

LCO Phases of Operation

This document presents the established operational phases at Las Campanas Observatory considering the conditions of operations under the global pandemic associated with Covid-19. The phases defined herein apply equivalently to operations at the mountain facilities as well as the office facilities at El Pino in La Serena. The responsibility for the creation and modification of this document resides with the LCO Reopening Committee as created ad hoc by the LCO Director. Any transition between operations phases as defined herein follow recommendation to the Director by this committee and final responsibility to approve said change rests solely with the Director.

Any decision to change phases of operations will consider the site specific health and safety conditions and follow the official indicators defined in the Chilean government's "Paso-a-Paso" plans. These indicators along with careful analysis of the actual conditions in the regions where we operate and where our collaborators live will be reviewed and shared with all personnel when a change of phase is anticipated.

Phase Ops_0: No night operations

- Maintain Protocols.
- Basic daily operations (El Pino and Mountain)
- Urgent technical visits will be considered only in exceptional situations with the authorization of the Director.
- Contractors Category 1a (with authorization of Director)
- Contractors Category 2. .
- Minimum Local teams on site with restrictions to avoid public transport and requirement to arrive at El Pino in private vehicles.
- On site presence of group leads only as needed.
- Staff with medical restriction to follow remote work protocols.
- Maximize remote work wherever possible.
- Minimize on site work to only essential activities that require physical presence.

Phase Ops_1: Essential Operations (one Magellan, duPont and/or Swope)

- Maintain Protocols.
- "Shared Risk" basic night operations (1 Magellan and possibility of duPont or Swope operations as staffing permits)
- Remote Observations Magellan.
- Remote observations and limited on site personnel duPont.

- Operations of robotic facilities not requiring on site technical visit.
- Maintain all telescopes and instruments in operative form.
- Maintain isolation of turno staff to avoid the possibility of cross-contamination.
- Restricted minimal transport schedule limited to within a single turno. For safety and logistics reasons, only scheduled transportation on days corresponding to change of turno are authorized.
- Reduced teams on site with restrictions to avoid public transport and requirement to arrive at El Pino in private vehicles.
- On site presence of group leads only as needed.
- Staff with medical restriction to follow remote work protocols.
- Urgent technical visits will be considered only in exceptional situations with the authorization of the Director.
- Contractors Category 1a, 1b, 1c (with authorization of Director)
- Contractors Category 2.
- Maximize remote work wherever possible.
- Minimize on site work to only essential activities that require physical presence.

Fase Ops_2: Operaciones nocturno (Mag_1, Mag_2, duPont, Swope)

- Maintain Protocols.
- “Shared Risk” night operations (Both Magellan, duPont and/or Swope)
- Remote Observations Magellan.
- Remote observations and limited on site observations duPont.
- Limited on site observations Swope.
- Operations of robotic facilities - site technical visits within a turno and following protocols permitted only with authorization of the Director.
- Restricted transport schedule. For safety and logistics reasons, only scheduled transportation on days and hours corresponding to change of turno are authorized.
- Restrictions to avoid public transport - exceptions will be considered for specific conditions for each trajectory between regions as confirmed with the direct supervisor and the reopening committee.
- On site presence of group leads as needed.
- Staff with medical restriction to follow remote work protocols.
- Urgent technical visits will be considered only in exceptional situations with the authorization of the Director.
- Other visitors to be considered on a case-by-case basis only in exceptional situations with the approval of the Director.
- Contractors Category 1a, 1b, 1c, 1d (with authorization of Director)
- Contractors Category 2.
- Maintain remote work wherever possible with exceptions for necessary on site activities.
- Minimize on site work to only those activities that require physical presence.

Phase Ops_3: Night Operations (Remote and on site)

- Modify and Maintain Protocols.
- Return to operations without medical restrictions on staff.
- Transportation from regions for staff without restriction for public transport.
- Observatory transport schedule without specific restrictions.
- Observations available in both remote and on site operations.
- Contractors categories 1 and 2.
- Visitors (technical and others) considered on a case-by-case basis depending on national and international conditions. (exceptional situations allowed with authorization of Director)

Phase Ops_Normal: “New Normal”

- Return to new international normal conditions without restrictions.
- On site classical observing modes
- Limited Remote Observations modes
- Contractors without restrictions.
- Technical visits without restrictions
- Public visits.

Contractor Categories:

1. Work involving common areas or interiors of existing facilities.
 - a. Day only - without local staff interactions
 - b. Day only - with limited local staff interactions.
 - c. Within single turno - with local staff interactions.
 - d. Extended across turnos - work teams separated from local staff apart from limited direct supervision roles.
2. Work in isolation (Bubble)
 - Supervision as required by local staff arranged without physical contact between contractors and LCO personnel.

Change Control

Verison	Date	Type of revision / Reviser	Modifications
01	14/01/21	Creation D. Osip	-----
02	15/01/21	D. Osip D. Briones M. Rodriguez J. Escobar	Revision and corrections
03	15/01/21	L. Infante	Approval