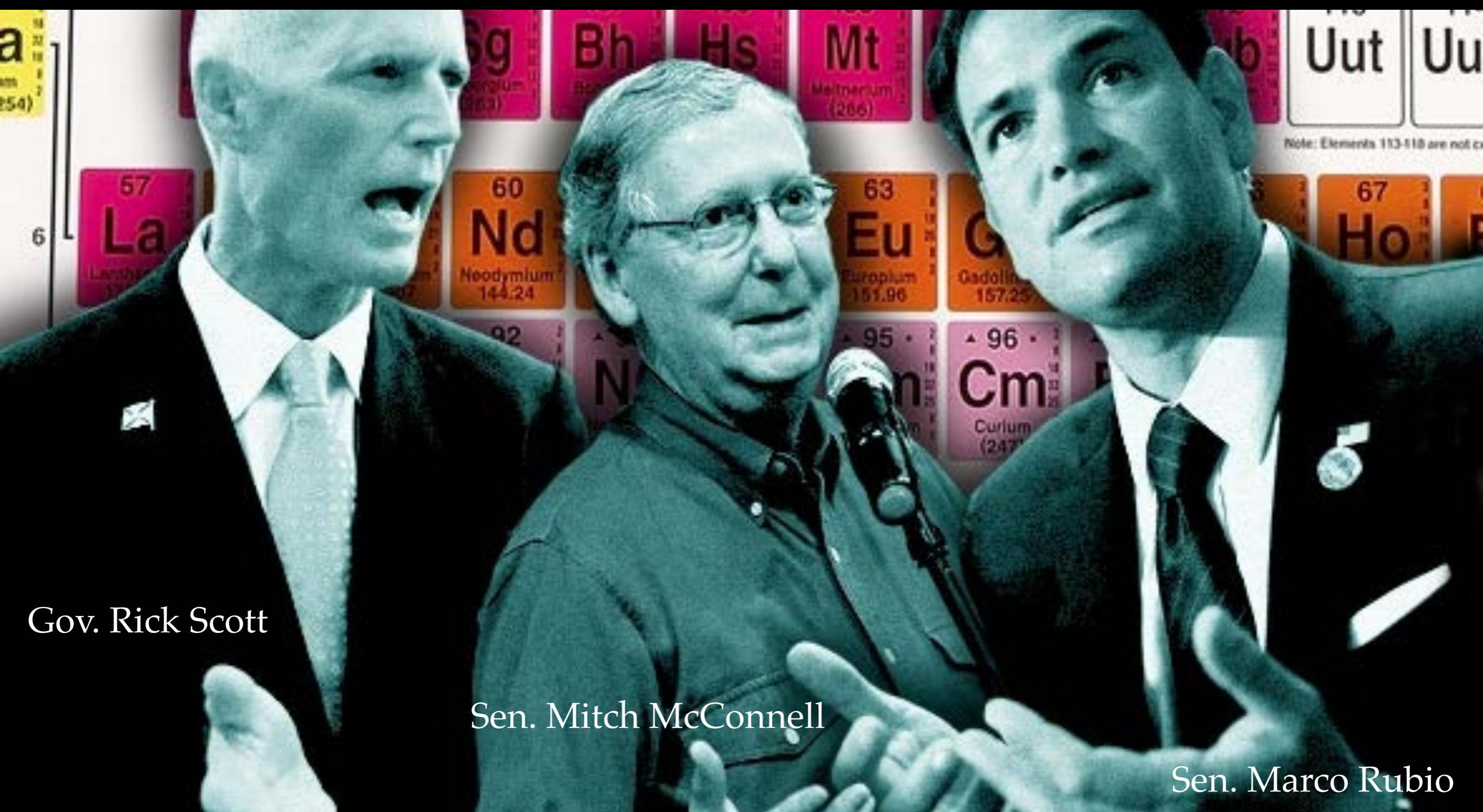
Physics is accessible, if we make it accessible.

WHY COMMUNICATE SCIENCE ?

FLOURISHING PSEUDOSCIENCE



"I'M NOT A SCIENTIST"



THE ERA OF FAKE NEWS



DEEPLY ROOTED PREJUDICE

L'Oreal Conference, Paris
September 2015

theguardian

Women in
Leadership

67% of Europeans don't believe women have the skills to be scientists

A new survey from L'Oreal looks at the public's perception of female scientists with shocking results. Particularly if you live in China

Professor Dame
Athene Donald

Professor of
experimental physics
at the University of
Cambridge

Thursday 24 September
2015 07.14 BST



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Most popular



Svetlana Alexievich
wins 2015 Nobel prize in
literature

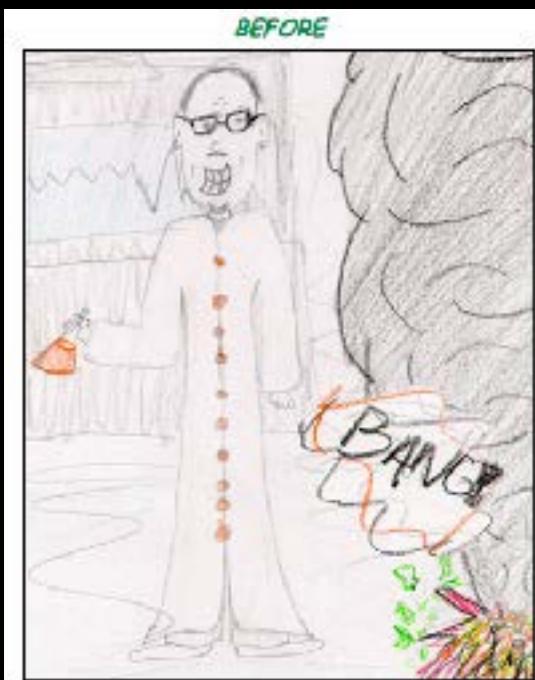


Sepp Blatter, Michel
Platini and Jérôme
Valcke suspended for 90
days

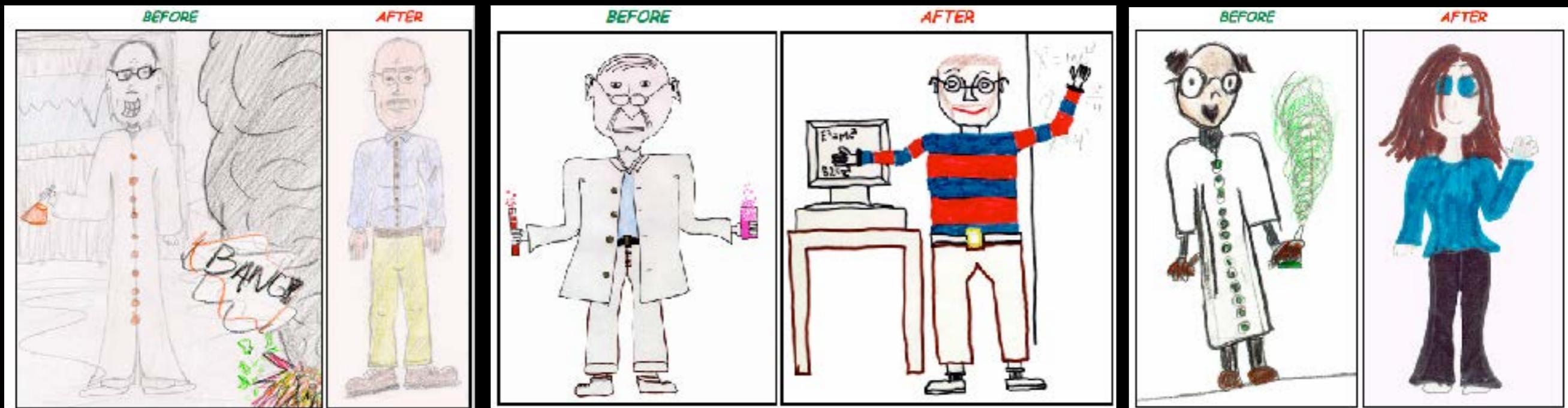


Harvard's prestigious
debate team loses to

REDUCE STEREOTYPES CHANGE PERCEPTIONS



REDUCE STEREOTYPES CHANGE PERCEPTIONS



SCIENCE

No Escape From Black Holes? Stephen Hawking Points to a Possible Exit

By DENNIS OVERBYE JUNE 6, 2016



SCIENCE

Gravitational Waves Detected, Confirming Einstein's Theory



Dennis Overbye

OUT THERE FEB. 11, 2016



986

We don't tell stories about people working together, instead we ask: who was the genius behind that

THE BLOG 03/09/2016 06:24 pm ET | Updated Dec 05, 2017

The Lone Genius Paradigm and Our Infatuation With Intellectual Heroes



By Agnes Mocsy

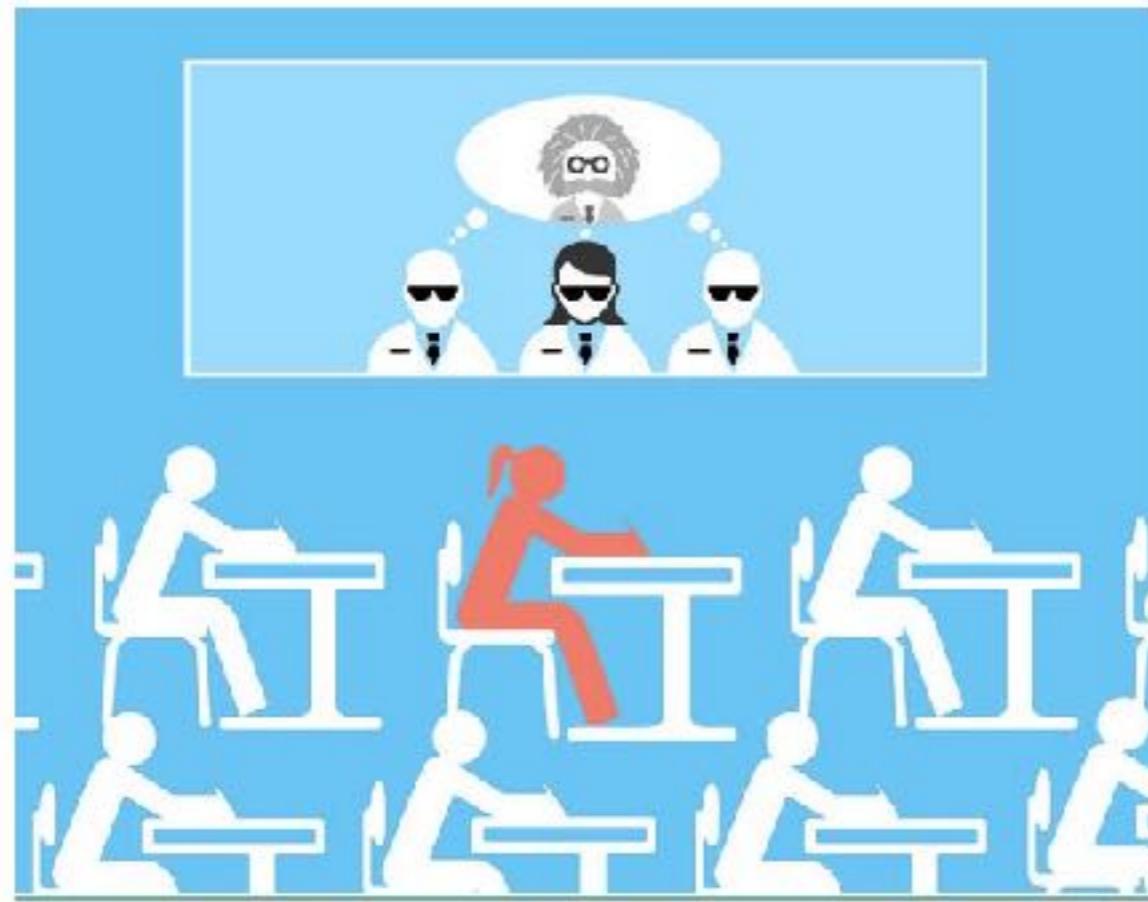


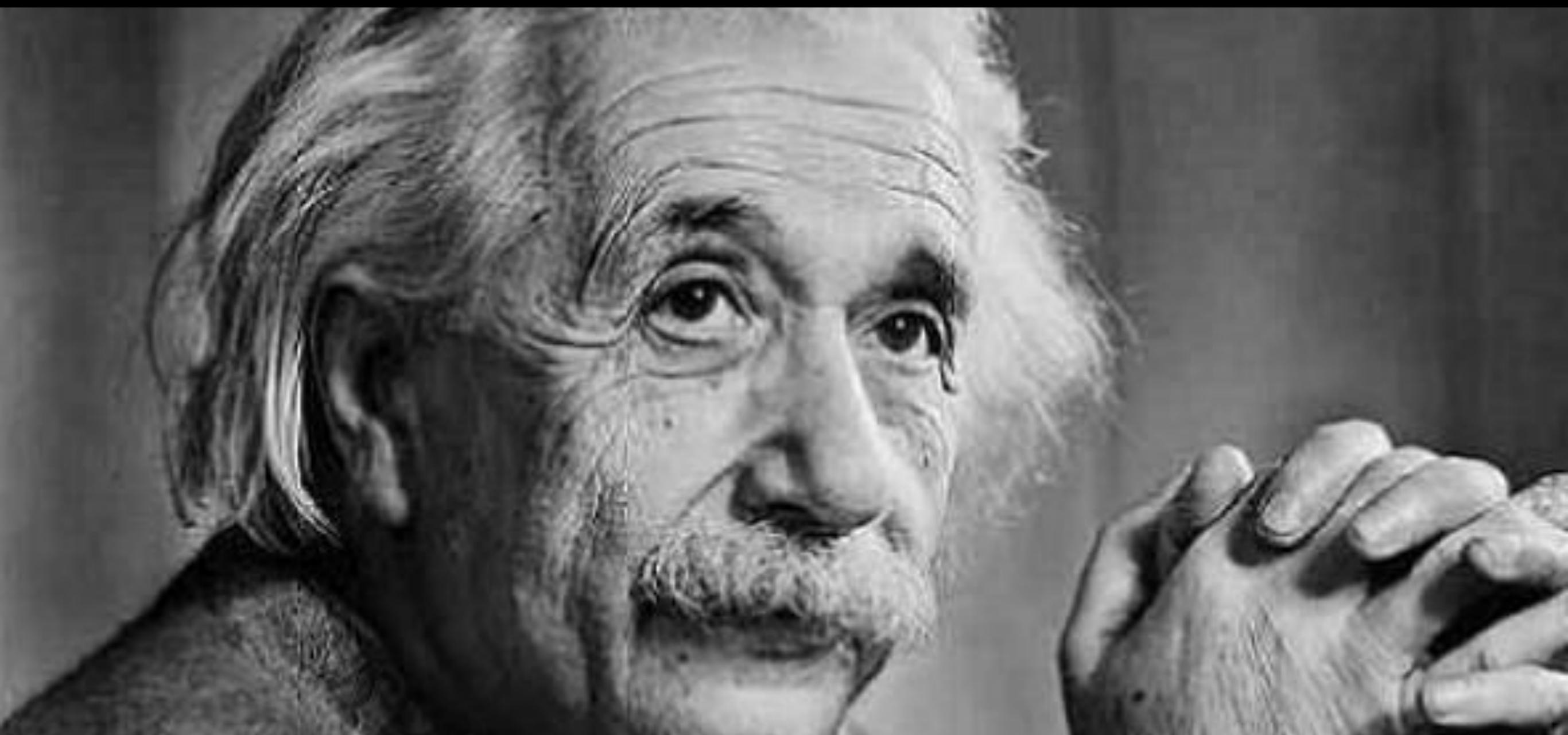
Image credit: Agnes Mocsy/Young Kim

As a physicist musing about genius, I wonder whether I know any geniuses or whether the best physicists I know are just

Implying the key to success is *innate talent* puts an unnecessary psychological road-block to negatively stereotyped groups

"Genius is 1% talent and 99% hard work."

-ALBERT EINSTEIN



CARL WIEMAN - CHAIR OF SCIENCE ED. AT NAS, NOBEL 2001

FAILING TO COMMUNICATE WELL

"our physics courses are actually teaching many students that physics knowledge is just the claim of an arbitrary authority, that physics does not apply to anything outside the classroom, and that physics problem solving is just about memorizing answers to irrelevant problems."



ALAN ALDA CENTER FOR COMMUNICATING SCIENCE

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COMMUNICATING SCIENCE



ALDA-KAVLI
LEARNING CENTER

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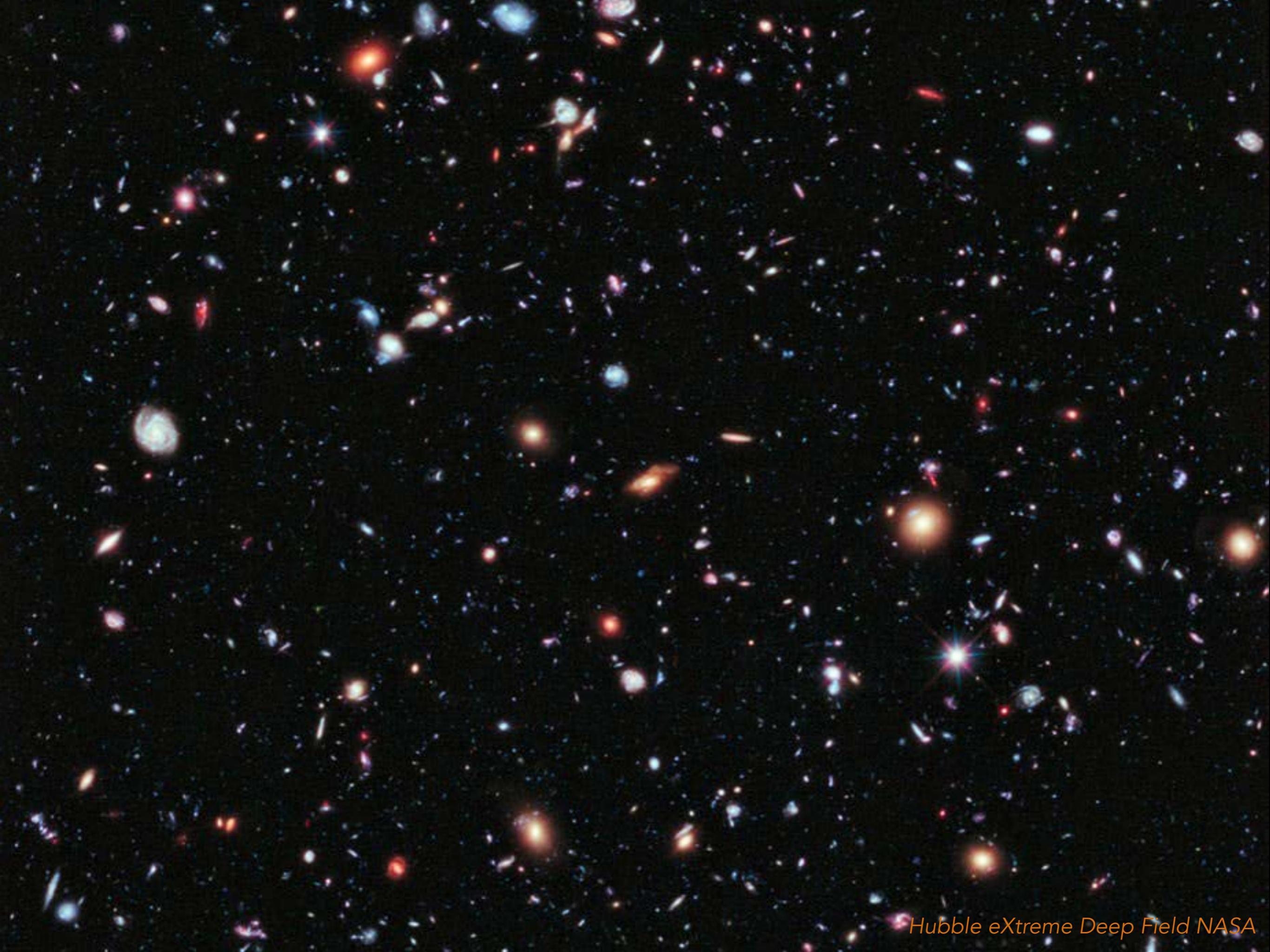
Let's improve
communication about
science and medicine.

Leverage our resources to polish your skills.

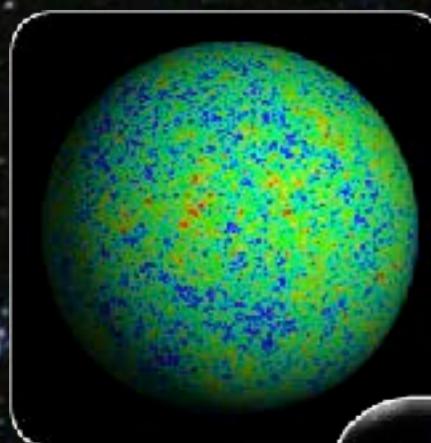
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JOY OF SEEING PEOPLE GET IT



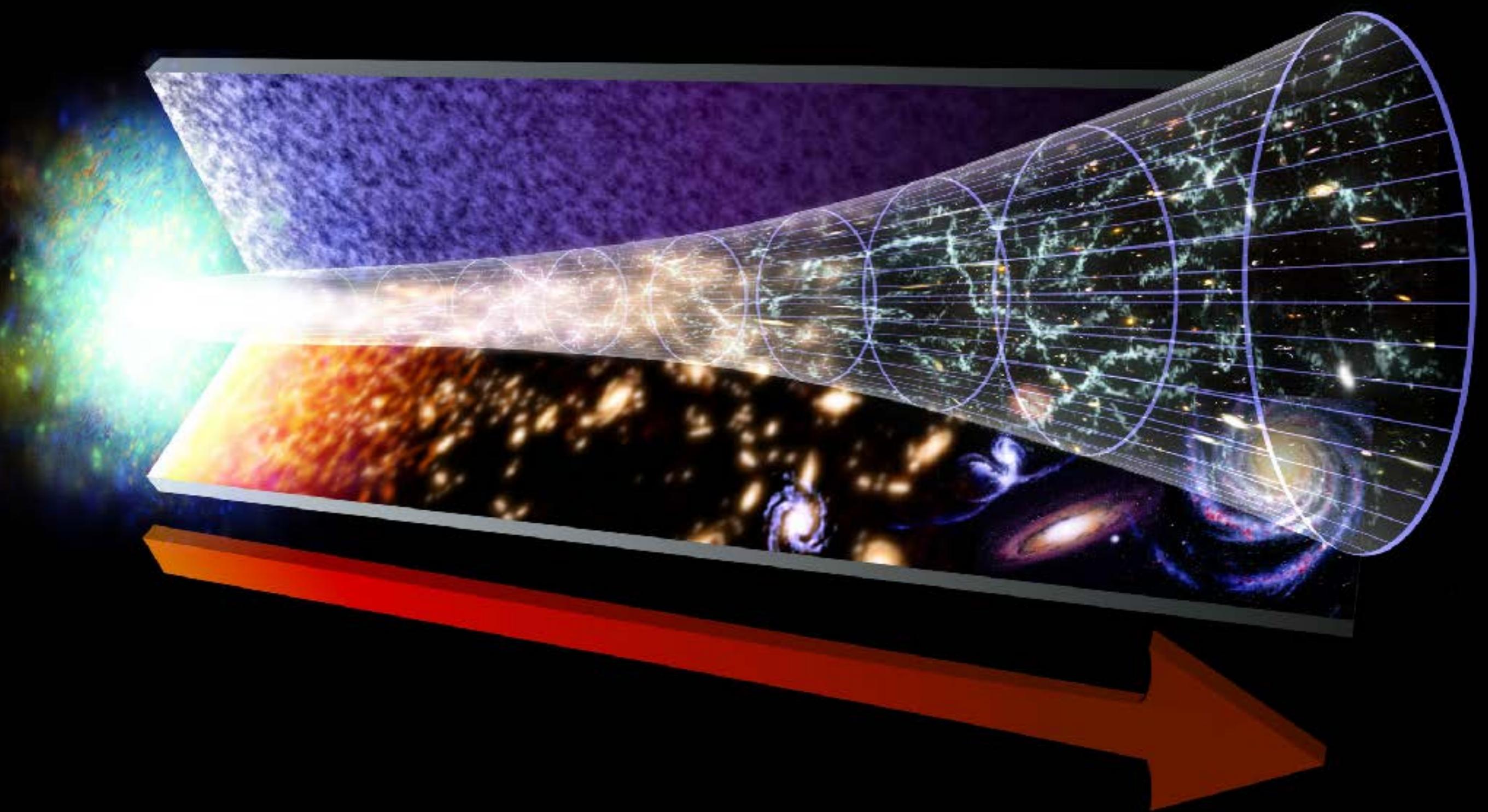


Hubble eXtreme Deep Field NASA



13.8 Billion Years





13.82 BILLION YEARS

RELATIVISTIC HEAVY ION COLLIDER

PHENIX

STAR

LARGE HADRON COLLIDER

ALICE

CMS

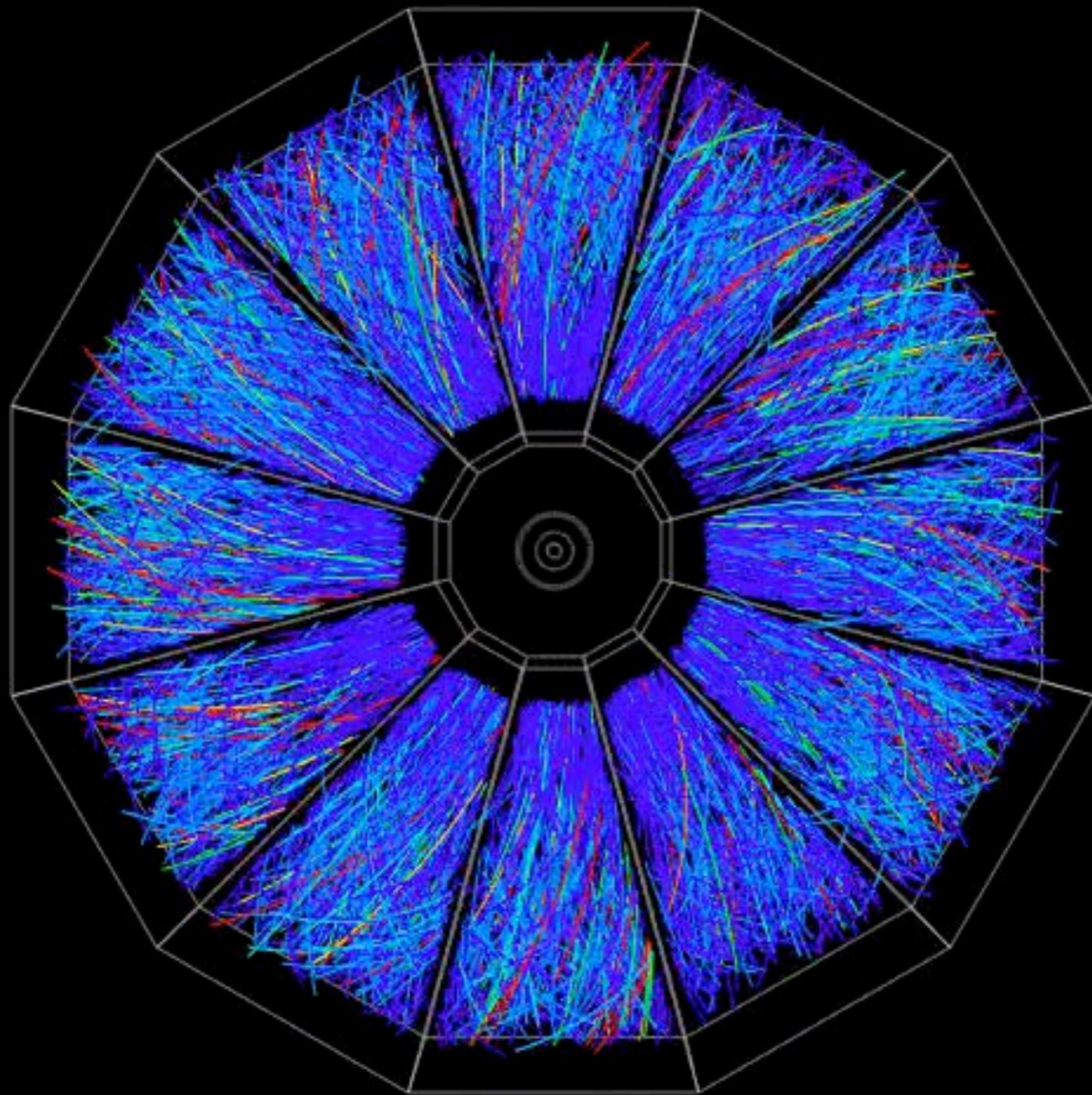
ATLAS

LHCb

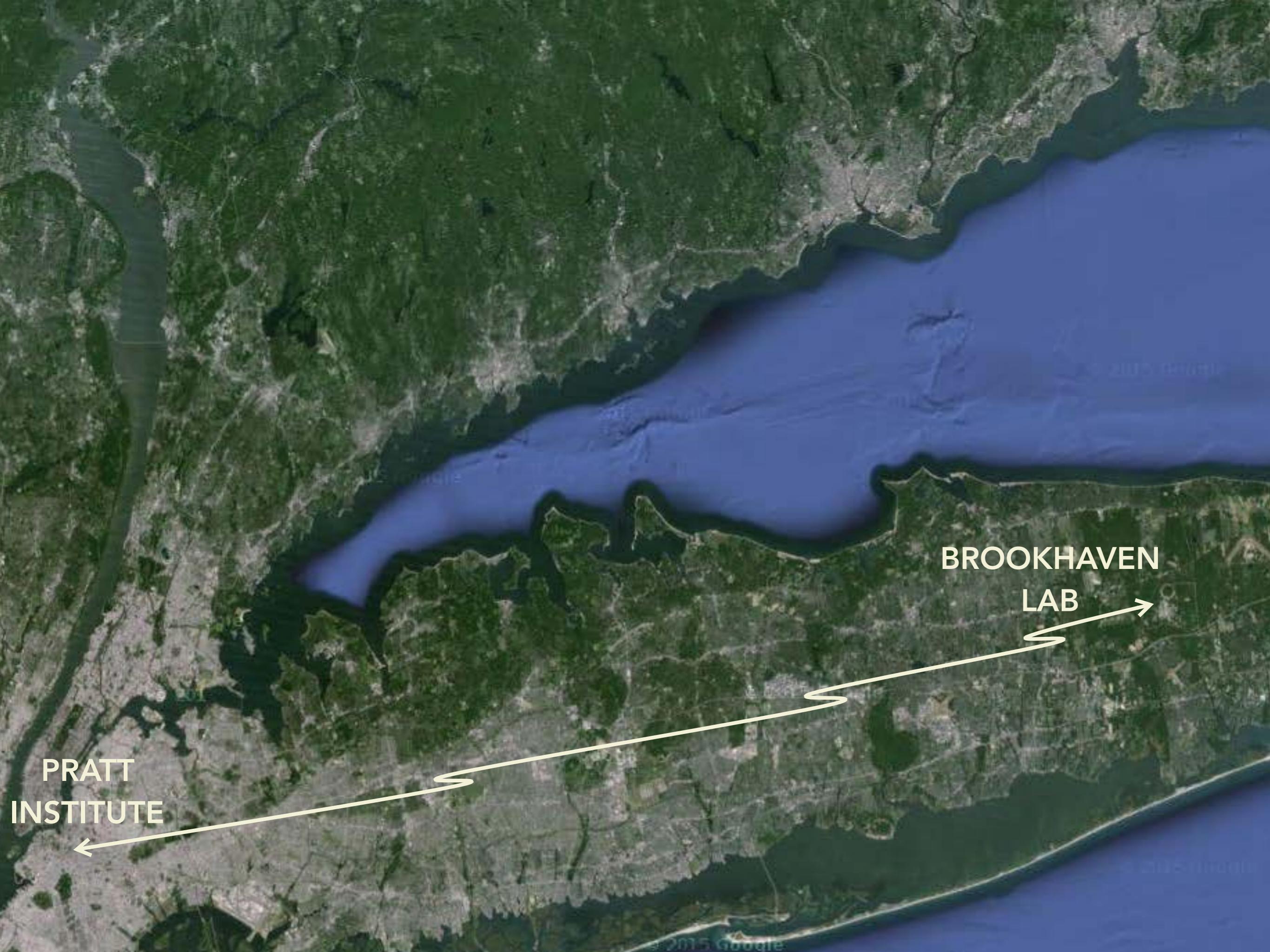




7 TRILLION FAHRENHEIT / 4 TRILLION CELSIUS



STAR



PRATT
INSTITUTE



BROOKHAVEN
LAB

PRATT INSTITUTE



Are you *sciencey* or *artsy* type?

- ill-posed question

WHEN PHYSICS IS ART

PHYSICS, THE MUSE APPROACHES

- The Wow Factory
- Science, the Film Muse
- Fusion Project Runway
- Science Happy Hours, Exhibits, Fashion Shows ...
- Smashing Matters
- In the pipeline ...

THE WOW FACTORY



Quark Matter 2017

The 26th International Conference
on Ultrarelativistic Nucleus-Nucleus Collisions
February 6-11, 2017, Chicago

Scientific Topics

QCD at high temperature
Baryon-rich QCD matter
QGP in small systems
Initial state physics and approach to thermal equilibrium
Collective dynamics
Correlations and fluctuations
Jets and jet quenching
Heavy flavor and quarkonium
Electroweak probes
Strongly coupled systems
New theoretical developments
Future facilities and new instrumentation

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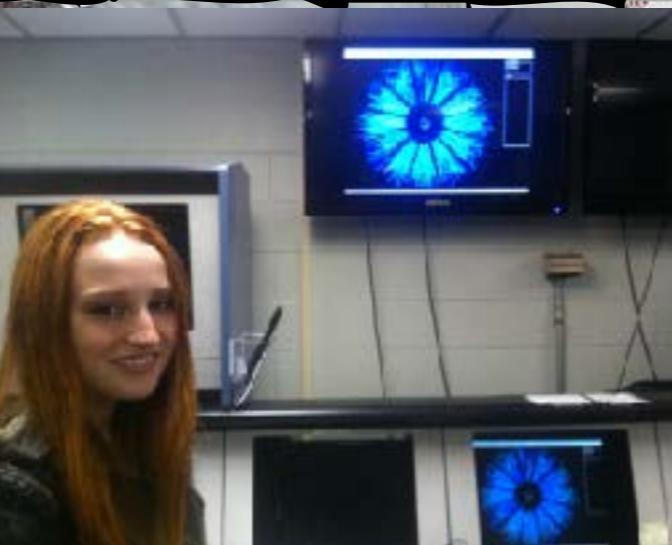
Designed by Anjali Chandrashekhar [Pratt](#)



THE WOW FACTORY



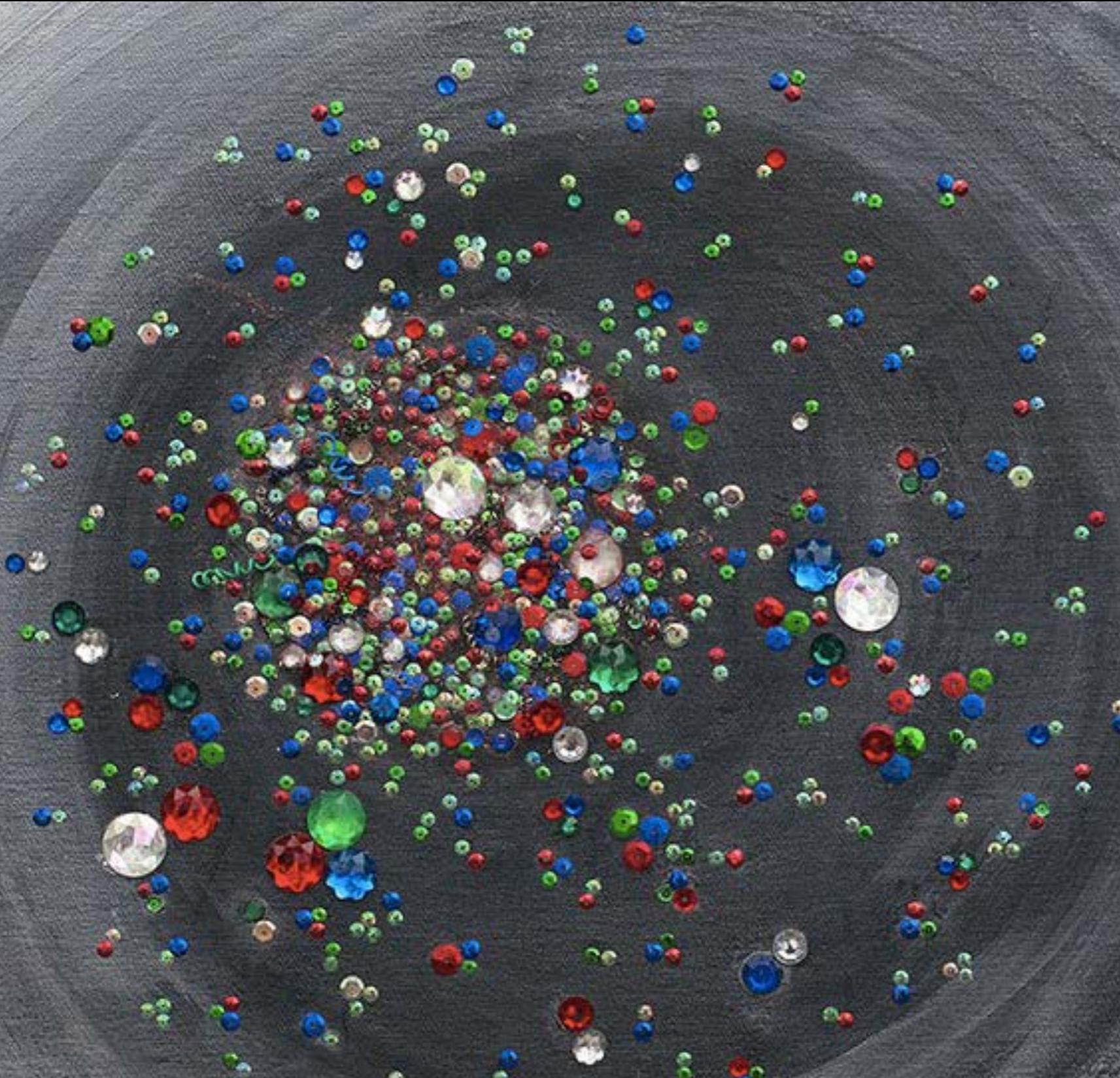
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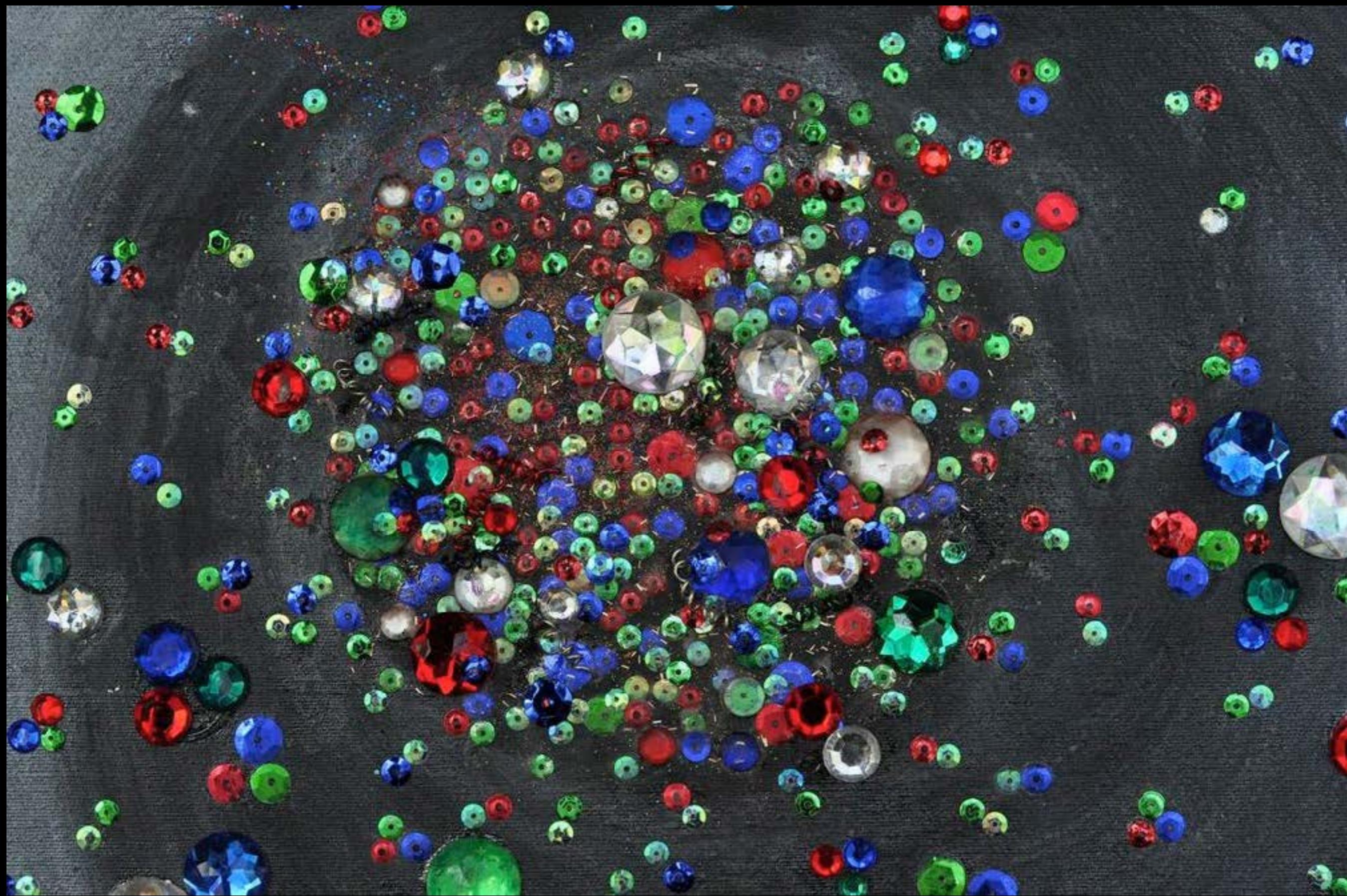


THE WOW FACTORY

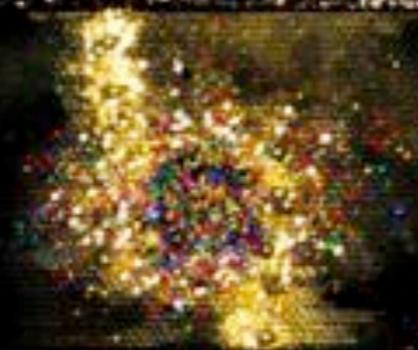
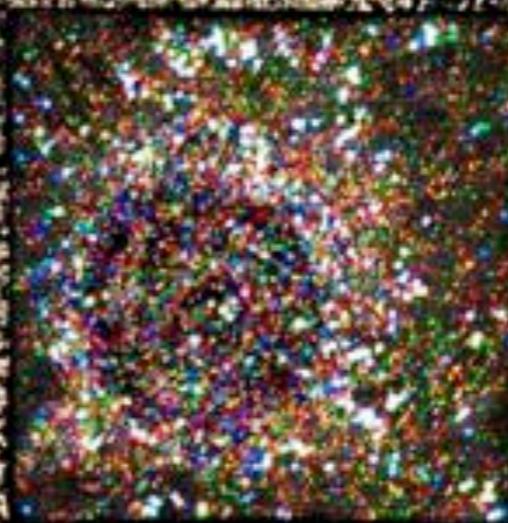
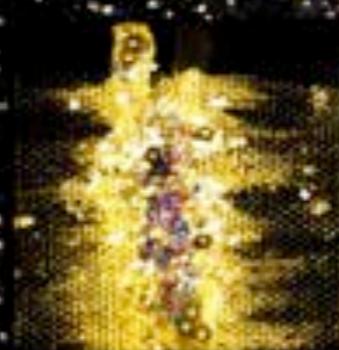


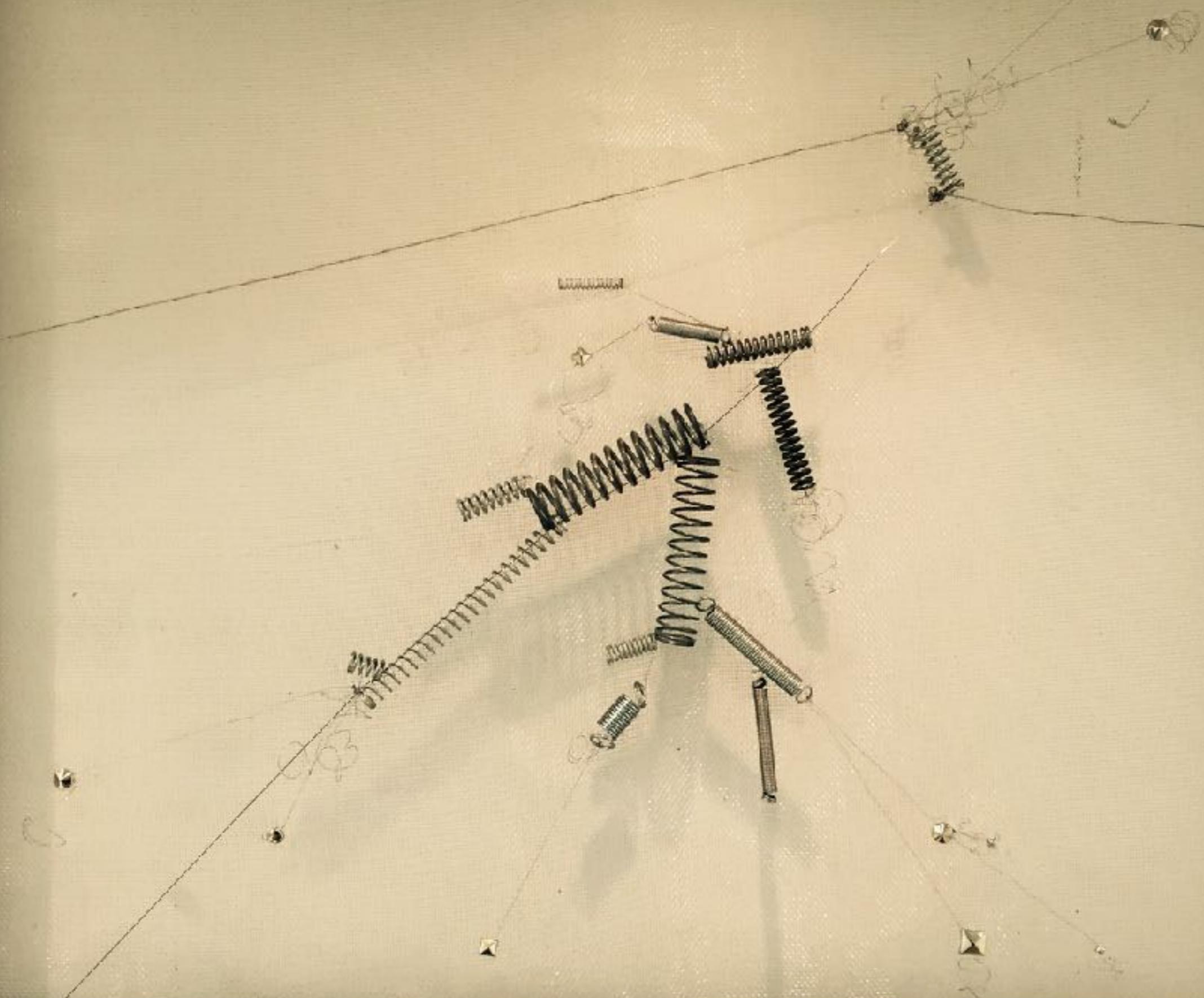
SARAH SZABO GLAMOROUS GLUONS SERIES





Quark Gluon Plasma Entering Hadronization by Sarah Szabo





SARAH SZABO

GLAMOROUS GLUONS

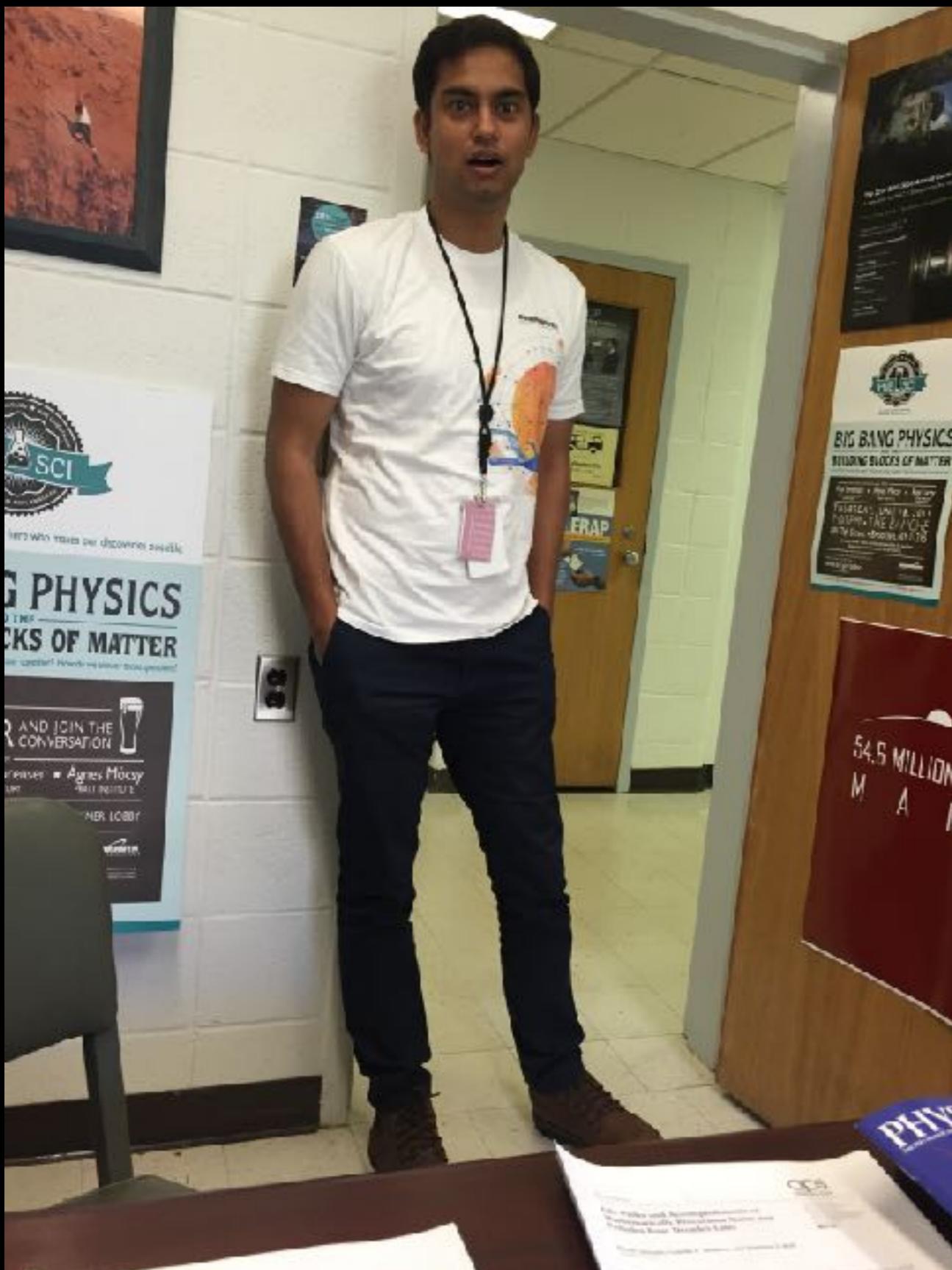


KAIJING WU THE LITTLE BANG HAT



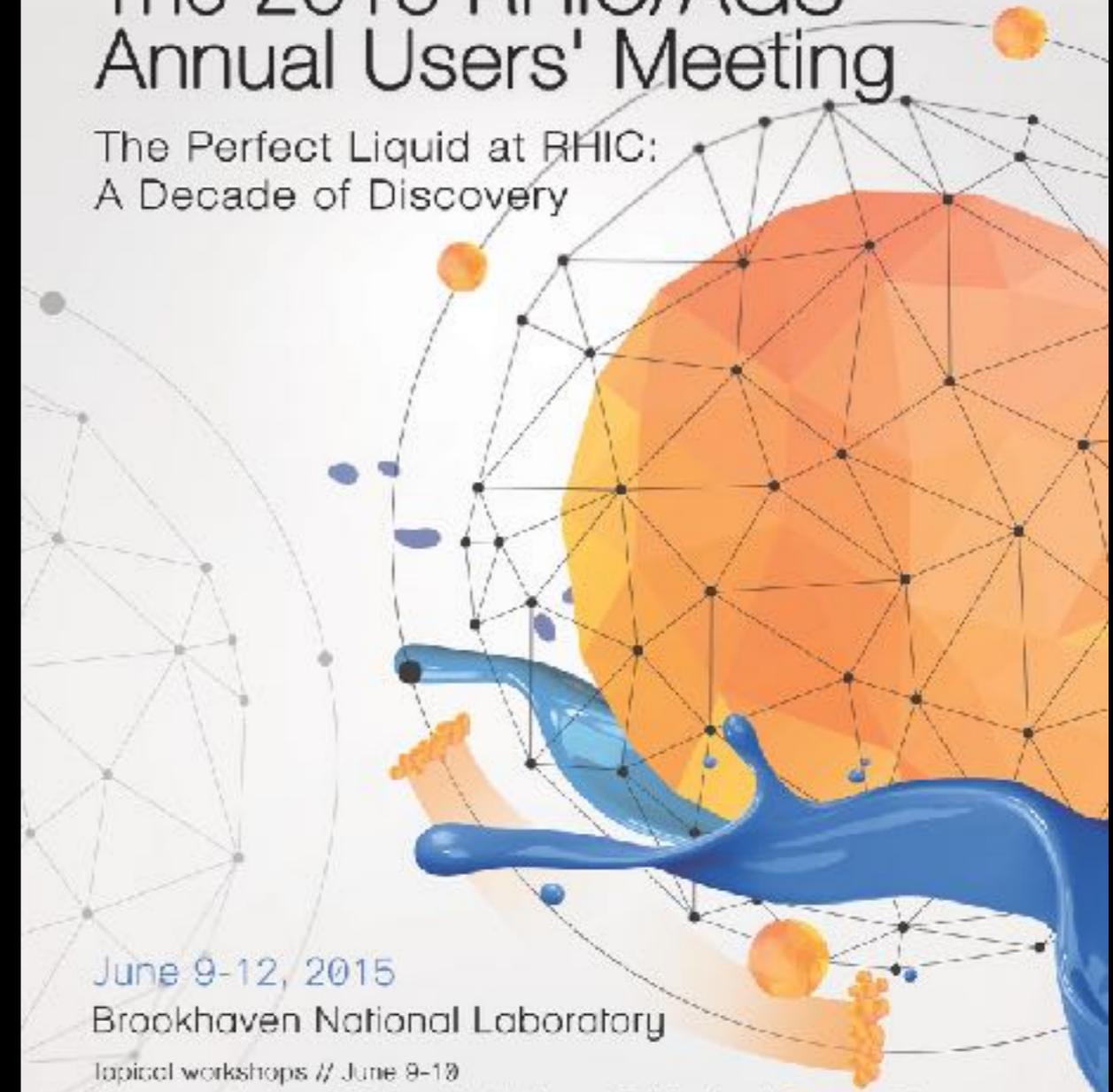
GAO-MOCSY-WU PERFECT LIQUID SHIRT





The 2015 RHIC/AGS Annual Users' Meeting

The Perfect Liquid at RHIC:
A Decade of Discovery



June 9-12, 2015

Brookhaven National Laboratory

Topical workshops // June 9-10

Plenary sessions and Perfect Liquid 10-year Celebration // June 11-12

Special guest speaker AAAS Chief Executive Officer and former Congressman Rush Holt

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p.sorensen@bnl.gov

Conference Coordinator

Kelly Gultroda
gultroda@bnl.gov

Register at www.bnl.gov/sum2015

Poster designed by Chenxin Yang **Pratt**

BROOKHAVEN
NATIONAL LABORATORY

RHIC/AGS USERS' CENTER

SCIENCE, THE FILM MUSE

Spring
2017

Mondays
2:00pm-6:20pm

3 credits

Prior filmmaking experience is required.
Prerequisites: FVID-101 or FVID-102 or FDC-181
or equivalent digital cinema production experience, including knowledge of
video cameras, sound equipment and editing software, as evidenced by portfolio.

MSCI 490-08 Science,
The Film Muse

Ágnes Mócsy (Math and Science) : amocsy@pratt.edu
Ramón Rivera-Moret (Film): rriveram@pratt.edu



Course Description:

This course is a joint study of cutting-edge scientific research and film theory and practice. It will explore the conceptual connections between science and film, how scientific research and filmmaking provide ways of envisioning the world. We will visit state-of-the-art research facilities, including the world's most versatile atom smasher, the particle accelerator that re-creates the conditions present a fraction of a second after the birth of the universe, and the 3-acre X-ray machine that images matter at the scale of atoms. In connection with these visits we will study the science done at the facilities, and the process of science, as well as filmmakers and genres that foreground inquiry, experimentation and reflection. Readings by filmmakers, theorists and critics will serve as a springboard and counterpoint for your own film projects. Students will produce short videos in response to scientific ideas, the facilities, and the scientists. For more information: www.bnl.gov/world



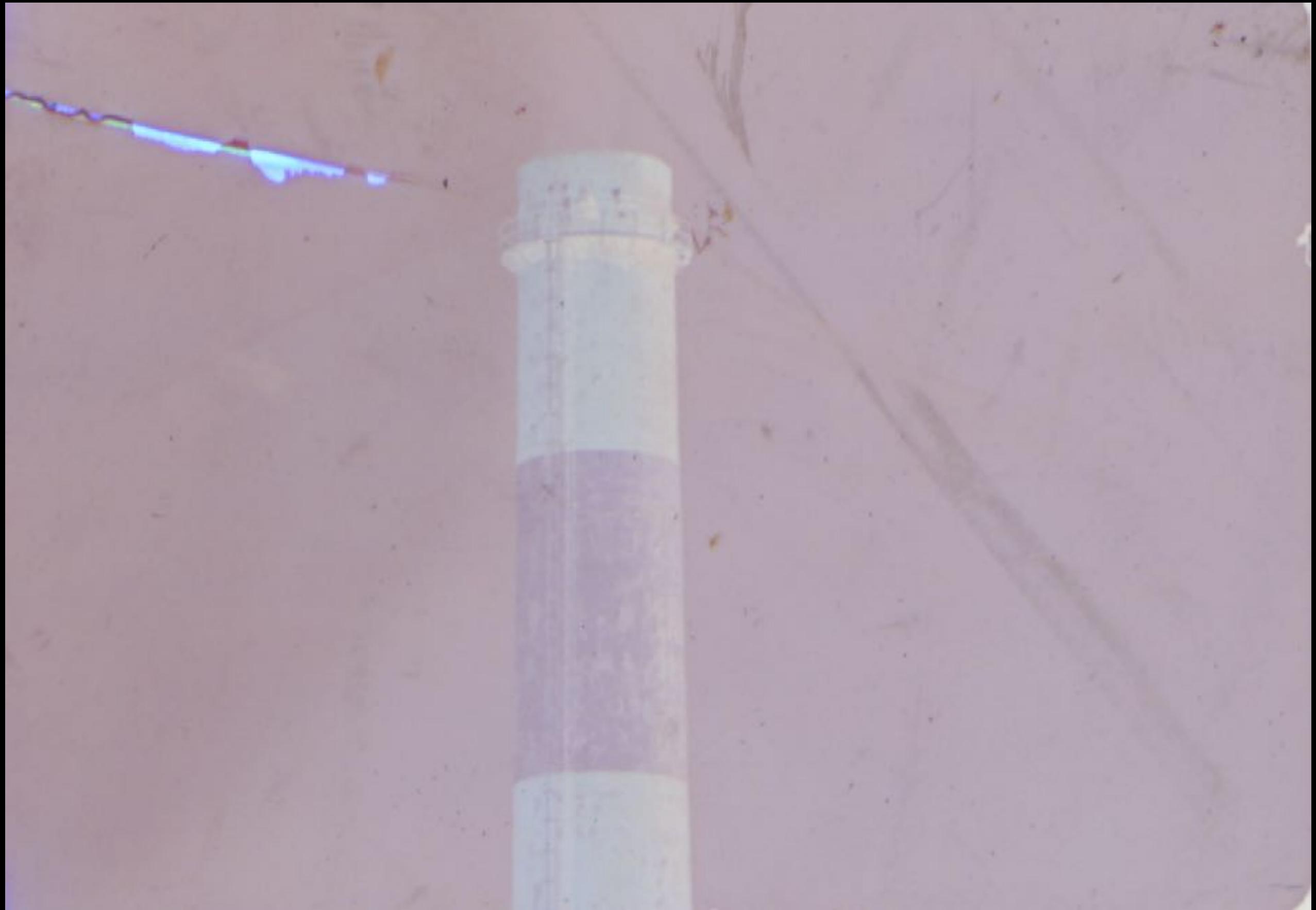
Pratt

200 WILLOUGHBY AVE
MAIN GATE

PRATT SHOWS.



SARA TRUSCOTT UNTITLED



CALVIN LAVALLE RHIC-Y



AVERY DUNKIN A FILM ABOUT SCIENTISTS



LOU GONZALVES OLEG, FANG, KEVIN AND LOU



FUSION PROJECT RUNWAY

The image features a dynamic, multi-colored background that looks like a celestial nebula or a star field. The colors transition from deep blues and purples at the edges to bright yellows and reds in the center. Overlaid on this background is white text for course details and a large, stylized title. In the bottom right corner, there is a small, detailed illustration of a satellite or space station in orbit.

FUSION PROJECT RUNWAY



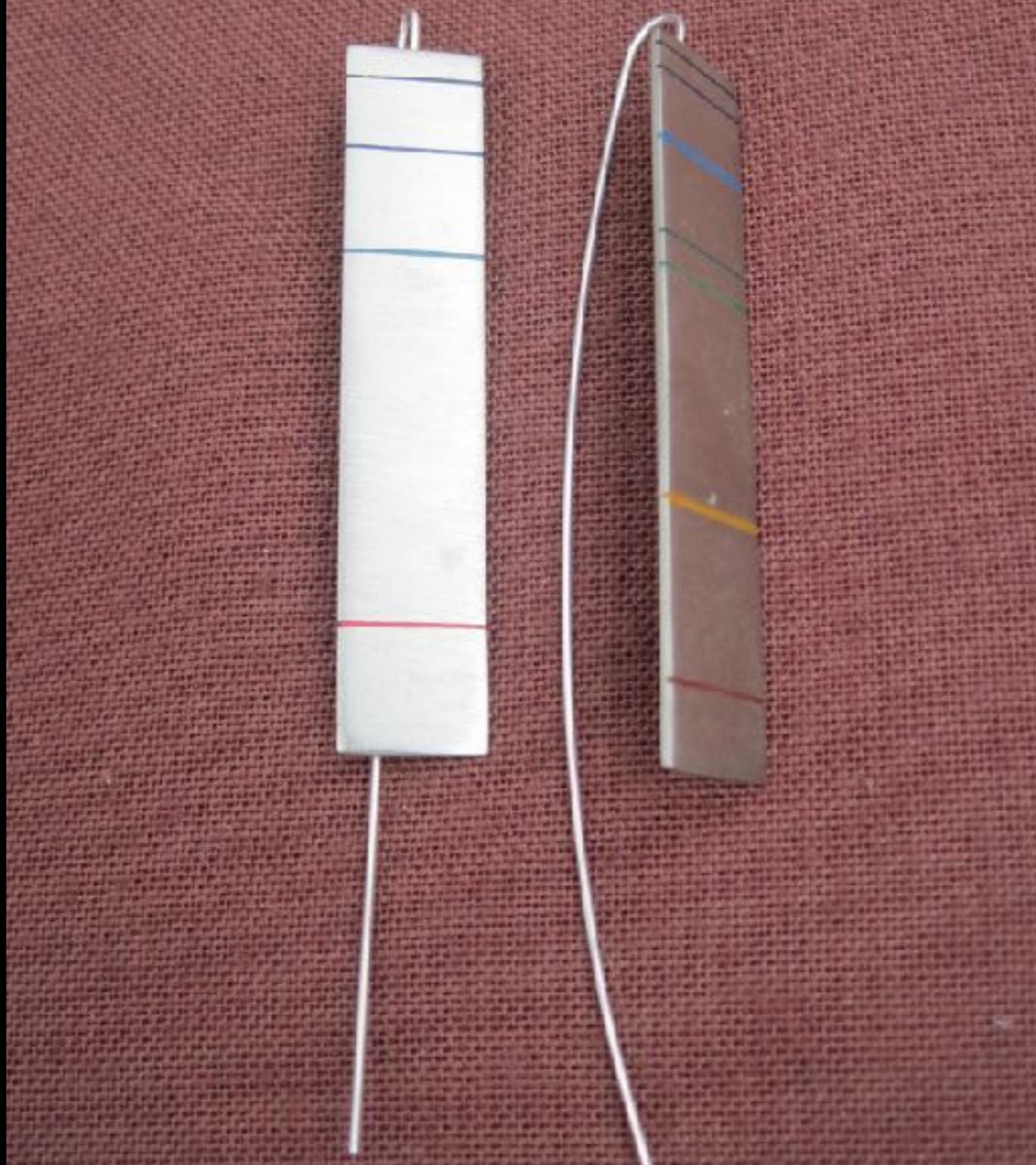
FUSION PROJECT RUNWAY



FUSION PROJECT RUNWAY



ASHLEY LANDON SPECTROSCOPY



DALITZA BABILONIA COSMOS CREATION COLLECTION



RUBY GERTZ "SHIFT" DRESS



SABRINA CONTRATTI GALACTIC SPACE SHOES



LAUREN MOSELEY STELLAR FORMATION COLLECTION



REBECCA TRAVIS YOUR OWN STAR CLUSTER



JI HYUN CHONG GALAXY BLOSSOM



ISMAEL OATES GALACTIC CANNIBALISM



CELESTE TSANG INVISIBLE FORCES



ANJALI CHANDRASHEKAR LUNA PLATES



ANJALI CHANDRASHEKAR LUNA PLATES

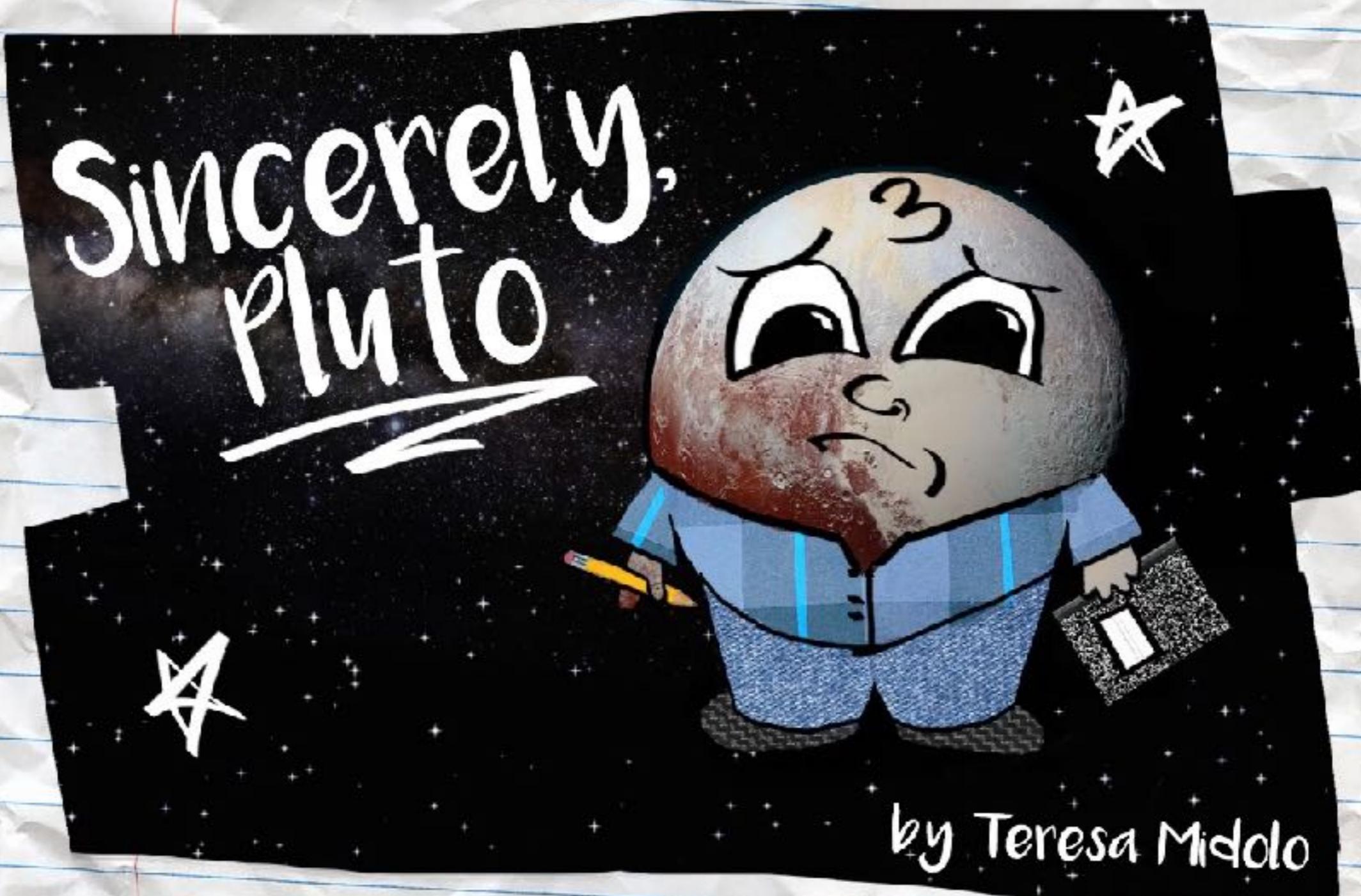


ALLI HOUGHTON COSMIC CERAMIC BACKGROUND



DANIELLE RYAN
ASTEROID BELT DRESS





JOSH DIETZ UNIVERSAL ATTRACTION

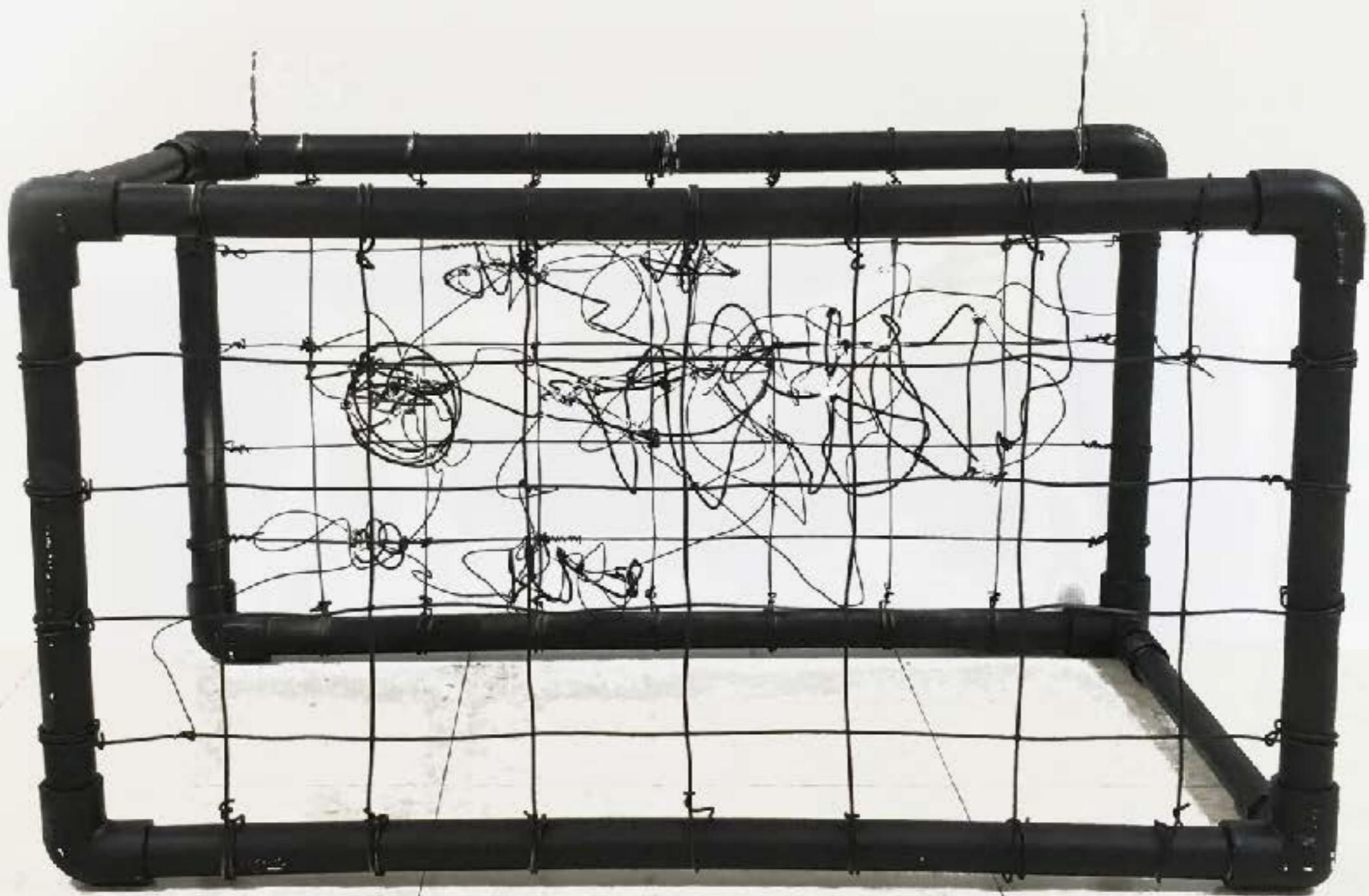


APRIL MAXEY ARE YOU AFRAID OF THE DARK?

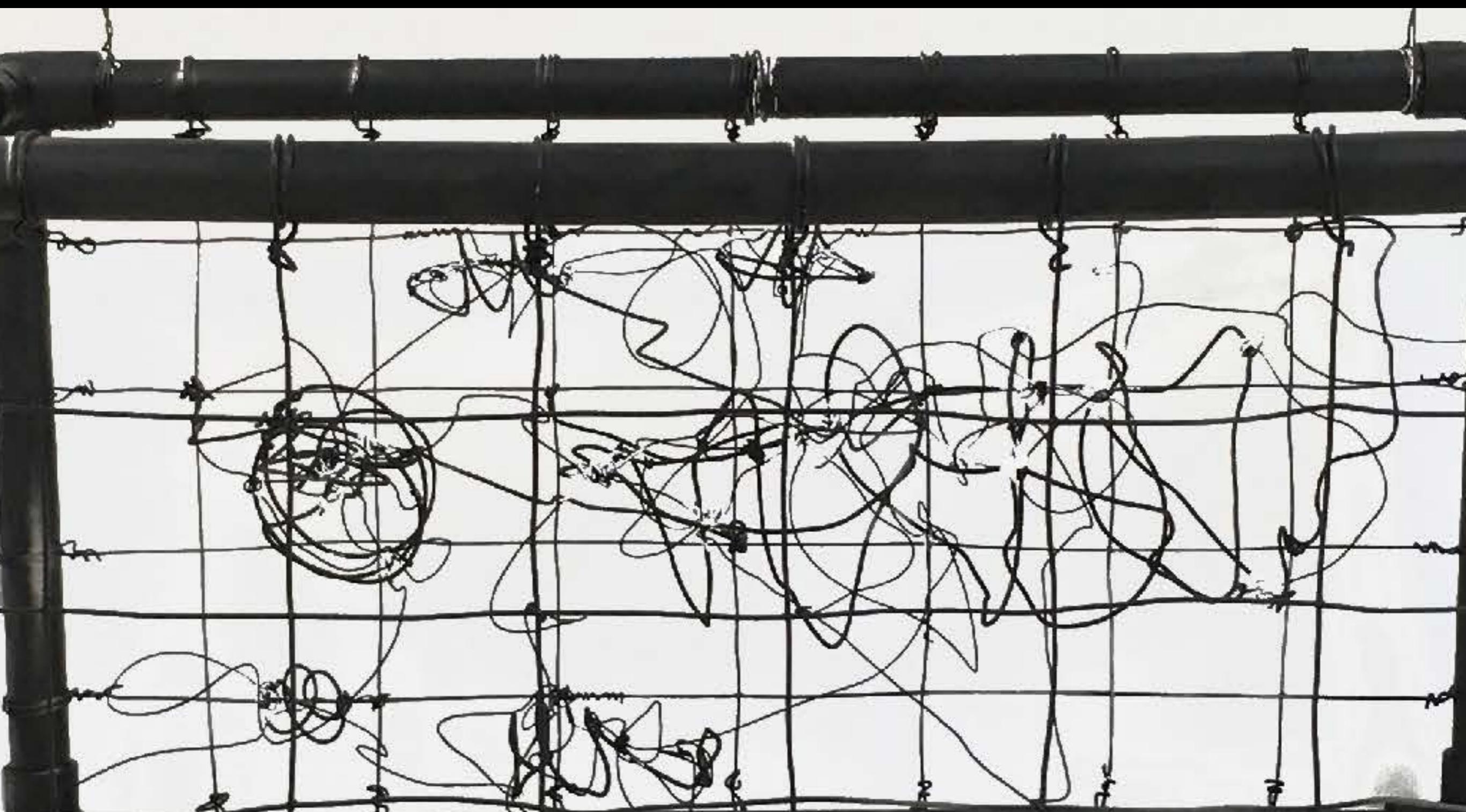
**Are You Afraid
of the Dark?**

by April Maxey

SPENCER STONEBERG THE COSMIC WEB OF MATTER



SPENCER STONEBERG THE COSMIC WEB OF MATTER



ERICA PAHARILLO CELEBRATING FEMALE ASTRONOMERS



EMILIA KAPLAN CELESTIAL CONTRIBUTORS COLLECTION



NICOLAUS
COOPERNICKUS

VERA
RUBIN

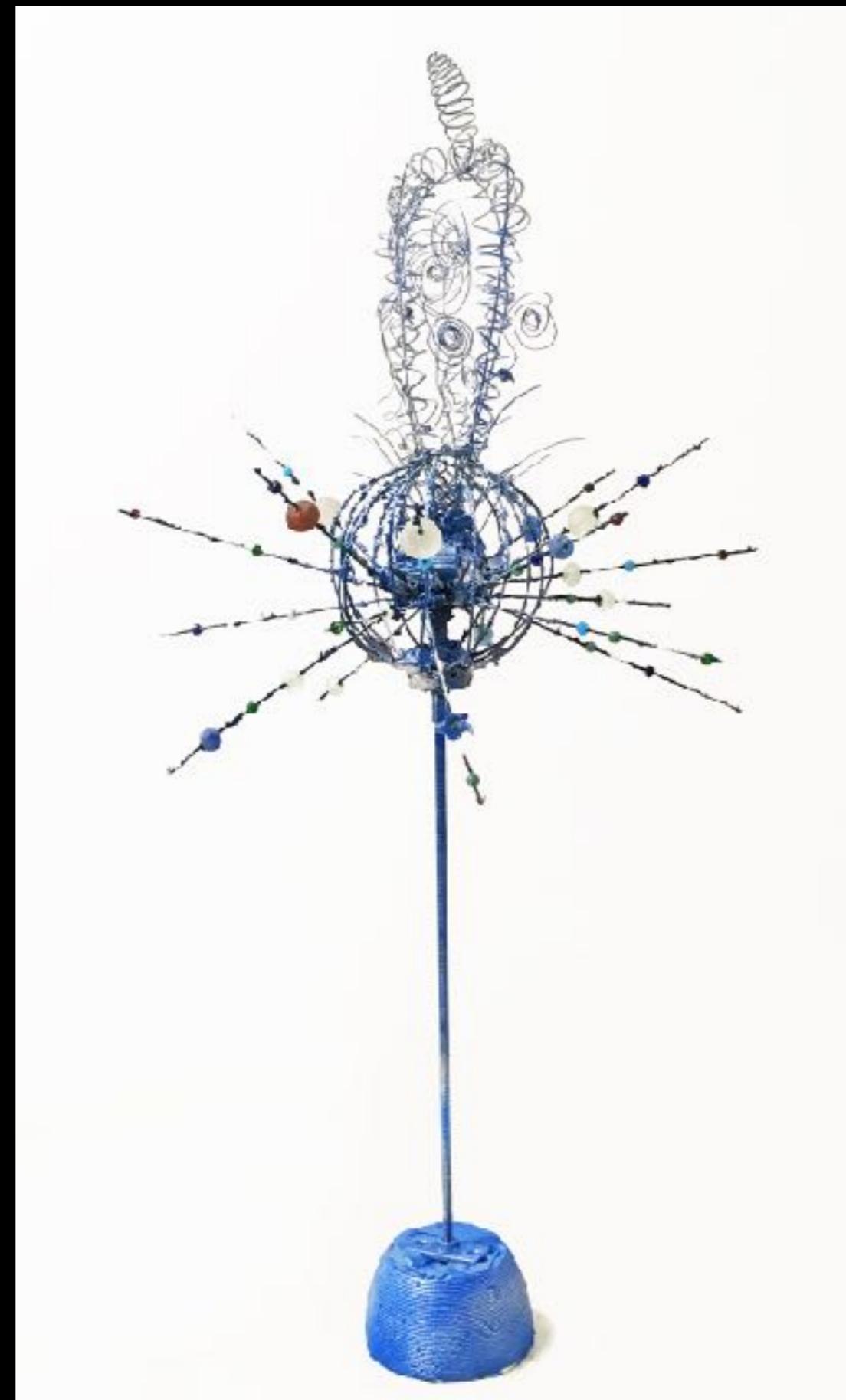
EDWIN
HUBBLE

KATHERINE
JOHNSON

ROBERT
WILSON

ARNO
PENZIAS

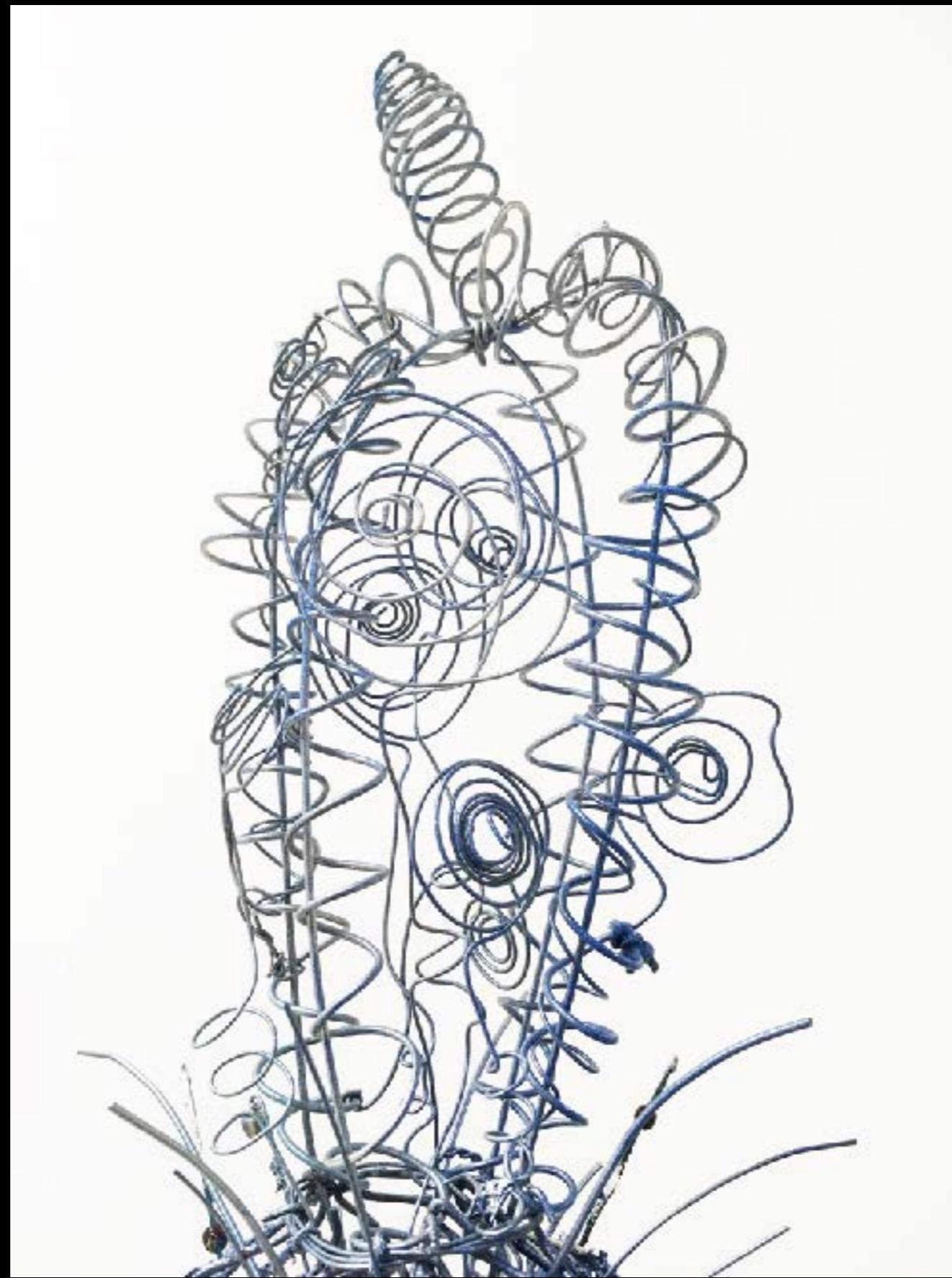
SOFIA ALBEE WE ARE MADE OF STARSTUFF



SOFIA ALBEE WE ARE MADE OF STARSTUFF



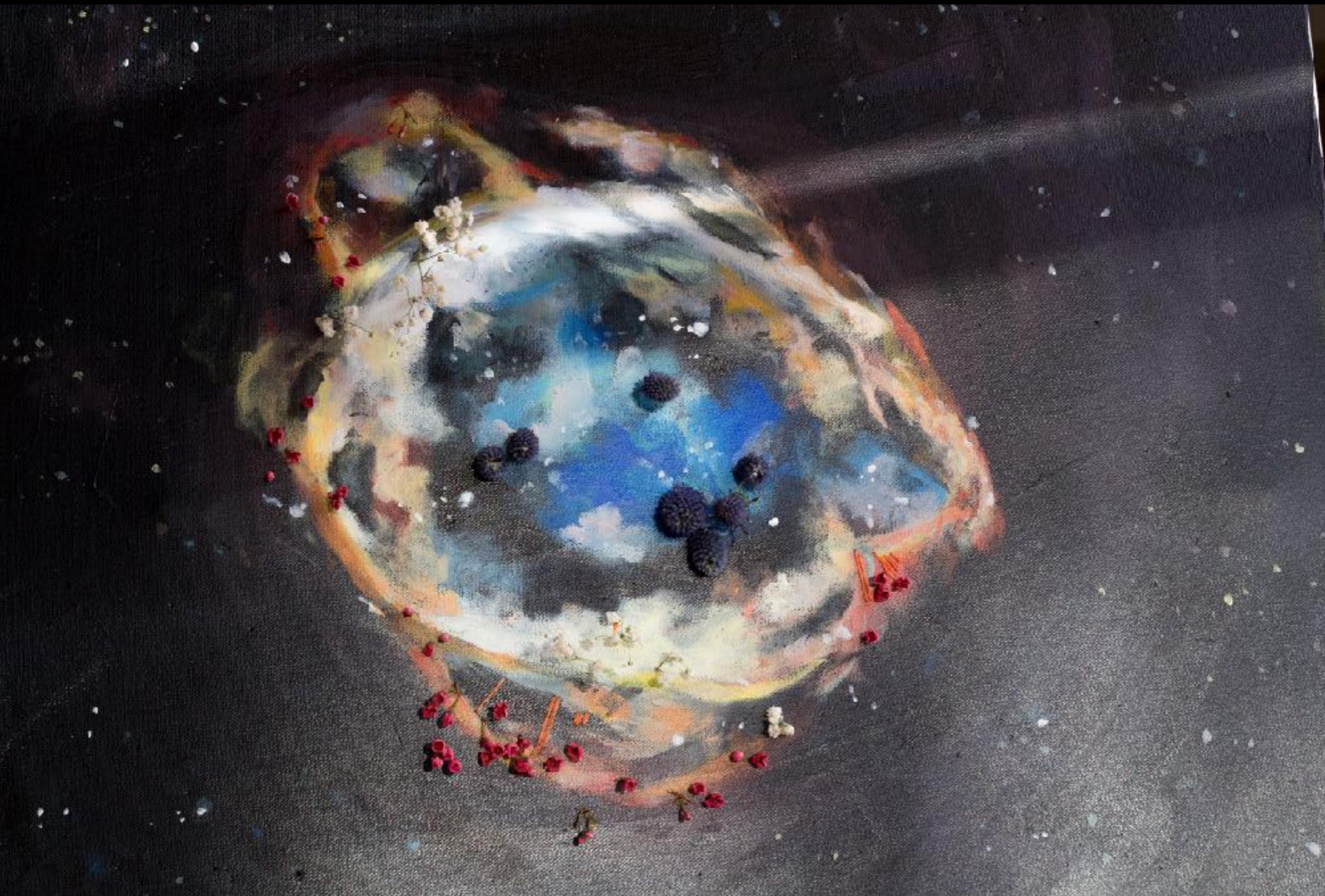
SOFIA ALBEE WE ARE MADE OF STARSTUFF



JIHUN KANG BASIC ELEMENTS OF LIFE AND COSMIC CANDLES



JIHUN KANG BASIC ELEMENTS OF LIFE AND COSMIC CANDLES



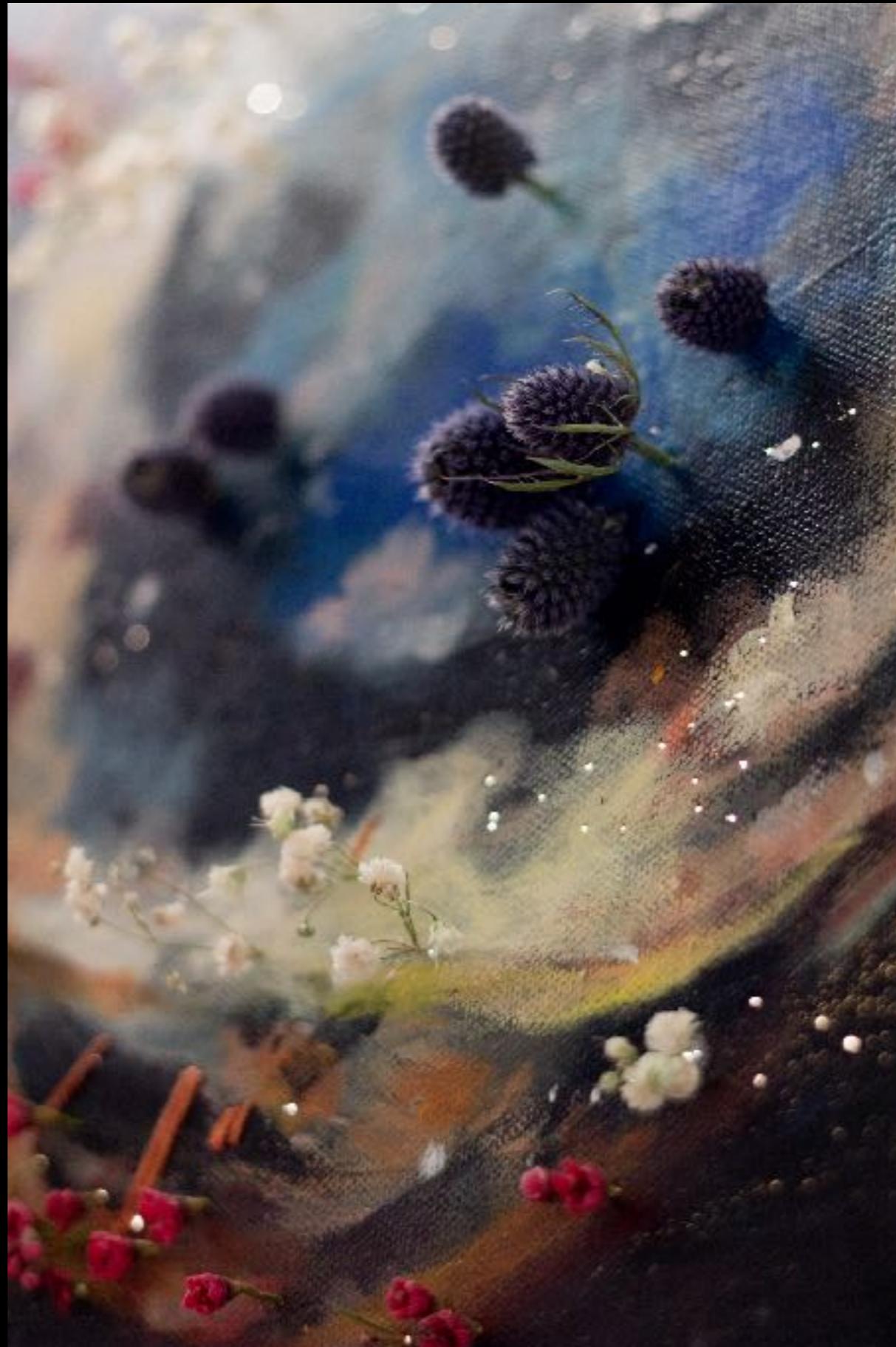
JIHUN KANG BASIC ELEMENTS OF LIFE AND COSMIC CANDLES



JIHUN KANG BASIC ELEMENTS OF LIFE AND COSMIC CANDLES



JIHUN KANG BASIC ELEMENTS OF LIFE AND COSMIC CANDLES



SARAYU KRISHNA STARDUST IN OUR SYSTEMS



KAYLA FERRANTE FOR DRAKE'S SAKE



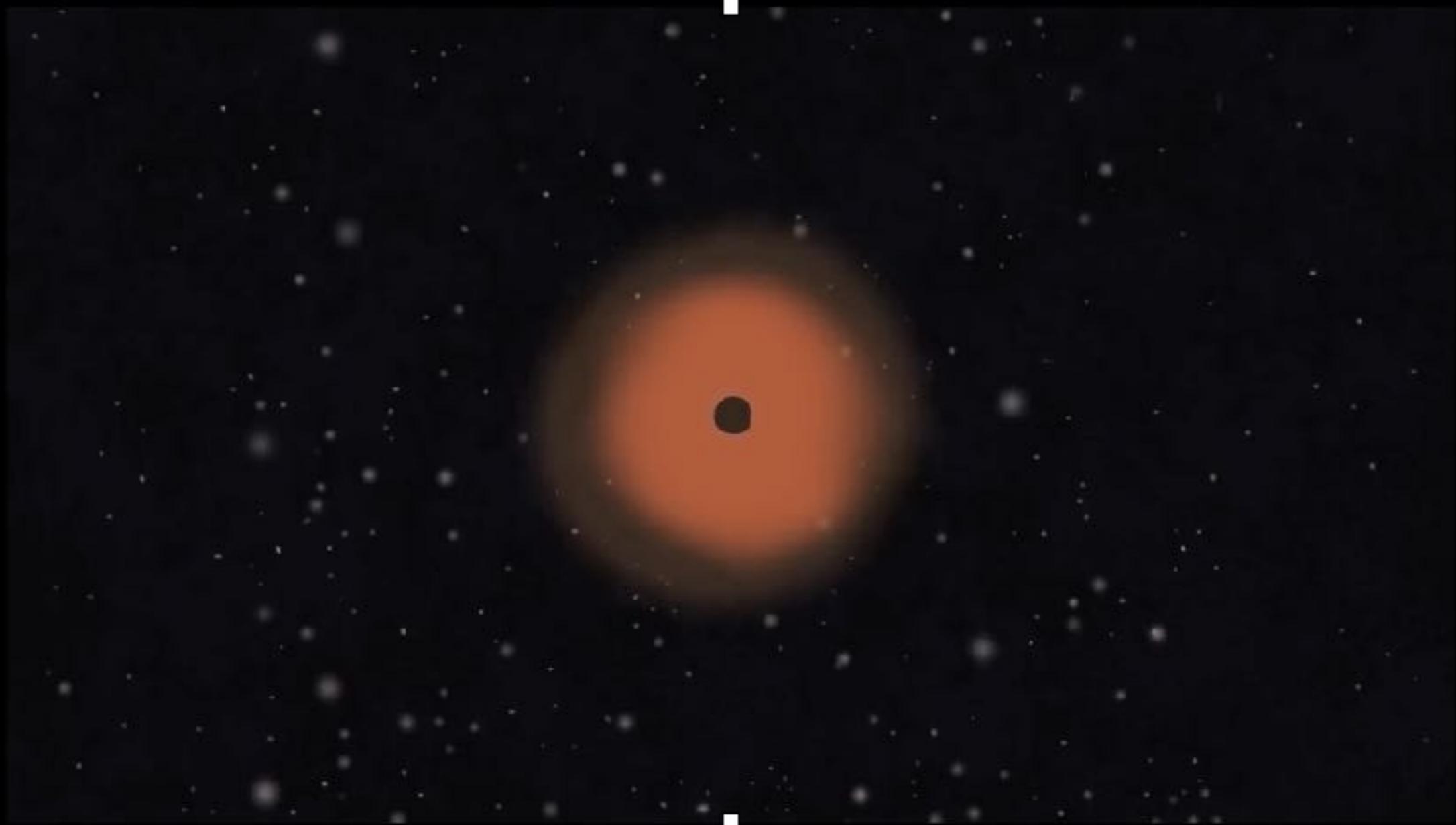
"FOR DRAKE'S SAKE"

about

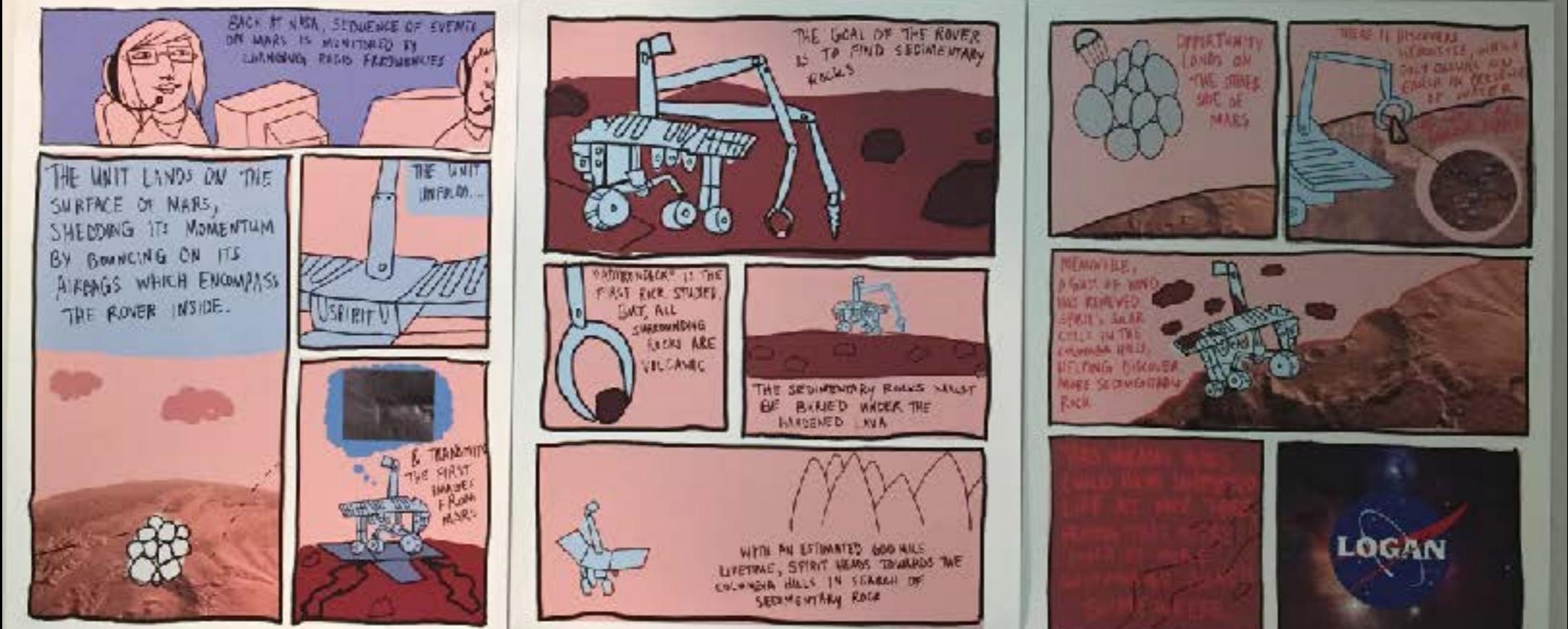
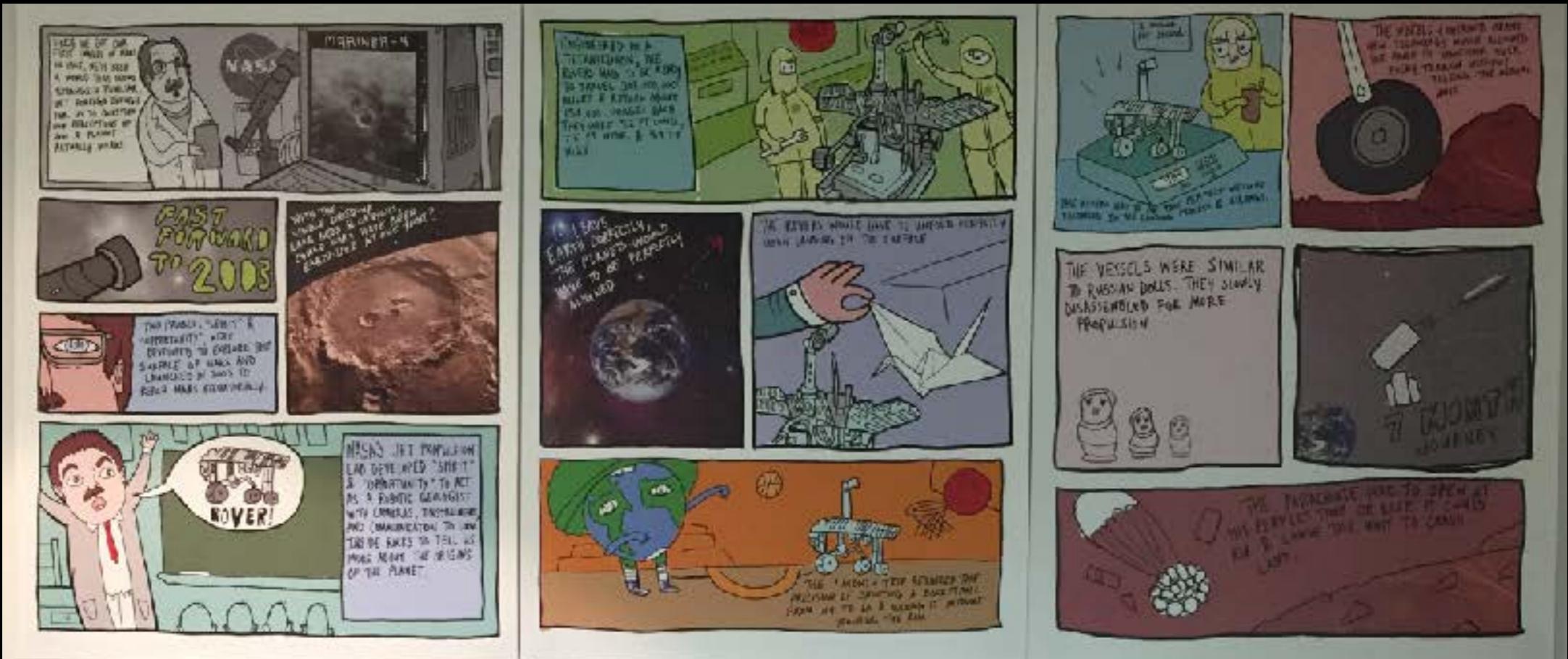
RAINE MANLEY ROBERTSON EXOPLANET DETECTION



IULIA ZHUKOVA WITH LOVE FROM E TO YOU



LOGAN FITZPATRICK SPIRIT AND OPPORTUNITY



ADRIANA DE CERVANTES THE SUN TIMES

"Illuminating
the News"

The Sun Times

National Edition

Vol. CL, No. 15,856

NEW YORK, WEDNESDAY APRIL 18, 2012

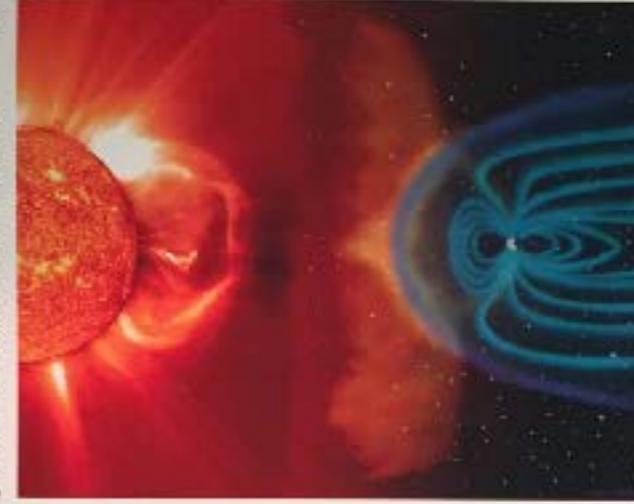
75 cents

EARTH UNDER ATTACK!

STRONGEST SOLAR STORM SINCE 2005

A CONTINUOUS THREAT

Solar winds are streaming off the Sun in all directions. They originate from the Sun's incredibly hot corona and make their way through space at speeds around a million miles per hour and carry with them highly charged magnetic clouds. Scientists are keeping close watch on the solar winds and their variations using the Advanced Composition Explorer (ACE) satellite, which sits at a point between the Earth and the Sun where gravitational attraction is equal and opposite, known as L1. These solar winds are not the only thing we have to worry about here on Earth. There are also colossal explosions on the surface of the sun known as solar flares, as well as Coronal Mass Ejections (CMEs) and electromagnetic pulses (EMPs). That is quite a lot that the sun is hurling toward us. The Sun produces all of this activity over an 11-year cycle that is driven by the reversal of its magnetic poles. In 1859 something known as the Carrington Event took place. The sun released a massive CME and within hours telegraph wires shorted out causing fires. This CME was particularly fast, intense, and the magnetic fields happened to be in the exact opposite direction of Earth's allowing charged particles to enter Earth's atmosphere.



There were also incidents in 1989 and 1994 in which power grids were down and major satellites malfunctioned. It was predicted that the next period of solar maximum would be between 2010 and 2012. Well, here we are in 2012 facing some serious solar storms. Our technology today is far more sensitive than it was the last time the solar cycle was at its maximum. We could be facing some serious damage in the very near future.

RECENT SOLAR ACTIVITY

It was declared in January of this year that we are currently being hit by the strongest solar storm since 2005. Two massive solar flares occurred on the 5th of March, one of them being the largest seen this year. On March 7th it was confirmed that the flares were headed directly for Earth and the National Oceanic and Atmospheric Administration said that there was a possibility that power grids would be disrupted. On March 8th it was reported that the Earth's protective electromagnetic field was holding strong. An incredibly powerful solar flare occurred on Monday, April 16 at 1:45 pm. It ranked as an M1.7-class on the storm scale placing it roughly in the middle of the scale scientists use.

Earth's Magnetosphere Hard at Work

Because the core of our Earth is made of molten metals such as iron and nickel, which are terrific conductors, electric currents flow easily, and as the Earth rotates electric currents build up and our protective magnetic field is produced. This magnetic field acts as an invisible force field deflecting the Sun's solar wind, flares and CMEs. Without this protection, the solar wind would completely strip away our atmosphere. It is probable that this is how Mars lost its atmosphere. Thankfully the Earth's magnetic field is strong and steady. But it is possible for some of the Sun's charged particles to come close to Earth. This is what causes the beautiful phenomenon of the aurora borealis. We don't want it to get any closer; the effects could be devastating.

Illustration of Earth's Magnetosphere



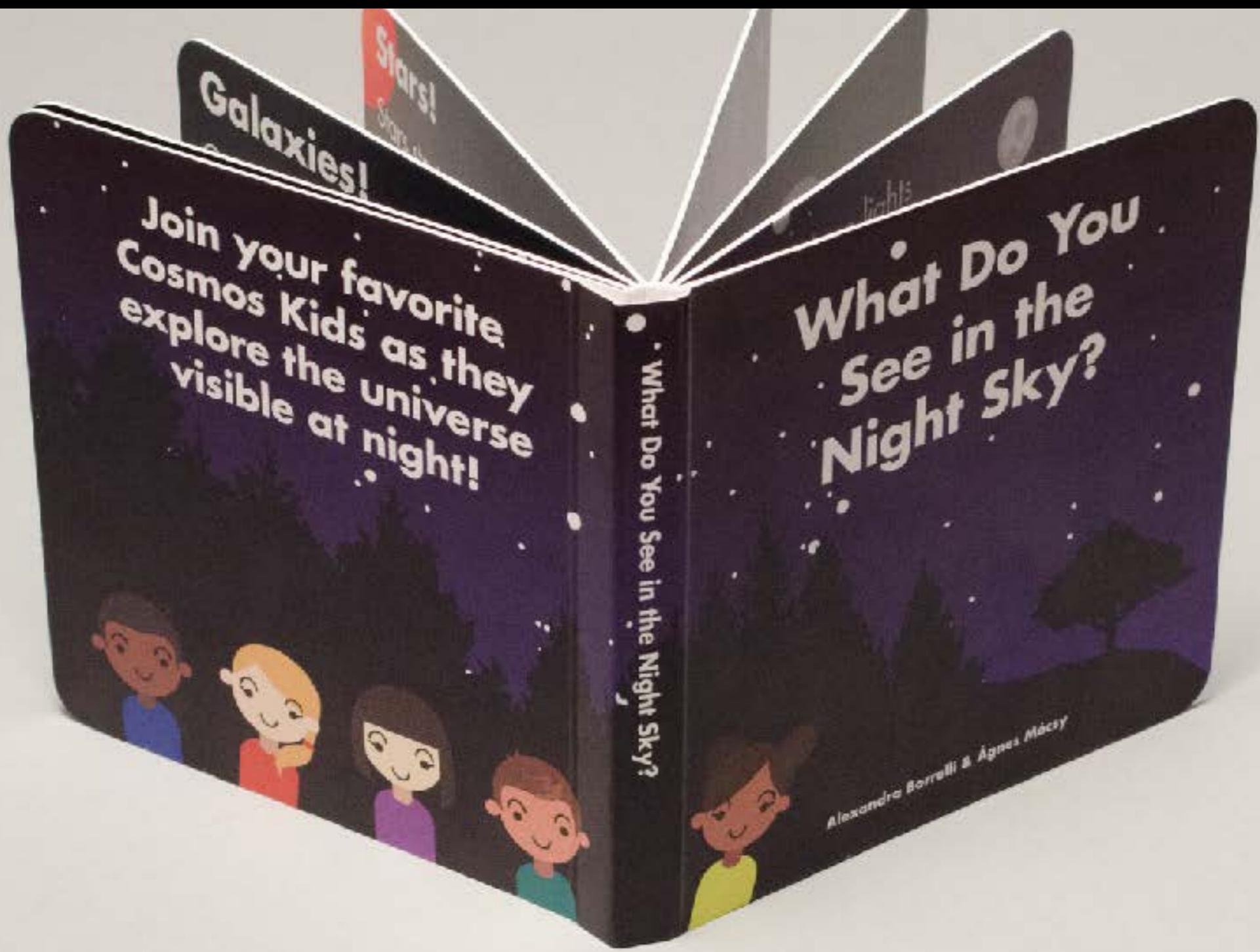
It erupted along the sun's eastern limb that is believed to also be responsible for the solar activity that was observed last Sunday. Luckily this solar flare will not hit Earth, but according to scientists, we will be facing plenty more in the future. Only time will tell what the future of the Sun's activity holds for us here on Earth.

Adriana De Cervantes

EVA JENSEN
MODELS OF THE ATOM



ALEXANDRA BORELLI COSMOS KIDS



ROSA QUINBY

$F_{\text{TIDAL}} = F_1 - F_2$ DINNERTIME



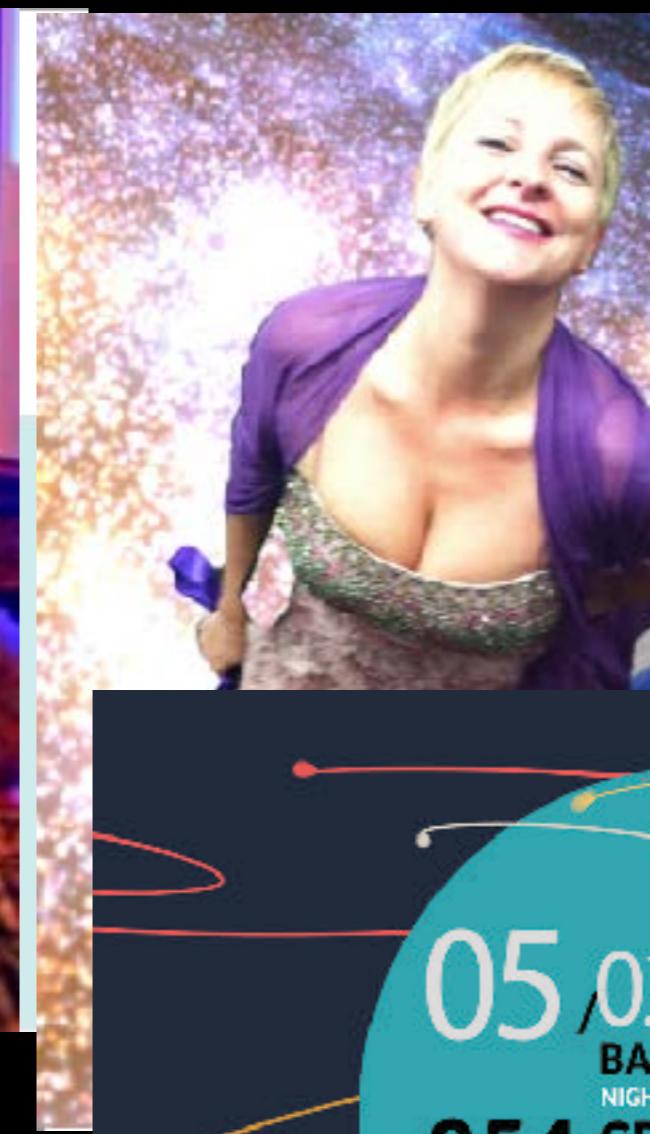
KAVON JOHNSON OUR PLACE IN THE UNIVERSE



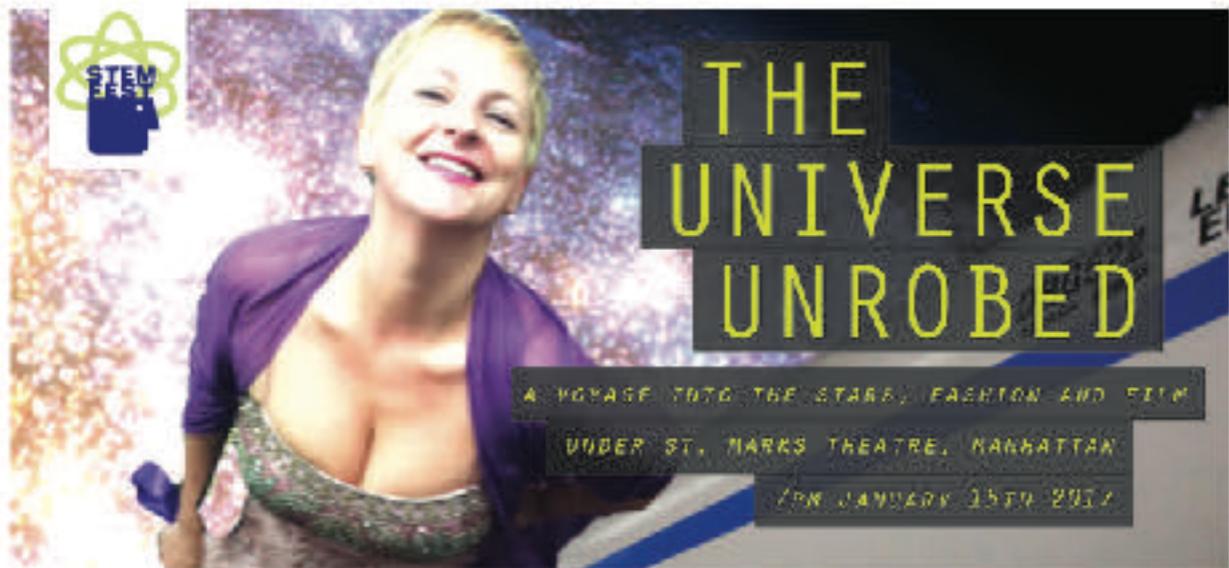
SCIENCE HAPPY HOURS



THE UNIVERSE UNROBED



EXHIBITS, FASHION SHOWS



AGNES MOESY teaches physics and astrophysics at Pratt Institute, where she develops science-art-design fusion projects that allow students from broader, non-science backgrounds to explore the world of science through their own mediums: including fashion, illustration, fine art, animation and film. As a theoretical nuclear physicist, Dr. Moesy studies the matter that existed microseconds after the Big Bang. This matter is sequestered at two atom smashers, the Relativistic Heavy Ion Collider (RHIC) at Brookhaven National Lab, NY and the Large Hadron Collider (LHC) at CERN. Dr. Moesy is keenly aware of the role science plays for progress in society, driving her to seek new audiences with which to communicate science to varied audiences. Her next project is a short documentary film www.agnesmoesy.com.

HIBA ASWAD is a fashion designer based in NYC. Her love of clothing and dressing up was instilled in her very early, inspiring her to become a designer. Her Lebanese heritage provides a connection to a culture where being well dressed is a lifestyle. Lebanon also has a rich history in garment and textile making, enabling Aswad to learn fiber arts handed down from generation to generation. Aswad graduated with a BFA from Pratt Institute in May 2016, after completing an 11-look senior thesis collection, *Mare et Femina*. This collection, much like her body of work, is based on her relationship with nature, and exploring the science of the natural environment, which drew her to working with Dr. Agnes Moesy. www.hibasawad.com

SARAH SZABO is an artist with a love for the beauty of science. Like Richard Feynman, Szabo feels that learning more about nature only enhances its beauty. Szabo aims to create an inspirational vision through the fusion of science and art, with a balance between knowledge and discipline, exploration and expression. Szabo majored in Painting/Fine Arts at Pratt Institute. Szabo worked with Dr. Moesy for independent study focused on the universe in the most micro of scales. Szabo is currently working towards an MFA in Painting at the New York Academy of Art. Although rooted in tradition, her studies help her study the body, and workings of painting in a way which is integral to her development as an artist. www.sarahszabowork.com



SIMI WU finished her bachelors degree from Pratt Institute in May 2016, majoring in fashion design. Wu originally came from eastern China, where she studied material science and chemistry until the moment that she realized her dream was to work in a more creative field. As a science lover of all time, she develops science-fashion products with Professor Moesy.



TENÉ DEVEAUX is an up-and-coming poetry and fiction writer originally hailing from Mount Vernon, New York. As she adjusts to college life in Brooklyn, she aspires to expand her literary work back into visual mediums, where she found her inspiration.



ASHTON CARLILE is a Freshman writing student at Pratt originally from Cape Canaveral, Florida. She enjoys writing short fiction and poems but also loves art and fashion! She is very interested in how artistic mediums relate to one another and how they can be used to translate thoughts and emotions into something tangible.



RUBY GERTZ is a Pratt Institute fashion design graduate and a seamstress and sewing instructor based in Brooklyn, NY. She teaches private lessons in clothing design and construction, portfolio development, and sewing machine basics through her own company, Sewing Lessons NYC. Ruby is also enthusiastic about bicycles and women's health, and is currently pursuing a Master's degree in Education at Widener University.

MODELS: Ace, Agnes, Angels, Ashton, Hiba, Sarah, Saizyu, and Sicu

DESIGNERS: Hiba Aswad, Dahlia Balakonia, Ashton Carlile, Sophie Constant, Lucia Han, Ashley Landau, Agnes Moesy, Lauren Moreley, Danielle Ryan, Sarah Szabo, Lydia Tum, Cassie Yang, Suri Wu

ANIMATION: Mary Does How Black - tiles Are Made, April Moesy, Are You Afraid of the Dark?, Sirena Melo & Sincerely, Photo

ART EXHIBITION: Sofia Albee (Star Man sculpture), Avijali Chaudhary (Cup Plates), Ji Eun Choi (Galaxy Bloom lamp), Alli Houghton (Cosmic Cosmic Buckwheat bowl), Sunjuu Kaelam (Stardust in Our Systems painting series), Sam Schleser (Star Organ: zircon metal work), Celeste Tsang (Visible Forces sculpture)

POETRY: Tené DeVeaux, The Generation of Light

PRODUCER: Agnes Moesy and Moxy of New York, LLC

CO-PRODUCER: Dr. Paul Scherer

GRAPHIC DESIGN: Selen Sand

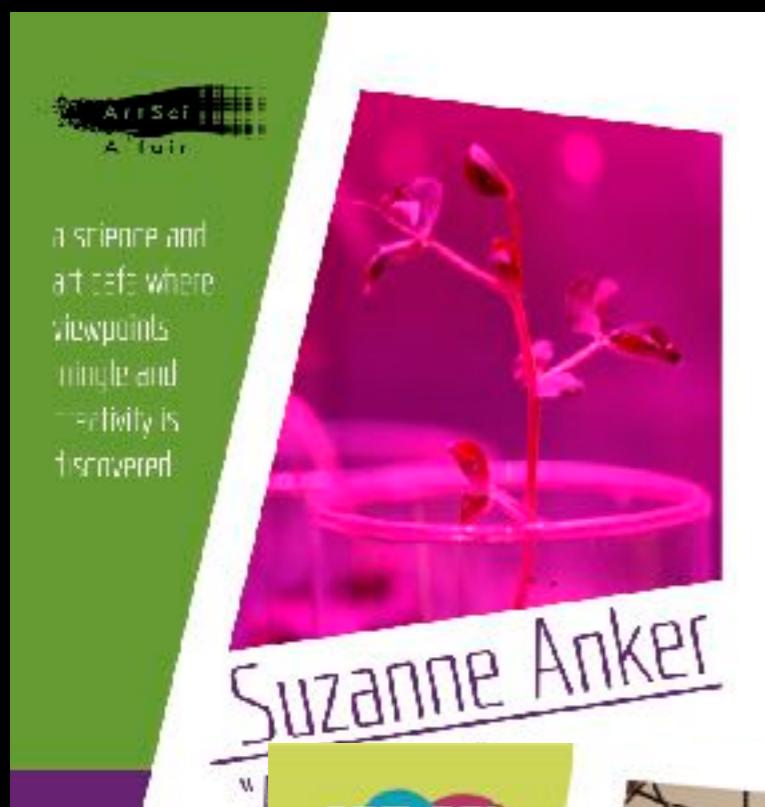
EXHIBITS, FASHION SHOWS



EXHIBITS, FASHION SHOWS



ARTSCI AFFAIR



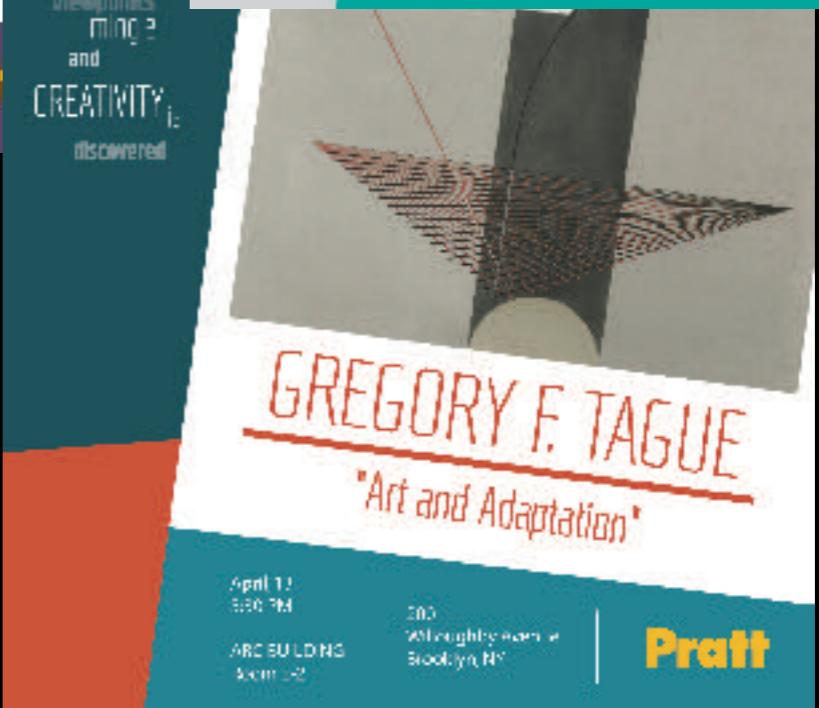
Istvan Hargittai

How Scientists Think:
Creativity and the Role of Symmetry

Monday, September 18
6:00 pm
Alumni Reading Room
Pratt Library 3rd floor

200
Willoughby Avenue
Brooklyn, NY

Pratt



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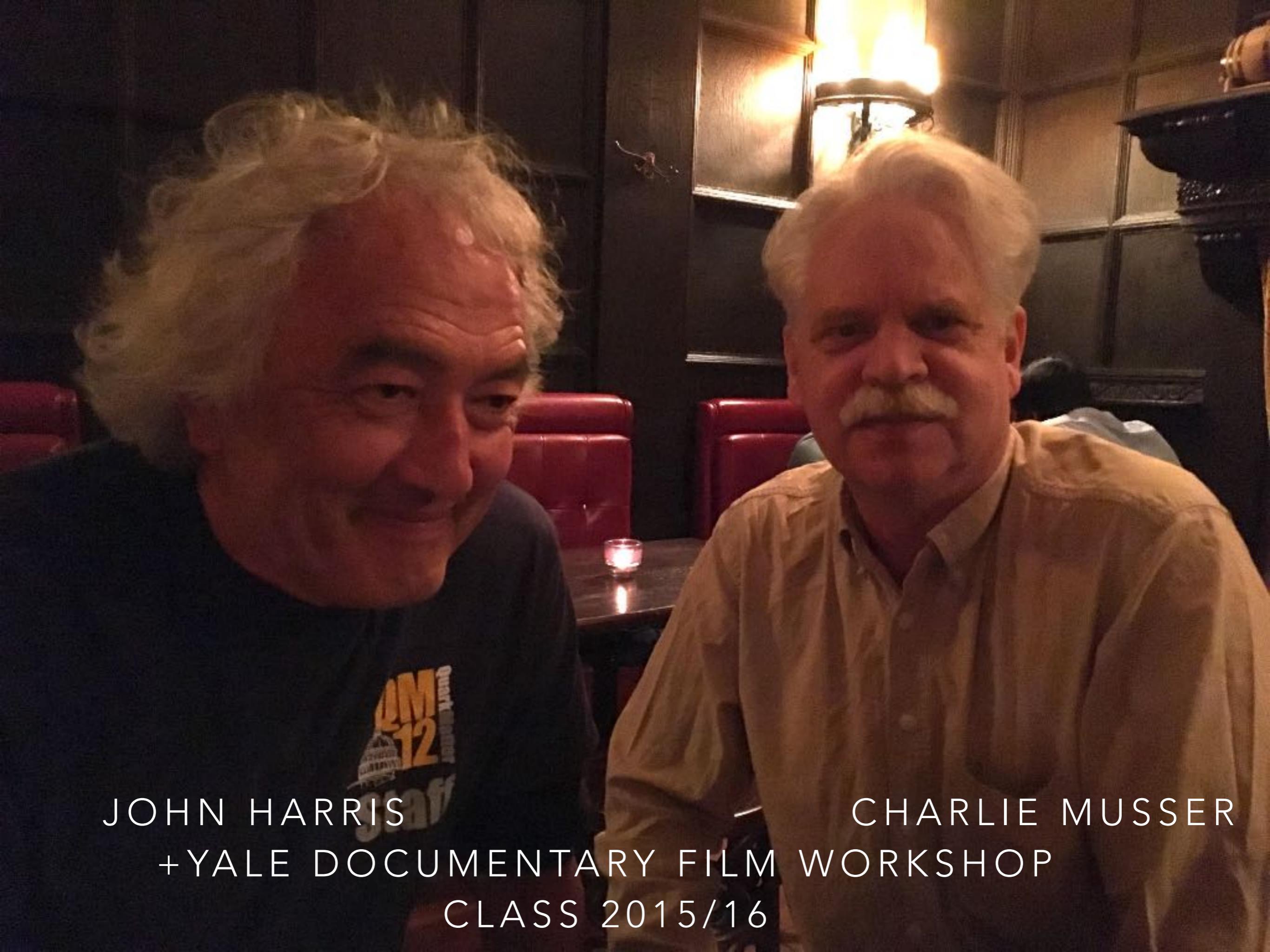
www.smashingmatters.org

SMASHING MATTERS

BEHIND THE SCIENCE SCENE



MOXY OF NEW YORK PRESENTS "SMASHING MATTERS" A FILM BY ÁGNES MÓCSY
STARRING ARTHUR POSKANZER, REINHARD STOCK, CAMELIA MIRONOV, JOHN HARRIS, AND RAMONA VOGT
EXECUTIVE PRODUCER CHARLES MUSSER PRODUCERS ÁGNES MÓCSY, JOHN HARRIS EDITORS ELEANOR SYDELLE, ÁGNES MÓCSY
CINEMATOGRAPHY LOURENCA ALENCAR, SAMANTHA KAHRAR, AND ÁGNES MÓCSY MUSIC BY ROBERT RAPOSO



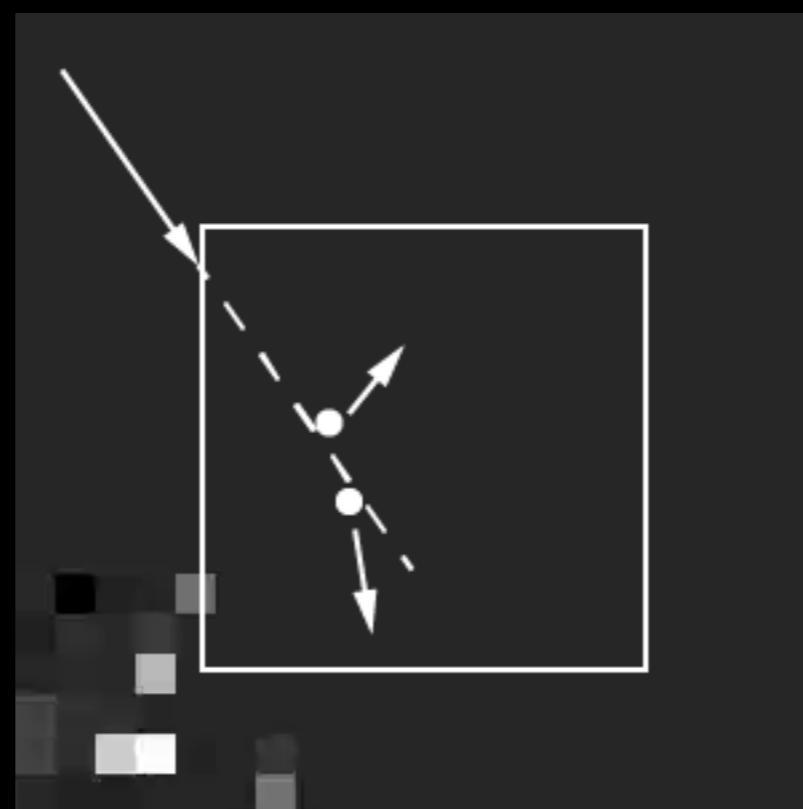
JOHN HARRIS – CHARLIE MUSSER
+YALE DOCUMENTARY FILM WORKSHOP
CLASS 2015/16

IN THE PIPELINE ...

STEAMPLANT @ PRATT

The screenshot shows the homepage of the STEAMplant website. At the top, there is a navigation bar with various links such as Pratt LIMS, Gender, INSPIRE-HEP, ArtSci, Me, Film, Facebook, Study, YouTube, Astro Pict, Rikers, Fashion, arXiv, Popular, News, Research, Teaching, and a search bar. Below the navigation bar is a main title "STEAMplant" and a subtitle "Fostering interdisciplinary STEAM collaborations". To the right of the title is a horizontal menu with links for People, Resources, Projects, Application, and Contact. The background features a large, abstract graphic on the left side composed of numerous small, colorful spheres (red, blue, green) scattered across a dark, textured surface. On the right side, there is a photograph of a large industrial brick building with a tall, cylindrical chimney, set against a clear blue sky.

JOSEPH MORRIS A SPACE BETWEEN SPACES



JOSEPH MORRIS A SPACE BETWEEN SPACES



AZURE MCBRIDE A STAR IS BORN

Thank You

