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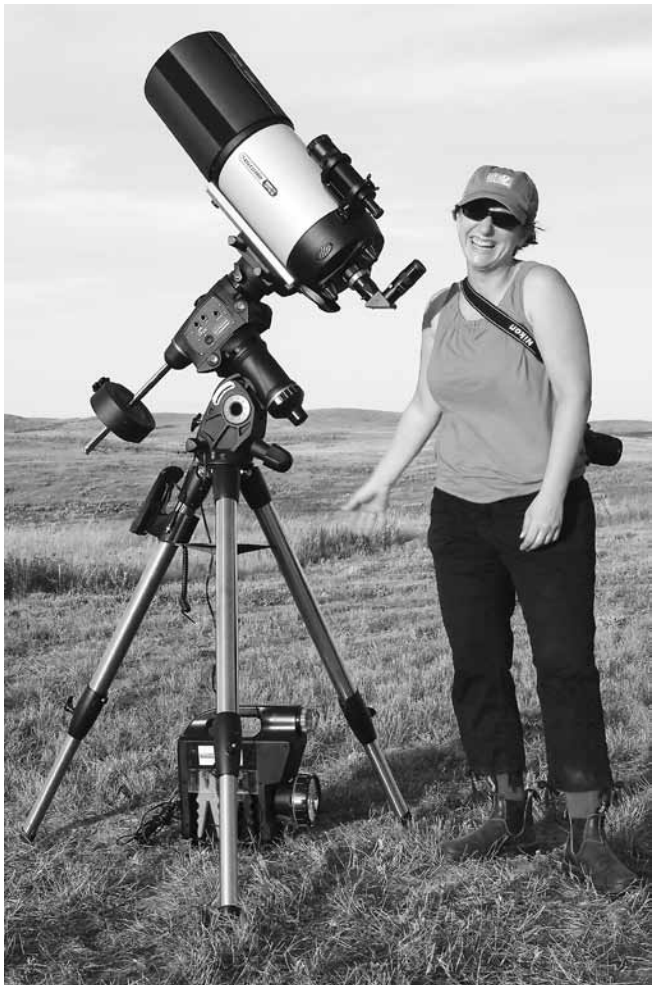
Risa Horowitz

Imaging Saturn—Amateurism as a Critical Method of Art Making

Imaging Saturn is a long-term project that emerged from seeing Saturn through a telescope for the first time in May 2010—a profound and sublime personal experience. It raised questions about the incomprehensible scale of the universe and the ways in which we make sense of it logically and intuitively. The project allows me to explore crossovers and distinctions between the training that defines the expert and the enthusiasm that animates the amateur within the field of astronomy, while at the same time identifying comparable characterizations made within the research-creation paradigm. *Imaging Saturn* engages multiple intertwined modes of research, art making, and dissemination, motivated by a methodological framework that includes a balanced engagement with the academic, art, and astronomy communities. The project recognizes that sometimes these intertwined activities—methods—are indistinguishable from one another, as when, for example, a weekend spent camping is a form of dissemination of artistic knowledge, the creation of drawings is a form of investigative research, and a gallery exhibition is a form of information gathering.

I have become an amateur astronomer within a professional and scholarly art practice that aggravates boundaries between expert and amateur, work and hobby, leisure and productivity. At the core of the project is an ongoing collection process based on the capture of at least one image of Saturn for each year of its orbit around the sun: a 29.42 year-long cycle. I have so far recorded images for the first four (Earth) years of the project, which started in 2011 and will run until 2040. This component of the project has challenged me to broaden my base of knowledge in the sciences of photography, digital imaging, optics, and astronomy. Aside from the obvious learning curve related to the workings of the solar system and universe, astrophotography is a highly specialized sub-discipline with a unique set of tools and techniques. These include operating a telescope that requires precise physical orientation to the cosmos to account for Earth's rotation, and acquiring images through video capture for processing multiple still frames into image "stacks" that provide more detailed still images than our "blurry" atmosphere would otherwise permit. I have become an active member of the Royal Astronomical Society of Canada (Regina and Toronto centres) to share and receive mentorship and knowledge, and to investigate intersections of creative practices and sciences, highlighting how common interests can be used to bridge disciplinary divides.

ABOVE: 3d printed plaster model of the planet from CAD file. 7.62cm sphere, 22.23cm ring tips (to G-ring). 2014.
TOP: Imaging Saturn (inverted), 11 May 2012.



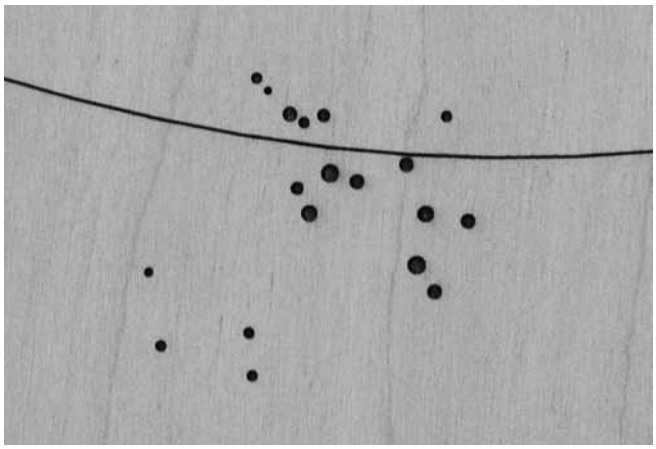
Labour Day Weekend camping, Grasslands National Park (West Block), Saskatchewan, with 8" scope. 30 August 2013.
Photo credit: Michael Flaherty.

Imaging Saturn 2013. 2012-05-11T22:35:11-04, 22 frames stacked from 29 seconds of video.

I have so far created a series of twenty-nine charcoal drawings that depict three views of Saturn on the day of its opposition—that moment each year when the planet is opposite Earth from the Sun—throughout its orbital period. Creating these drawings was both a research and a creation activity insofar as the drawings are finished and exhibited works of art. Making the drawings helped me to visualize and understand relevant planetary and galactic motions as seen from Earth, along with what the planet would look like each year.

I am currently developing a set of kinetic sculptures that place models of the planet against a backdrop of the ecliptic (the apparent path of the sun along with the thirteen zodiacal constellations), using cameras in the position of Earth to further visualize the apparent motion of Saturn at various time scales. This component of the project challenges me to develop electronics and programming skills and to collaborate with technicians to assist with the engineering and fabrication of the finished works. This part of the multi-year project includes development and production phases in Regina and at an artist's residency at Video Pool in Winnipeg, where a solo exhibition of the completed works is scheduled for 2016.

The project exposes non-artists to art and non-astronomers to astronomy, and it nurtures cross-disciplinary intellectual and creative inquiry. It is positioned across visual and media arts, and across arts and science. It engages in networking and knowledge-sharing in a way that both expands and blurs the boundaries between practices and disciplinary domains that remain somewhat fixed and unwavering even within our contemporary interdisciplinary culture.



Test imagery for the ecliptic and constellation backdrop of the kinetic models. Sagittarius with teapot. Laser cut baltic birch, 12.7 x 27.94cm detail. 2014.

Imaging Saturn (Oppositions 2024). Charcoal drawing on Arches 88, 38.1x76.2 cm. 2013.