J G + J G

# DOUBLE VISION

2 ARTISTS 4 RESIDENCIES

**Jane Grisewood** **Judy Goldhill**

Exhibition runs from
26th October - 8th November 2018
UCL opening hours 8am - 6pm
Monday to Friday.

University College London
North Cloisters and North Quad
Observatory
Wilkins Main Building
Gower Street
London WC1E 6BT

DOUBLE VISION

## COSMOLOGICAL TIME LINE

**2011 ARIZONA**

**1 July**
Artsmart at Chelsea College of Art, UAL, exhibiting artist books. First proposal scribbled on the back of a large envelope. (include...)

**1 August**
Artist enquiry. Email proposal to Dr David Silva, Director of NOAO.

**15 August**
Effusive response to our email, with contacts of relevant personnel.

**26 August**
Response from new director, Timothy Beers.

**29 August**
Email from Stephen Pompea, Head of Education and Public Outreach NOAO.

**16 September**
JG's Email to Tim and Steve aims, outcomes, schedule.

**2 October**
JG Planning US trip.

**21 October**
JG Arrive in Phoenix.

**22 October**
Move into Four Points, Sheraton Hotel.

**23 October**
Moved out of Four Points into another Sheraton.



Timothy C. Beers, Director
Kitt Peak National Observatory
950 N. Cherry Ave., P.O. Box 26732
Tucson, AZ 85726-6732
(520) 318-8491, FAX: (520) 318-8487
tbeers@noao.edu

NOAO
National Optical Astronomy Observatory
Kitt Peak National Observatory • Cerro Tololo Inter-American Observatory • NOAO System Science Center

2 March 2012

Dear Ms. Grisewood and Ms. Goldhill,

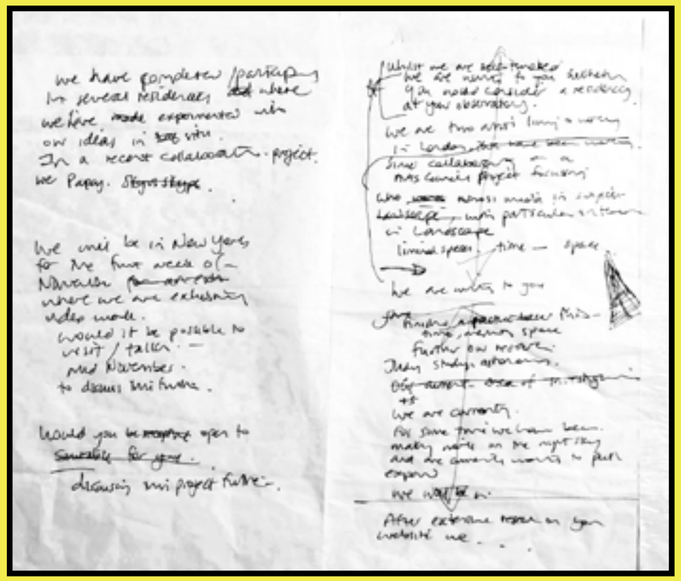
Kitt Peak National Observatory received and appreciates your proposal for an artists' residency program at our facilities in southern Arizona for approximately one month later this spring. The goal of coming to a research observatory is to build an art-science relationship to bridge from our work through your practices and the art community to the wider public. We encourage the development of new audiences and deeper understanding of science research through education and outreach. The aims and collaborative concepts and educational goals outlined in your proposal appear to mesh well with our mission and goals to educate and communicate with the public regarding the research done at our national observatories. We look forward to working with you as we try to enable your proposal.

Sincerely,

Dr. Timothy C. Beers
Director, Kitt Peak National Observatory
Associate Director, NOAO

950 North Cherry Avenue • P.O. Box 26732, Tucson, Arizona 85726
www.noao.edu • Phone: 520.318.8000

NOAO is operated by the Association of Universities for Research in Astronomy (AURA) Inc., under cooperative agreement with the National Science Foundation

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London 2018

# 1

# DOUBLE VISION

## J G + J G

2 ARTISTS 4 RESIDENCIES

From a scribble on the back of a large envelope one Saturday afternoon while invigilating at an artist book fair, we discussed astronomy. In our enthusiasm for the beauty of the observatories on Kitt Peak, we sent an email to David Silva, the director of NOAO in Arizona to apply for artist residencies. His positive response took us to Tucson to meet and discuss our plan in 2011, a small detour from New York where we were already travelling for our collaborative exhibition.

Together, we as artists JG and JG were invited to Arizona to bring light to astronomy for a month in May 2012. We became the first artists-in-residence at the National Optical Astronomy Observatory (NOAO) and Kitt Peak at 2096 metres in southern Arizona. Night after night, we observed the vast clear skies through the powerful telescopes. It was like being in a time machine and seeing into the past. Six months later we spent a month in the southern hemisphere in Chile at Cerro Tololo Inter-American Observatory (CTIO), which coincided with the launch of the powerful Dark Energy Camera (DECam). On the summit undertaking the largest survey of the southern skies to record information from millions of galaxies, billions of light years from earth, we witnessed the hunt for dark energy. This extraordinary event at 2700 metres in the Andes Mountain facilitated our meeting with Ofer Lahav, Head of Astrophysics at University College London (UCL), which led to our ongoing residencies at UCL. In 2015 we experienced a further residency at the Mauna Kea observatories (MKO) with Gemini North, Keck and Subaru in Hawaii on the summit of 4205 metres, breathtakingly beautiful and exhilarating, a 'sky island' towering 40% into the atmosphere.

These four residencies have had a radical impact on our art practice and our way of 'seeing' the world. The phenomenon of observing and the discussions with scientists and engineers, have informed both of our practices on the summits and in the downtown headquarters. Being in close proximity with the observers has proved to be an invaluable and unique insight. The night environment became ideal for our ongoing investigation into darkness. Throughout the residencies, the significance and implications of 'seeing' in the dark became an apt metaphor for our experiences and reflections.

**24 October**
Moved in Lodge on the Desert.

**28-30 October**
Jane to Vancouver for artist's performance.

**31 October**
4 pm Meeting with Steve Pompea NOAO downtown Tucson.

**19 November**
Dr Timothy Beers presents our work to the Schuk Toak District Council and saw no problems with this project to occur. Though no photos or filming, and to donate a courtesy copy of what as produced from the 2 artists.

# ASTRONOMERS' THOUGHTS AND REFLECTIONS

## GIORGIO SAVINI

<< Jane and Judy (or J^2 - read "J squared") as we sometime refer to them at the UCL Observatory, have brought in the last few years a combination of outside and orthogonal views on our subjects of study mixed with a human touch which we often forget. They did so participating and getting involved in many of our outreach events held both in College and at the Observatory in Mill Hill.

Eye opening are often the parallels between Science and Art, not only in the images produced in the process of either of these activities which can arguably be assigned to one court or the other, but also the perspectives and approaches that people take in producing and evaluating them. I have discovered that there is much to be learnt if the journeys of Science and Art to places of Truth and Beauty can be done together. >>

Best wishes,
Giorgio

Prof. Giorgio Savini
Director of the University College London Observatory (UCLO)
Group A - Physics & Astronomy Department
Room 220 - 2nd floor - Pearson building
University College London

## TIMOTHY C. BEERS

I recall with enthusiasm the time I received a request to host visual artists Jane Grisewood and Judy Goldhill for an extended residency at Kitt Peak National Observatory near Tucson, Arizona. It was late 2011, and I had just taken up my directorship there, after a long academic career at Michigan State University. The purpose of their visit was to explore the intersection between art and science, one of my own overlapping interests, and their timing could not have been better. We arranged for them to visit for the period from May to July 2012, during which two amazing astronomical events took place – an annular (nearly complete) eclipse of the Sun, and the transit of Venus over the disk of the Sun (the next of which will not occur for another century), both visible from southern Arizona at that time.

Jane's fascinations include the nature of motion, the coming and going that happens constantly around us, and how that impacts our understanding of the natural world, as well as with extremes such as the darkest darkness that human beings can experience. Judy's areas of exploration include bringing the machinery of the modern technological world – in particular those often unseen – to the forefront of our consciousness. Both topics for which a modern observatory is extremely well-suited!

Our interactions quickly became a consuming passion for all three of us, and I value our many conversations and back-and-forth impressions of their explorations of the artistic side of a world that I had lived in as a scientist for almost three decades, but never fully considered through the eyes of artists such as themselves. The success of this residency led to others in short succession, at Cerro Tololo Inter-American Observatory in Chile, and at telescopes on Mauna Kea in Hawaii. I believe those experiences have linked our paths together for life, which I will always treasure.

I wish them well with their new exhibition, and only wish I could have attended in person.

Timothy C. Beers
Notre Dame Chair in Astrophysics,
University of Notre Dame
Notre Dame, IN 46556 USA (tbeers@nd.edu)

**10 January**
Elizabeth Alvarez del Castillo setting up residency for us with Tohono O'odham Indian Nation. *I believe that art can align with our science and education work...*

**9 February**
Tim Beers emails kick-start our Artist-in-Residence 'in style.'

**27 February**
Email from Tim Beers that meeting with Schuk Toak Council went great, so 'no problemo.'

**2 March**
Formal letter from Tim Beers for our ACE application as Director of Kitt Peak National Observatory. From Elizabeth Alvarez, request for more information of our proposal, collaboration with NOAO and UA communities and the



## NICK ACHILLEOS

Judy and Jane, as our Astrophysics Artists in Residence, try to make more connections between art and science, and between artists and scientists. Much of our work in Astrophysics is related to data visualization which lends itself well to this connection - their exhibitions are recommended viewing.

Nick Achilleos
Professor of Planetary Physics
Dept of Physics & Astronomy
Faculty of Maths & Physical Sciences

## STEPHEN M. POMPEA

"*The most beautiful thing we can experience is the mysterious. It is the source of all true art and science.*" A. Einstein

While most scientists would agree with Einstein, this sentiment is often far from the mind of the astronomer at the telescope. On our precious few nights of observing, we battle fatigue, high altitude, and cloudy skies. We worry about finicky instruments and feel the relentless time pressure of using expensive equipment in high demand. We don't have time to appreciate our tools that take us back through billions of years in time, made to tolerances of a millionth of a centimeter.

Jane and Judy, as artists in residence at our observatories in Arizona, Chile, and Hawai'i have restored our sense of appreciation. Their work is a most welcome complement and healing salve for the impersonal scientific world of massive data, elaborate equations, and detailed calculations. Through their diligent, playful, and challenging perspectives, they have done us an immense favor by bringing us back to our original purposes for doing science. They have reminded us, as perhaps only artists can, how to see, how to remember, and how to feel. To reground ourselves as child-scientists, with an immense curiosity for the beautiful and the mysterious. What a gift for us!

Stephen Pompea
Observatory Scientist
National Optical Astronomy Observatory

## OFER LAHAV

The attraction between the arts and science reminds me of a quote from the 3rd Apollo 11 astronaut, Michael Collins. He was the one who stayed in orbit around the moon, so he probably had plenty of time to think. He said that next time we come to the moon we need to bring with us a poet, a philosopher and a priest. I would like to add to this list that we also need an artist. Now my angle is not one of the astronaut, but of doing the dark energy work where the community at large has done a fantastic job in measuring dark energy and, and to the best of our understanding how it behaves like Einstein's cosmological constant, but what on earth does dark energy actually mean?

I think having a different perspective from artists on the wider picture, on us having a universe made at present of 70% dark energy, 25% cold dark matter and 5% atomic matter is so bizarre that we do need another way of looking at it.
We are very fortunate to have met Jane and Judy. This actually happened on top of a mountain in Chile, in November 2012, for the inaugural ceremony of the Dark Energy Survey. This is a project we embarked on in 2003 and UCL got engaged in 2004, brought instrumentation and science together, and it took until 2012 to build the new camera. The opening ceremony was a splendid affair with all the 'rich and famous' present. And then there were two artists, who also offered to take the group photo, which we still have. I was pleased that they approached me, we talked and then to my surprise they were actually based in London.

It was clear they had already spent time in vast observatories and we are very pleased to subsequently host them as Artists in Residence, here at University College London with the Astrophysics Group. They have been a great influence, inspiring us to think outside the box. Having this exhibition is a great way to celebrate and to see their contribution to the UCL Astrophysics Group.

Prof. Ofer Lahav
Perren Chair of Astronomy
Department of Physics and Astronomy
University College London
Gower Street, London WC1E 6BT, UK

Tohono O'odham community and Schuk Toak Council.

**23 March**
Email from Steve Pompea about ultra black surface, blackest black.

**4 April**
Email from Elizabeth Alvarez. Draft approval from Schuk Toak District Council meeting

**4 April**
Email from Elizabeth Alvarez. Draft approval from Schuk Toak District Council meeting

**19 April**
Email from Steve Pompea giving us Kathie Coil and Nanette Bird as our point of contact for our visit.

**26 April**
Email to David Silva anticipating our arrival in Tucson *(I am looking forward to having you and Judy in the building, as it were.)*

**26 April**
Email from Nanette Bird, explaining procedure for us on arrival.

**28 April**
JG Depart London for Arizona.

**29 April**
Stay in Lodge on The Desert.

**30 April**
Breakfast meeting 8am, Lodge on the Desert, with Tim Beers.

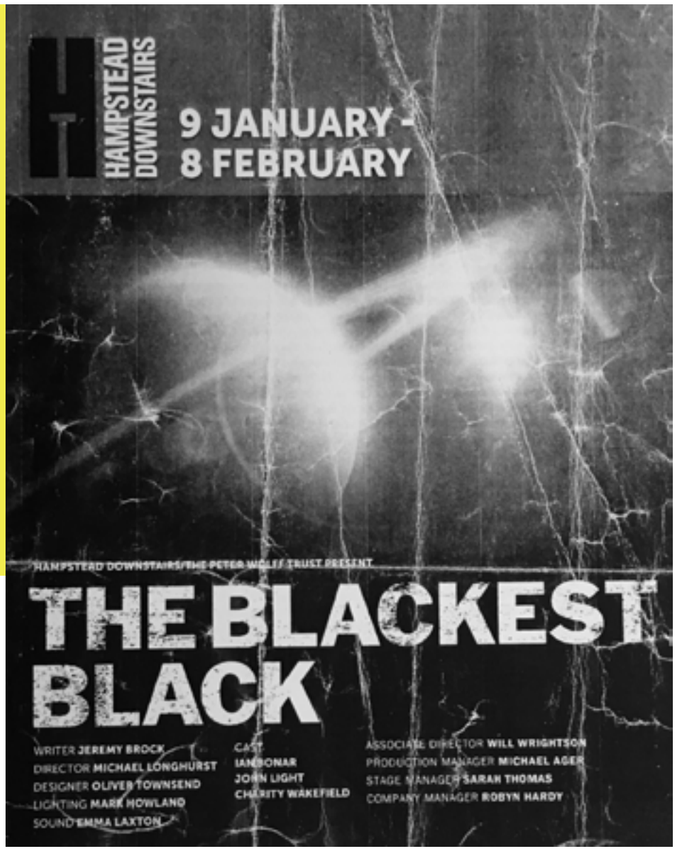
**1 May**
Meet with NOAO personnel in downtown Tucson.

**3 May**
Drive up to Kitt Peak (2096 metres), with Steve Pompea. Workspace arranged McMath-Pierce telescope on Kitt Peak move in to Glasby House for 9 days.

# PRESS, PUBLICATIONS AND REVIEWS

GUARDIAN/OBSERVER, FINANCIALTIMES, INDEPENDENT, PHAIDON

JANE GRISEWOOD




## REVIEW, INTERVIEW

### *Blackest Black*

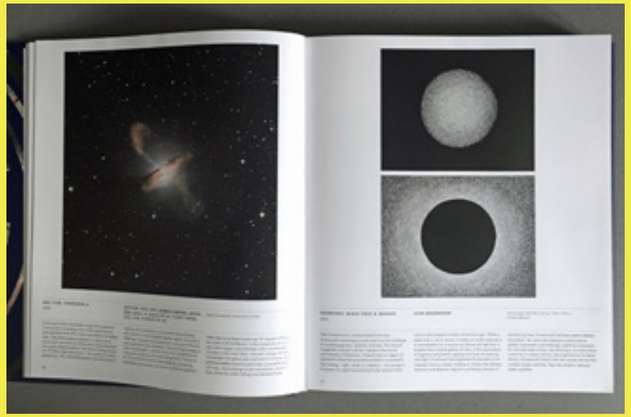
Interviews with The Blackest Black writer Jeremy Brock who is a BAFTA winning screenwriter. At Hampstead Downstairs 9 January – 8 February 2014

"Brock has always been interested in science 'with an amateur's obtuseness and enthusiasm', especially the way scientists seem to 'engage their imaginations and the whole of themselves'. But the trigger for *The Blackest Black* was meeting an artist, Jane Grisewood, at a party and hearing that she was just about to start a secondment at a US government observatory in Tucson: 'All those feelings I've had about art and science suddenly came together and I realised I just needed to go.'

Laughingly he adds that it might sound 'rather stalkerish' but Grisewood was happy for him to research while she was completing her project, and watching the way she approached her work was very instructive."

*Features Editor, Susie Benson*





## UNIVERSE*: Exploring the Astronomical World*

The image and text appear in the Phaidon book Universe, The Guardian and exhibitions. ...
"a *high-definition image of the galaxy Centaurus A is placed opposite a diptych from artist Jane Grisewood. Centaurus A contains a supermassive black hole in its core that is disturbing space so much that jets of particles can be seen shooting out of it, and Grisewood's piece reflects her interest in black holes. It uses two black-and-white artworks to visualise the power of gravity, both to hold shining objects together and to hide things from view within a heart of utter darkness*."

Dr Stuart Clark, The Guardian, 2017

NOAO Operations & Staff

Where Art and Astronomy Meet:
Thoughts on an Artist Residency at NOAO May 2012

Jane Grisewood & Judy Goldhill

In the most artists, we are engaged in the questions surrounding who we are and why we are here, and how to express these concerns through individual and collaborative practice. We are London based, working across different media, exhibiting both in the UK and internationally. For some time, we had been independently interested in the art-science connection in our work, in particular, astronomy and astrophysics and the realm beyond our own planet. In order to realise and develop the relationship, we explored the possibility of an artist residency at an observatory. After much discussion, it was clear to both of us that such a pre-eminent research, development, and educational center as the National Optical Astronomy Observatory (NOAO) would be the perfect environment to provide an opportunity to facilitate our aims, alongside offering a wealth of resources that would trigger ideas and actions. Communications with enthusiastic NOAO staff led to meeting the new director of Kitt Peak National Observatory, Timothy Beers, and the head of program for Education and Public Outreach, Steve Pompea, in Tucson, in October 2011. Proposals and discussions followed, and at the end of April this year, we arrived back in Tucson to take up the first artist residency working at the headquarters of NOAO on the University of Arizona campus and at Kitt Peak in the spectacular mountains in the Schuk Toak District of the Tohono O'odham Nation some 55 miles southwest of Tucson.







(Top) Journals, sketchbooks, notes, drawings, and photographs—a record of Jane's time at Kitt Peak and NOAO headquarters. (Image credit: Jane Grisewood); (bottom left) outside the home of John Glaspey/Katy Garmany, Jane draws globular clusters and spectra from previous nights' observations at the WIYN 3.5-m and Mayall 4-m telescopes (image credit: Jane Grisewood); (bottom right) Jane recording on Kitt Peak, drawing with graphite, and creating video with a camera strapped to her body (image credit: Judy Goldhill).

**Jane Grisewood: "Seeing" in the Dark**

Observing the night sky from the inner sanctum of the great domes and telescopes (27 in all) protruding from the vegetation at the Kitt Peak National Observatory was breathtaking—stillness and silence in the darkness interspersed with the whirring sounds of devices opening and rotating. Through the powerful telescopes and complex technology, I could see images of unimaginably distant objects billions of light years away, and I was seeing into the past. It was like being in a time machine, displacing me from my earth-bound temporality. I was able to experience first-hand remote galaxies and exosters, planets and super moons, asteroids and eutopots—exotopic, and always changing in cycles, phases, rotations, and eclipses.

The complexities of the temporal dimension and liminality of space, the fact that everything is in flux, was the catalyst behind the residency at NOAO, and it has been an exhilarating and transformative experience revealing opportunities for new thoughts and applications to inspire my art practice. I spent many years in book publishing before returning to university to study fine art, culminating in a practice-based PhD, titled "Marking Time," in 2010 at Central Saint Martins, University of the Arts London. My practice is concerned with time, memory, and movement and includes durational work extending to performance, installation, and video, as well as works on paper. I'm interested in investigating in-between transient spaces, recording through drawings, notes, and photographs interventions that capture a moment in time whilst simultaneously tracing its passing. I work across media, but throughout, drawing is key—drawing in

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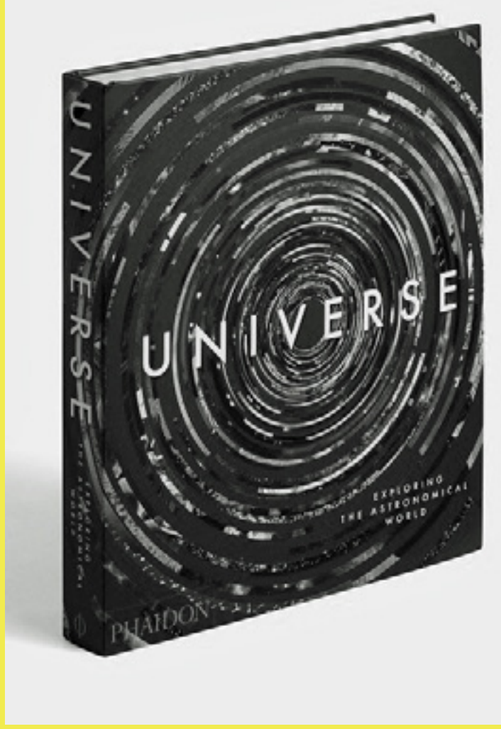


**4 September**
Email from Steve Pompea. All hurdles have been cleared for our visit to NOAO south. It was just a matter of time as everyone is enthusiastic about your visit.

**1-5 November**
Buenos Aires, Argentina.

**5 November**
Flight to La Serena via Santiago, Chile. Meet with Steve Pompea and Nancy Regens for duration.

**5-20 November**
Stay in Casa 13 (student house) in Recinto (headquarters). Meet Director of CTIO Nicole van der Bliek.

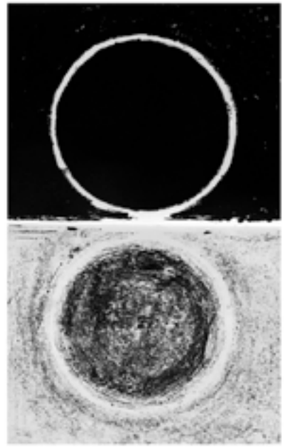
**8 November**
Through the Elqui Valley 80 km to summit. First visit on Cerro Tololo (2200 metres) with Juan Seguel.

**9 November**
10am-10pm. Launch of DECam on Cerro Tololo. Meet Ofer Lahav, Head of Astrophysics at UCL. Lunch, ceremony welcome David Silva, various talks, watch sunset and star gazing.



*Where Art and Astronomy Meet continued*

"Spectrum Study 1," 16"x 23", oil on paper. A drawing of an echelle spectrum observed at the Mayall 4-m telescope (image credit: Jane Grisewood.



"Eclipse Study," 23" x 16", oil on paper (image credit: Judy Goldhill.

its broadest sense—drawing as a verb, as process, operating through the line.

The phenomenal encounters at Kitt Peak were intensified further by "observing the observers" and the subsequent instructive conversations that occurred throughout the residency. It was a privilege to be in the control rooms with the astronomers and telescope operators who shared their knowledge and time while working through the night, in the dark, searching for data. The spectra from distant stars appeared on the monitors as minimal lines that translated into a wealth of information, from size and temperature to composition and properties that could one day determine intelligent life elsewhere. The learning curve was steep, and within days I had been animatedly briefed on wavelengths and spectrographs, absorption lines and emission lines. The line has been a consistent theme in my work as a means of recording time and movement through a repetitive drawing process. I was absorbed in the various manifestations of the spectra, and puzzling over how to render them as drawings, paintings, and/or installations that would convey their significance. With high definition, 3-dimensional, and manipulated images everywhere, it is the simplicity of the minimal black and white marks that catches my attention—like fingerprints, or DNA—where the invisible can be made visible.

My work is predominantly black (and white), with color seeping into only a few specific photographic projects—black paint, black pigment, black objects, charcoal lines on black paper—all making the night environment ideal for my ongoing investigation into darkness, blackness, and the depth of black in a scientific context. Ideas for art works ran riot when I was shown an intense black material developed to absorb optimum light, which was the "blackest black" I had ever seen. Defined by its absence of light, black paradoxically enables us to see light. The light from celestial objects and the information we glean from the telescopes would not be possible without the blackness of night. I became increasingly conscious during the residency of the significance and implications of "seeing" in the dark, and it became an apt metaphor for my experience at NOAO. Every night, without light, I would draw the moon in graphite on black paper and take still and moving images of what appeared to be black sky, which on closer examination revealed traces of starlight.

An added highlight during the time in the downtown headquarters was the collaboration extending to a wider drawing field. Scientists and engineers drew in my notebooks as a way of answering my queries on subjects from stellar evolution and symbiotic stars to dark energy and black holes. The teaching aspects of my practice extend to drawing in other disciplines, outside the fine art context, where it can be used to inform and describe as a means of communication. This was a valuable contribution to my work, defining not what drawing is, but what it can do or be. I'm hoping to develop the project further and continue this collaboration.

The residency has been provocative in pushing my thought processes into another dimension and in enabling an ongoing dialogue between art and astronomy with NOAO through the generous and enthusiastic response from everyone. Through a variety of media, I'll be extracting from the hundreds of drawings and photographs that filled my notebooks to make a new body of work that might reflect this awe-inspiring cosmological temporality. A temporality where things are continually shifting: expanding and imploding, repelling and attracting, appearing and disappearing.
*www.janegrisewood.com*

**Judy Goldhill: Imaging Light**
Whilst I was transferring planes at Dallas International Airport, my luggage was pulled apart by security personnel. I had a total of five cameras: a pinhole with a 5 × 4 film back, medium format and panoramic analogue cameras, and two digital single-lens reflex cameras with accompanying lenses, encased in a secure black box. My entry to the US was somewhat guarded, but on explaining about my upcoming artist residency on which I was about to embark, the

*continued*





*Where Art and Astronomy Meet continued*

(Top) Detrick Branson (NSO) at the McMath-Pierce Solar Telescope (image credit: Judy Goldhill); (bottom left) photograph of CDI using a pinhole camera (image credit: Judy Goldhill); (bottom right) Judy photographing the computer room at the NOAO headquarters (image credit: Jane Grisewood).

guards were so enthusiastic. "How cool, can we carry these bags for you?" I wish they had, they were very heavy.

I have been a portrait photographer all my life, having learned photography at art school as part of my undergraduate sculpture degree. Several years ago, I returned to art school to complete an MA in Fine Art at Central Saint Martins, using photography as the basis of my work. As a result, I have not only turned to landscape but also to the poetics of technology embedded in the land, so that prior to my residency at NOAO, I had been photographing nuclear power stations in the UK. This resulted in an exhibition in London earlier this year.

I have been harboring hopes that I could come to grips with the depiction of landscape in relation to the cosmos. This has been a developing topic for me over the last few years while I have been photographing volcanoes, the Suffolk coast, and The Holy Land. All the while I have felt challenged to explore the energy and movement of landscape in relation to the skies and the changing, shifting patterns of the Earth. To be present in the landscape, to listen and observe, to react to the syntax of place has gained a place in my art. Part of what I aspired to in Arizona was to find ways of representing the granite mountain in relation to seeping arcs of sun, moon, and stars topped by that sky-pyramid of blue light: the whole a daily drama acted out on the sky-island of Kitt Peak.

For some time I have been trying to articulate the capture of movement from stillness, and of making the invisible visible. This theme slowly began to represent itself to me whilst taking pictures on Kitt Peak. I was attracted to movement, a definite rhythm in the embrace of sky, land, and domes, echoing the knowledge that everything in the universe has some rotation. I swiftly realized that I had neither the skills nor technological patience to be an astro-photographer, nor was I going to be able to capture anything of the night sky, despite being in the presence of these magnificent telescopes, the result of which was purely data.

Experiencing the nightly observations in the telescopes, the mechanical parts in action, the whirling of the telescopes, the screeching of the domes as they moved like prehistoric creatures was extraoedinary. My challenge was to translate this cycle photographically, to convey something of the telescoping of time, time variability. Using photographic processes, I wanted to utilize the parallels with astronomy and photography, from the initial glass plates that were used in astronomy, to the current CCDs, equivalent to the tiny CCD in my digital camera. I was experimenting with a pinhole camera while photographing both the WIYN One Degree Imager (ODI) and the computer room at NOAO, the reception point for all the data acquired on Kitt Peak. The pinhole, an early, primitive photographic device, staring long and hard at the behemoths of current technological expertise, grappling with light from distant galaxies, stars, moon, sun, and the office illumination, whilst simultaneously pushing the boundaries of darkness, before the pixilation and noise of the digital camera takes over.

Concurrently, I photographed staff in the corridors at NOAO. This has resulted in what I hope will be a rich portfolio of images, taken

*continued*



**13 November**
Visit to Mamalluca Observatory.

**14 November**
Earthquake on Cerro Pachón, 6.1. magnitude while working in Gemini South. Visit site of LSST on Cerro Pachón, (2700 metres).

**16 November**
Stay one night on Cerro Tololo. Leonid meteorite showers and Large Magellanic Clouds lighting up the dark sky.

**20 November**
Flight to Calama, then driving to to San Pedro.

**21 November**
Tried to visit ALMA and failed several times. Possible exhibition title; *24 hours from ALMA*

**27 November**
Fly to Buenos Aires BA.

**28 November**
Flight to London.

**September 2013**
Produce Dancing with *Sirius: lines of light; Dark Energy Fills My Sails; and emergence I / emergence II* made by Book Works, London.

*MAUNA KEA*
PHOTOGRAPH BY JANE GRISEWOOD

**15-18 November**
Gemini HQ. Meet Director, Markus Kissler-Patig at end of residency.

**17 November**
Teaching at Waiakea High School with Andreaa Petric

**19 November**
Suburu HQ in Hilo. 23 November Meet Arimoto Naburo, the director of Suburu HQ, Hilo.

**24 November**
Driven to Suburu on Mauna Kea by astronomer, Saeko Hayashi

**26 November**
Flight to Waikiki, Honolulu.

**27 November**
Return Flight to London.

**2013-2018 LONDON / UCL / UCLO**

## 2013

**3 May**
Prof. Ofer Lahav at event re: Dark Energy, TedxCern speakers.

**4 June**
Royal Institute lecture 'The Dark Energy and Dark Matter' by Ofer Lahav and Michela Massimi.

## 2014

9 January-8 February
Jeremy Brock's astronomy play The Blackest Black at Hampstead Downstairs Theatre, London.

**21 January**
Steve Fossey discovered at UCLO supernova SN2014J.

**21/25 February**
Participated in four 'Wonderments of the Cosmos'

**26 March**
*Astronomy Meets Art* and the visit of annual clockmakers lecture by Giorgio Savini 'Far-in-frared Astronomy from Space' at UCLO.
.

JUAN SEGUEL, ASSISTANT OBSERVER, CERRO TOLOLO , CHILE, PHOTOGRAPH BY JUDY GOLDHILL



**1 May 2015**
**On Fri, May 1, 2015 at 12:41 AM, Jane Grisewood wrote:**

Dear Peter, Janice, Steve, Markus, Arimoto and Hilton,

It's been a long time since we've been in touch, but things are going in the right direction. We have been so grateful for your support in your lovely emails. With only a few more weeks of treatment Judy will soon be able to get on with her life, which she is eager to do.

We are excited at the prospect of the residency and very much look forward to planning a suitable time that would work for you later in the year. Assuming of course that you are happy with us 'starting over'. Strangely enough, it is almost exactly a year to the day since or proposal was sent to you. We were thinking that for the postponed residency October/November time would be good for us. But you would have to advise re: your schedules, practicalities, etc.

The Mauna Kea debacle has been much in our thoughts too,

**Peter Michaud**
**Public Information Manager**
**Gemini Observatory**

Hi Peter,

Following our emails on the 22nd July, I have revised and restructured the proposal (attached), particularly p.2, which I hope will provide you with further details. I'm not quite sure what more I can add until we have dates fixed that work for you. We can then send a schedule like the example attached. I have also attached our experiences at NOAO in their Newsletter (*Where Art and Astronomy Meet*), which will help explain what we did on the residency

As I mentioned, we are accommodating and flexible, and have found in the past that things work out quite organically. Perhaps it would be a good idea to Skype, if you have time in the next week, when we could discuss how things will fit into your plans.

I understand it must be quite difficult to visualise at your end. Please don't hesitate to get back to me with any questions, details, timelines, etc that you need to know/ clarify/change.

Kia Ora
Jane

**22 July 2015**
**On 22 Jul 2015, at 23:09, Jane Grisewood wrote:**

Hi Peter,

Thank you so much for your quick response, much appreciated.

I'm getting together the proposal outlining our thoughts and will send to you by Monday. We will be mostly following the previous residencies in Arizona and Chile where we worked fairly independently. We hope not to take up too much of your time, but it will be valuable interacting with you and your colleagues when and where possible. More details will be in the proposal.

We're very much looking forward to
the prospect... it is exciting.

Kia Ora
Jane

**22 July 2015**
**On 22 Jul 2015, at 02:12, Peter Michaud wrote:**

Aloha Jane,
Great to hear from you again and glad Judy is doing well!
Yes, we should explore in more details about what is involved in implementing this on your timeline later this year. Is there an updated version of the proposal we can see (including my boss, Nancy Levenson, cc'd). For my part at Gemini we will have to determine how this fits into our existing plans as well as your vision for working at Keck and elsewhere, so we can determine the impact and be sure that we can support you as necessary to assure a successful experience.

I look forward to working with you to move this exciting concept forward.
Cheers,
Peter

Jane,

As discussed, we are happy to host you here at Keck Observatory.

When it's appropriate, please feel free to contact me directly for whatever portion of your visit you would like to do here.

I didn't see any November dates in your email, but we are generally free then.

Aloha,
Steve

**Steve Jefferson**
**Communications Officer**
W. M. Keck Observatory

*CERRO TOLOLO,*
PHOTOGRAPH BY JUDY GOLDHILL

J G + J G

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