

The UK has an unprecedented opportunity to lead the exploitation of this combined suite of facilities

LSST:UK Consortium













































































Every astronomy group in the UK





Questions for this short talk

- What is the UK role in Rubin's LSST?
- As a UK scientist how can I get access to LSST data?
- How do I get involved in Science Collaborations and planning for LSST?





UK participation in LSST

LSST:UK Consortium



Defines the programme of work for...

https://www.lsst.ac.uk/governance

Works on behalf of...

LSST:UK Science Centre (LUSC)





LSST:UK Leadership

- Bob Mann (Project Leader)
- Terry Sloan (Project Manager)
- George Beckett (Project Manager
 & Data Facility Coordinator)
- Stephen Smartt (*Project Scientist*)
- Mike Watson (Board Chair)

LSST:UK EXECUTIVE

- Aprajita Verma (also Rubin International Program Coordinator)
- Catherine Heymans
- Kathy Romer
- Cosimo Inserra
- Richard McMahon





UK Science Leadership in Rubin

- UK one of only 3 "LSST National Groups"
- 8 science collaborations (~16 co-leads): UK has 5 co-lead roles in 3 SCs.
- 2 members on "Science Advisory Committee"
- 2 members on "Survey Cadence and Optimization Committee"
- 57% of these UK lead science roles are female
- Strong involvement across Science Collaborations





International contributions models

2015

- Cash subscription
- STFC signed Memorandum of Agreement to secure data rights for 100 PIs (and 400 Junior Associates)

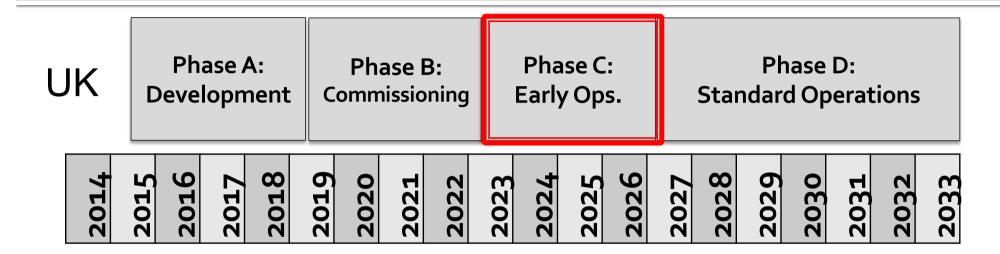
2019

- In-kind contributions: either
 - Offset costs to US agencies i.e. do work that would happen
 in US otherwise
 - Add value to US scientific return from Rubin LSST – e.g. other data or software for usergenerated products





LUSC programme defined in 2014



- Phases A & B very successful
- Three major changes since 2014





In-kind contributions model

- Great opportunity for the UK
 - Expand data rights ideally to whole UK community
 - Earn a place within the Rubin operations consortium
- In-kind package developed by LSST:UK in conjunction with STFC & Rubin during 2019-20
 - Approved in 2021 by Rubin Management Board as forming basis for UK Data Rights Agreement





Where are we now?

- Currently funded LSST:UK grant from STFC PPRP : Phase B 2019-2023
- Work ongoing under this grant is being continually assessed by the Rubin's "Contribution Evaluation Committee" (CEC)
- We submitted a Phase C (2023-2027) proposal of work to STFC – under review
- Total cost to UK will be about £60M





UK in-kind package

- Three main strands
 - DAC: development & operation of Data Access Centre
 - DRP: 25% share of annual Data Release Processing
 - DEV: development of analysis software
- plus additional cost-offsetting activities requested by Rubin & binding us into operations consortium
- Gain data rights credit for work we're already doing
- All STFC funding will now be spent within the UK
- Rubin valuation: over 300 PI positions





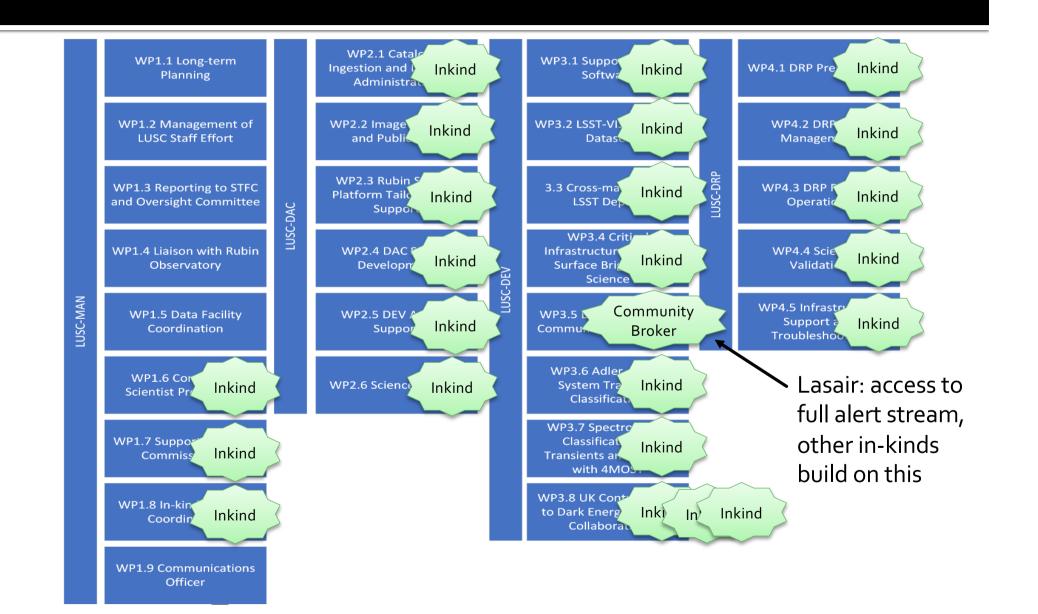
Phase C WPs

WP1.1 Long-term **Planning** WP1.2 Management of **LUSC Staff Effort** WP1.3 Reporting to STFC and Oversight Committee LUSC-DAC WP1.4 Liaison with Rubin Observatory **LUSC-MAN** WP1.5 Data Facility Coordination **WP1.6 Community** Scientist Programme WP1.7 Support for Rubin Commissioning WP1.8 In-kind Program Coordination **WP1.9 Communications** Officer

WP2.1 Catalogue Ingestion and Database Administration WP2.2 Image Ingestion and Publication WP2.3 Rubin Science Platform Tailoring and Support WP2.4 DAC Service Development LUSC-DEV WP2.5 DEV Activity Support WP2.6 Science Support

WP3.1 Support for EPO WP4.1 DRP Preparations Software WP3.2 LSST-VISTA Fusion WP4.2 DRP Data Dataset Management LUSC-DRP WP4.3 DRP Pipeline 3.3 Cross-matching at **LSST Depths** Operations WP3.4 Critical Infrastructure for Low WP4.4 Scientific **Surface Brightness** Validation Science WP4.5 Infrastructure WP3.5 Lasair - the UK's Support and Community Alert Broker **Troubleshooting** WP3.6 Adler – Solar **System Transient** Classification WP3.7 Spectroscopic Classification of Transients and Lenses with 4MOST **WP3.8 UK Contributions** to Dark Energy Science Collaboration

Phase C WPs In-kind



Data access and involvement

- Get "Affiliate PI" or "Junior Associate" status
- https://www.lsst.ac.uk/news/2021/2022-pijaselection-round-open-21-11-01
- Join the LSST:UK mailing list wiki account, follow monthly newsletters
- https://www.lsst.ac.uk and the link to wiki
- General good starting point : https://www.lsst.org/participate
- Join a Science Collaboration : slack and community posting web sites

SST:UK Science Centre