

LSST:UK Newsletter 8 (February 2021)

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Introduction

Construction activities on Cerro Pachón continue to ramp up, with significant progress being made on the dome and the Telescope Mount Assembly (TMA).

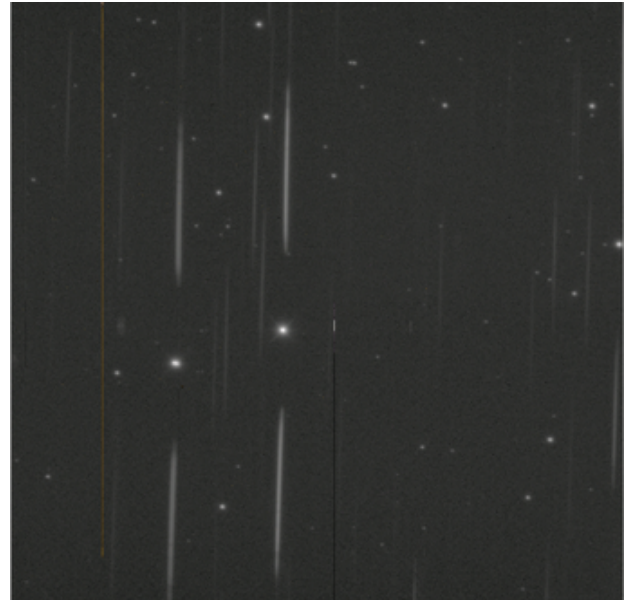
The picture on the right shows work in progress on dome cladding and louvres, while, inside the dome, preparation is being made for the imminent arrival of the top-end of the TMA. Its assembly will require the services of a 500-ton crane, which, itself, is currently being assembled on the summit.



(Credit: Rubin Obs/NSF/AURA)

Meanwhile, observations with the Auxiliary Telescope (AuxTel) have recommenced, after a ten-month break, with a [three-night run during January](#). AuxTel's role during survey operations is to monitor atmospheric transmission above Cerro Pachón, but these early runs allow testing of a variety of communications, networking and data reduction systems prior to the start of commissioning observations with the Simonyi Survey Telescope itself.

The image to the right was taken during that run and shows a spectrum of a spectral standard star, near the centre of the image; the star to its left appears elongated because it is a close binary.



(Credit: Rubin Obs/NSF/AURA)

Those with ideas for future newsletter items should contact the LSST:UK Project Managers ([@ George Beckett](#) and [@ Terry Sloan](#): lusc_pm@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](#)

Summary of the 11th LSST:UK Consortium Board Meeting

Starting with this newsletter, we thought it would be of interest to the wider LSST:UK community to learn what was discussed at the latest Board Meeting. The Board is essentially the governing body of the LSST:UK Consortium and consists of representatives from each of the 37 institutions who participate in the consortium.

The 11th meeting of the Board took place online on 9th December 2020 and was attended by 27 of the members. The project leader, project scientist and the joint project managers were also in attendance. The agenda followed the now standard pattern and included project updates /reports and new items for discussion, with the addition of two science talks related to ongoing activities in phase B of the project.

The main items which may be of interest were:

- Change-overs in board membership since the last meeting were noted:
 - o Alastair Edge has replaced Alis Deason as Durham member
 - o Vasily Belokurov has replaced Paul Hewett as Cambridge member
 - o Simon Dye has replaced Chris Conselice as Nottingham member
 - o Manda Banerji has replaced Mark Sullivan as Southampton member
 - o Chris Conselice has replaced Iain McDonald as Manchester member.
- It was also announced that Alastair Edge had been elected as Deputy Chair of the Board.
- Bob Mann (project lead) provided an update on the status of the UK's proposal to the new LSST 'In-kind' framework for the allocation of data rights internationally. Review of proposals is proceeding well and signing of the new agreement is expected in the summer of 2021. UK contributions in the new agreement should be substantial enough to enable expansion of data rights for the UK community.
- The LSST:UK project's Education and Public Outreach (EPO) and Training Coordinator roles started during Phase A (though they were unfunded). The project feels it is important to reinstate these roles in Phase B and the Board discussed and agreed new role descriptions and how candidates would be solicited and selected. The availability of these roles will be advertised to the community in the near future.
- As an interlude to its other business, the Board had two science presentations from Raphael Shirley (Southampton) : "LSST and near infra-red data fusion" and Aaron Watkins (LVJM/Herts) : "Low-surface-brightness science using LSST". Both interesting talks were well received.
- George Beckett (joint project manager) provided an overview of the status of phase B project activities. He also summarised the outcome of the recent Affiliate PI/Junior Associate round. Almost all applicants had been successful. The Board expressed its satisfaction with the process and approved allocations proposed by the selection committee.
- Graham Smith (commissioning coordinator) provided an update on the plans for commissioning observations with the Rubin Observatory. The UK will play a significant role in this and a call for expressions of interest (EOIs) in 2020 had resulted in 23 proposals from 15 institutions/ groups, covering a range of career stages. The Rubin commissioning camera is in La Serena, with first light expected by autumn. Formal proposals, linked to the In-kind process, will be solicited by the LSST project within the next few months.
- LSST:UK plans to organise another All Hands Meeting in the spring of this year (likely to be May). The Board discussed how to make this successful as a purely online meeting. Further steps needed for the development of the meeting were entrusted to the Executive Group.

@ Mike Watson

Community input sought on survey strategy, photometric redshifts and joint LSST-Euclid derived data products

As many of those most interested will already have heard through their Science Collaborations, the Rubin Observatory is currently soliciting input from the community on three important issues, namely survey strategy, photometric redshift estimators and joint LSST-Euclid data products.

1. **Survey strategy.** The optimisation of survey strategy has been a multi-year process, currently overseen by a Survey Cadence Optimization Committee ([SCOC](#)), which includes LSST:UK members Hiranya Peiris and Meg Schwamb. In December 2020, SCOC issued a [call for Cadence Notes](#), which would record the opinions of different portions of the Rubin community on a number of questions relating to the specification of the observing strategy for the survey, based on analyses of the most recent set of survey simulations. The SCOC has [recently announced](#) an extension of the submission deadline for Cadence Notes (to [15 April 2021](#)), along with further clarifications of what should be submitted. More general information about the survey strategy optimisation process can be found on the [SCOC webpages](#).
2. **Photometric redshift estimators.** The Rubin Data Management (DM) team issued [A Roadmap to Photometric Redshifts for LSST Data Releases](#) at the start of February, as part of which it is running two sets of monthly [Photo-z Virtual Forums](#) to gather community input to inform the selection of the photo-z estimator(s) to be used in the production of the data release catalogues. The first set,

running from February to April, will define the evaluation criteria to be used in assessing photo-z estimator, with the second set (May-July) will focus on the development of the *Letters of Recommendation* (due by [30 September 2021](#)) through which the community can influence the DM team's selection of a short-list of photo-z estimators for more detailed evaluation.

3. **LSST-Euclid derived data products.** The synergy between LSST and Euclid data provides the UK community with a great opportunity, given the prominent roles played by UK researchers in preparation for both surveys. The Rubin and Euclid management teams have been discussing for several years how best to enable exploitation of that synergy, most recently through the [establishment of a joint Derived Data Products Working Group](#) (DDP-WG), that “*will recommend a science-driven initial set of DDPs which would be shared promptly and simultaneously with both the Euclid Consortium and all Rubin Observatory LSST data rights holders for scientific use, in a way that protects the unique science of each collaboration and respects the data policies of each collaboration*”. The DDP-WG is now [soliciting input](#) from the community via asynchronous discussion on a dedicated space within the [community.lsst.org](#) site. All interested parties are [invited to join](#) in this discussion, which is due to run until May 2021 and which will inform an initial report to be produced by the WG in summer 2021.

@ Bob Mann

Upcoming meetings of interest

The Covid 19 pandemic has seen a dramatic reduction in travel, with a knock-on effect, on science meetings in the Rubin community and beyond. Despite this, there are at least two up-coming virtual meetings, which we believe will be of interest to members of the UK community, as follows.

Statistical Challenges in Modern Astronomy VII (7-10 June 2021)

The seventh Statistical Challenges in Modern Astronomy (SCMA) conference will take place online from 7-10 June, and will include two parallel sessions with particular relevance to LSST:UK, covering “*Irregular Times Series*” and “*Methodology for the Rubin/LSST Survey*.” Further information can be found on the [conference website](#).

On the Future of Data Centers and eScience Institutes, Celebrating LineA's 10th Anniversary (13–15 April 2021)

This workshop will bring together representatives of some of the more important data centres, e-Science institutes and IT companies to discuss current solutions and new technological trends, as data volumes from modern experiments such as LSST, Euclid and SKA continue to grow. The programme includes a number of well-known speakers from the Rubin Observatory and international LSST community.

The workshop, which has been organised to celebrate the 10th Anniversary of the Brazilian astronomy institute, LineA, will be entirely remote and there will be no registration fee. We ask those interested in participating to register [here](#).

@ George Beckett
