LSST:UK Newsletter 4 (September 2020)

- Introduction
- First images from LSSTCam
- Towards a more Just, Equitable, Diverse, and Inclusive Rubin Observatory
- RAS Meeting: The new window on Transients and Variable Star astronomy with the Rubin Observatory (October 9th)
- Rubin Observatory Technical Documents Online
- Recent LSST:UK outputs

Introduction

This month's Newsletter is slightly briefer than most, because most of those who might have contributed to it have been occupied with preparation of the proposal for the LSST:UK contribution to Rubin Observatory operations. The main portion of the proposal was submitted on 25 September, with extensions requested to allow later submission of text describing three proposed contributions - relating to participation in Commissioning, annual Data Release Processing and operation of a Data Access Centre - where discussions with Observatory staff are continuing. The proposal will be assessed by Observatory staff and by the Contribution Evaluation Committee, with the assessment process expected to conclude next April with the US agencies making decisions on "approval to Rubin to establish data rights agreements and grant interim data access", with final data rights agreements to be signed by the middle of next year. The content of the proposal was approved prior to submission by the LSST:UK Consortium Board and carries an endorsement from Colin Vincent, Associate Director Astronomy at STFC.

Those with ideas for future newsletter items should contact the LSST:UK Project Managers (@ George Beckett and @ Terry Sloan : lusc_p m@mlist.is.ed.ac.uk), while everyone is encouraged to subscribe to the Rubin Observatory Digest for more general news from the US observatory team.

@ Bob Mann

First images from LSSTCam

The Rubin Observatory camera team have released a first set of images taken with the full 3200 megapixel focal plane of the LSST Camera, along with a nice account of the engineering challenges faced during the focal plane assembly process. They note that it would take "378 *4K ultra-high-definition TV screens*" to display each of these images at its full size.

Perhaps most striking amongst the images is that (right) of a head of romanesco - a cultivated form of *Brassica oleracea*, for the uninitiated - which was chosen as a target because its near-fractal form neatly illustrates the range of scales probed by LSSTCam images, as revealed by playing with the image zoom tool provided by the LSST camera team at SLAC.

Since the camera's optical system is yet to be integrated, these images were taken through a 150 micron pinhole, and camera team have provided an explanation of some of artefacts visible when you zoom into the images, such as the diffraction patterns from the pinhole.



Credit: LSST Camera Team/SLAC /Vera C. Rubin Observatory

Ø Bob Mann

Towards a more Just, Equitable, Diverse, and Inclusive Rubin Observatory

One of the liveliest sessions at the 2020 Project and Community Workshop in August was that entitled *Roadmap to a more Just, Equitable, Diverse, and Inclusive Rubin Observatory.* Its organisers are hoping to sustain the momentum initiated during that session by running a series of monthly workshops, to contribute to the development of a roadmap setting out the equity and social justice goals of the Rubin community, ahead of the 2021 Project and Community Workshop.

The initial plan is for these meetings - which are open to all - to take place on the first Thursday of each month at 12PM Pacific / 3PM Eastern / 8PM CEST, starting on October 8th. Further details can be found in a posting on the community.lsst.org site.





RAS Meeting: *The new window on Transients and Variable Star astronomy with the Rubin Observatory* (October 9th)

The first RAS Meeting of the new year takes place online on Friday, October 9th from 10.30-15.30. Its topic is *The new window on Transients and Variable Star astronomy with the Rubin Observatory* and it is organised by LSST:UK Consortium members Sarah Casewell and Cosima Inserra. Those wishing to attend must register, with separate registration links for RAS Fellows (for whom it is free) and non-Fellows (who must pay £5).



Rubin Observatory Technical Documents Online

For those of you who have not yet discovered it, I would like to point out that the Rubin Observatory maintains a comprehensive repository of technical documents and reports at https://www.lsst.io/. Documentation is categorised into series, based on the particular function or aspect that it relates to, covering technology, engineering, and science. If you ever come across a reference to a Rubin Observatory report of the form DMTN-135 or LSE-61, for example, then it will almost certainly be available from https://www.lsst.io/ (provided it is public). The site usually has some features some topical reports, plus some key document to be aware of include the Rubin Observatory Science Requirements (LPM-17) and the Data Products Definition document (LSE-163).



@ George Beckett

Recent LSST:UK outputs

LSST:UK has recently produced the following technical reports.

Title	Author	Description
D2.2.1 Report on data transfer and ingest experiments for DESC DC2	Mike Read	This document describes the tests, and their results, undertaken to gain experience with transferring significant volumes of data from a Rubin Observatory processing to the LSST:UK DAC. Such data transfer volumes will be required to acquire each new LSST data release. The tests involved transfers of the DESC DC2 (Dark Energy Science Collaboration Data Challenge 2 from IN2P3 (French National Institute of Nuclear and Particle Physics).
D3.11.1 Model for crowding at LSST depths	Tim Naylor, Tom Wilson	This document describes models deep enough to enable modelling the effect of faint stars at LSST depths. It includes an additional journal-style report that provides further technical details.

@ Terry Sloan