

Chilean Telescope Time Allocation Committee Semester 2019A Call for Proposals

The Chilean Telescope Time Allocation Committee (CNTAC) invites the Chilean community to submit proposals for observations during the 2019A semester at the following facilities that have signed agreements with Universidad de Chile:

- **CTIO:**

BLANCO, SOAR, SMARTS, PROMPT, SARA, LCOGTN, KASI, ASAS-SN and T80S.

- **LCO:**

Baade, Clay, Dupont, Swope, and CHAT.

In addition, and following a petition of the ESO-Chile Committee, the CNTAC also invites the community to submit proposals for the following ESO National Telescopes:

- EULER, Danish, MPG 2.2m, REM, TAROT and TRAPPIST.

The submission deadline is:

Friday OCTOBER 19, 2018 at 12:00 p.m. (noon, Chilean continental time)

We would like to remind the community that different facilities finish their respective telescope schedules at different times. For example, LCO will have their schedule ready by early December. CTIO (Blanco, SOAR) finalizes their A semester calendar typically by mid-December. The MPG2.2m will probably finish their schedule at some point in January (their term runs from April through September), etc.

The CNTAC will make its best effort to communicate the final results as soon as they become available.

1. Policies

The CNTAC has established specific rules regarding eligibility, duration of the projects, and telescope assignment.

1. Eligibility:

Starting with the 2017B Call, the CNTAC has chosen to follow the eligibility rules approved by SOCHIAS during his 2017 meeting. According to these, eligible principal investigators (PIs) are the following individuals:

Faculty: Researcher hired by a Chilean Institution (CI) in a full-time, permanent position (equivalent to tenure-track) in any of the usual contract variations: *honorarios*, *contrata*, *planta*, etc.

Graduate Student: with a support letter from a faculty satisfying the point above and from the same institution.

Postdocs: Postdoctoral researcher with a fixed-term contract (including “contrato a honorarios”) in a CI, hired at least half-time and for a minimum of six months. They can apply from the moment they accept the position. After that, to be eligible for a given cycle, they must hold their postdoctoral position at least until the beginning of the cycle when their observations would be carried out.

Visitor Professor: Like postdocs plus the participation of a Co-I who satisfies the first point.

Adjunct Researchers: To be eligible as an Adjunct Faculty (or equivalent position) the researcher must have at least a half-time position (must spend half of her/his time at the CI). If the primary institution of the Adjunct is not a CI, and it grants access to telescope time in Chile, then the Adjunct cannot apply to those telescopes. Retired or Emeritus Professors qualify automatically in this category.

The original eligibility rules can be found at:

<http://sochias.cl/tiempo-de-observacion/acceso-a-tiempo-de-observacion>

SOCHIAS will maintain a “white-list” of eligible PIs. This white-list is created with the help of all department Chairs, so we encourage you to verify with your respective one if you have been included. The current list can be found at:

<http://sochias.cl/lista-blanca/>

2. Duration of projects:

The proposals are reviewed by the CNTAC on a semester by semester basis (except for the **du Pont**, **Swope**, **ASAS-SN** and Warsaw telescopes which are assigned **on a yearly basis**).

The CNTAC can give special attention to proposals specifying their long-term nature (more than one semester). In the case of long-term programs it is required that the applicants indicate the long-term nature of the program and the total duration. A summary of the need for long-term status is also required (1-page limit). In case long-term status is granted, a status report must be

submitted each subsequent semester to inform the TAC of the progress being made. The CNTAC reserves the right to terminate long-term status if progress is deemed insufficient or if the PI fails to send a report.

In addition, special attention will be given to proposals requesting 50% or more of the available time in any semester on the following telescopes: Clay, Baade, Blanco, SOAR and MPG2.2m. These proposals will be considered large-programs. Approved programs will need to submit a work plan (1-page limit) specifying the contributions of all Co-Is and a data management plan and will commit to make their data public after one year (through ChiVO).

A proposal can be both long-term and large. If the proposed project fulfills the criteria for both it must include the additional page justifying the need for long term status and the page describing the Co-I's responsibility and data management plan, as well as the commitment to make the data public after one year.

3. "Fast track" CfP:

Occasionally, some telescopes have been undersubscribed. In the event that time cannot be fully allocated, and in order to optimize Chilean resources and avoid late-time requests, a second "fast track" call will be issued soon after the CNTAC process, including all telescopes with remaining time. Fast-track proposals will be handled directly by the CNTAC Chair.

4. Acknowledgments:

Since 2011B the CNTAC is asking PIs to include the identification number of the program in any publication that makes use of data obtained through a CNTAC proposal.

5. PI commitment: Through her/his application the PI is fully committed to carry out such observations. The PI or one of the Co-investigators listed on the proposal is expected to be present at the telescopes on the assigned nights (unless service or remote mode was assigned). In the event that the PI cannot make use of such nights for the scientific program approved, she/he must immediately communicate the problem to the Chairman of the CNTAC who will reassign such time to another applicant based on the ranking previously established by the CNTAC.

2. Proposal submission

1. CNTAC form: Starting in the 2016B semester, the CNTAC has moved to a web form.

IMPORTANT: Both PIs and Co-Is will need to be registered in the new web system. PIs will need to wait for confirmation of eligibility before being able to submit proposals. You will receive an email with the confirmation. **Please have in mind that the confirmation may take up to 48 hours to be sent.**

****PLEASE REGISTER NOW RATHER THAN WAITING TO THE LAST MINUTE****

As part of this new system, PIs will need to enter directly into the web form information such as Abstract, Co-Is, Telescope, Instrument, Time requested, Preferred Dates, Moon requirements, etc. In addition, the PI will be asked to upload a free-format pdf file that includes:

- Scientific aim and rationale (3 page limit including figures/tables and references).
- A description of the current status of the project including publications (1 page limit).
- Technical description (1 page limit).
- Justification of long-term status if applicable (1 page limit).
- Work plan for large programs, if applicable (1 page limit).

While the format is free, we ask that arial or verdana fonts are used, with font size between 10 and 12 pt. In addition, regular page margins should be used. **A complete proposal will then consist of no more than five pages of text (including figures, tables and references)**, seven for large programs that are also long-term. While the website will accept longer pdf files, the Telescope Assignment Committee will not be under any obligation to read additional text.

Students must also upload a letter from his/her supervisor (holding the status of Chilean astronomer). Without this letter the system will not allow submission of the proposal.

The website will be accessible through the CNTAC webpage at:

http://www.das.uchile.cl/das_cntac.html or directly through: <http://www.cntac.cl>

3. General Information

Questions regarding the submission process should be sent to cntac@das.uchile.cl. Please include the keywords "**CNTAC 2019A**" in the subject of the message.

Rafael Brahm, Andrés Jordán and Nestor Espinoza developed at PUC a suite of pipelines for echelle spectrographs called CERES which are publicly available and documented in Brahm et al 2017, PASP, 129, 034002. CERES can reduce echelle spectra in a fully automated way for the following spectrographs offered regularly by the CNTAC: Euler1.2m/Coralie, DuPont2.5m/Echelle, MPG2.2m/FEROS, Magellan6.5m/MIKE, Magellan6.5m/PFS. CERES includes routines for the computation of precise radial velocities and bisector spans via the cross-correlation method, and an automated algorithm to obtain an estimate of the atmospheric parameters of the observed star.

4. Instrumentation available in the semester 2019A

A description of the instrumentation available can be found through the following web pages or contact person:

- CTIO (incl. SOAR): <http://www.ctio.noao.edu/telescopes/telescopes.html>
- CTIO/PROMPT: <https://skynet.unc.edu/sites/view?id=2>
- CTIO/SARA: Contact person: William Keel (wkeel@bama.ua.edu)
- CTIO/Las Cumbres Observatory: <http://lco.global>
- ASAS-SN: Contact person: José Luis Prieto (jose.prieto@mail.udp.cl)
- LCO : <http://www.lco.cl>
- CHAT: Contact person: Andrés Jordan (ajordan@astro.puc.cl)
- Danish Contact person: Uffe GrMe Jorgensen (uffegj@nbi.dk)
- EULER: Contact person: Maxime Marmier (Maxime.Marmier@unige.ch)
- TAROT Contact person: Michel Boer (Michel.Boer@unice.fr)
- REM: <http://www.rem.inaf.it>. Emilio Molinari (emilio.molinari@inaf.it)
- MPG 2.2m: <http://www.eso.org/sci/facilities/lasilla/telescopes/2p2/index.html>

Specific guidelines for CNTAC proposals are described in what follows.

4.1 CTIO Facilities

The observing period covered at the CTIO telescopes is from February 1, 2019, through July 31, 2019.

Blanco 4-m Telescope

Nights available in 2019A: With the data taking stage of the DES and DECaLS surveys complete substantially more time is now available on the Blanco telescope and there will be no special limitations on lunar phase or time of year. For the 2019A semester 21 nights are being made available to the CNTAC corresponding to Chile's regular 2019A allocation, plus up to an additional 6 nights to compensate Chile for time that could not be allocated in 2018B. At the sole discretion of the CNTAC some or all of these additional nights may be carried over to 2019B if demand in 2019A is insufficient to use all this time. For the 2019B semester there will be 16 nights available corresponding to Chile's regular allocation plus any of the additional nights the CNTAC chooses to carry over. Starting with the 2020A/B semester we expect to revert to an allocation of roughly 16 nights per semester corresponding to Chile's 10% of science time (after subtracting engineering) on the Blanco telescope.

General information:

<http://www.ctio.noao.edu/noao/content/Victor-Blanco-4-m-Telescope>

Instruments available:

Dark Energy Camera (DECam)

<http://www.ctio.noao.edu/noao/content/dark-energy-camera-decam>

Cerro Tololo Ohio-State Multi-Object Spectrograph (COSMOS)

<http://www.ctio.noao.edu/noao/content/COSMOS>

The Astronomy Research with the Cornell Infrared Imaging Spectrograph (ARCoIRIS) is in the process of being relocated to SOAR. See the SOAR section for news on its availability on SOAR.

SOAR 4.1-m Telescope

Approximately 15 nights will be available for allocation by the CNTAC.

The SOAR website is located at: <http://www.ctio.noao.edu/soar/>

There are some changes in what SOAR is offering during the next semesters; these are described below.

All instruments that were available in the previous semester are currently available.

The SOAR Integral Field Spectrograph (SIFS) continues to be offered in “campaign mode”, because calibrations and data reduction require direct support from Brazil. Its use will be restricted to 2 runs of 6 nights each (assuming sufficient demand). The NOAO share of this time, assuming all SOAR partners request time, would be 3.6 nights. Requests for NOAO time should be made through the TAC. See the SOAR website (<http://www.ctio.noao.edu/soar/content/soar-integral-field-spectrograph-sifs>) for details on the available configurations and on instrument performance. Interested users should not hesitate to apply for time; this is an instrument that is producing scientific results.

When in doubt, consult the SOAR webpages (<http://www.ctio.noao.edu/soar/content/proposing-soar>)

Prospective users are reminded that:

- SOAR **does** support **target of opportunity proposals**. To make life easier for all involved, include **"ToO Proposal"** in your proposal title. See <http://www.ctio.noao.edu/soar/content/proposing-soar> for the overall SOAR ToO policy. The policy has been revised (again) for 2019A and B, to allow more interrupts to be allocated, and to separate support allocations for gravitational-wave-event follow-up. On a trial basis, SOAR will be scheduling a few nights in 2019A to provide compensation to

observers who lose time to ToO observations. Compensation to individual observers (as opposed to NOAO or other partners in general) is not guaranteed, however.

- SOAR supports allocations in **half-night pieces**, subject to scheduling constraints. Again, see the "Proposing for SOAR" page for a discussion.
- Due to the limited response, SOAR is **NOT** supporting requests for service observing during 2019A.

Upcoming instrument commissioning and science verification.

We currently expect to be performing science verification (SV) on both the STELES echelle spectrograph and TripleSpec 4.1 (ex-ARCOIRIS, transferred from Blanco), possibly as early as December. We will announce SV opportunities on the SOAR website; if you are interested in either instrument you can also contact the local instrument scientist (Andrei Tokovinin for STELES, Sean Points for TSPec 4.1). **It is not possible to propose for either instrument for 2019A through the normal CNTAC process.**

Instruments available:

Goodman Spectrograph

<http://www.ctio.noao.edu/soar/content/goodman-high-throughput-spectrograph>

SOAR Optical Imager (SOI)

<http://www.ctio.noao.edu/soar/content/soar-optical-imager-soi>

Spartan IR Imager

<http://www.ctio.noao.edu/soar/content/spartan-near-ir-camera>

SOAR Adaptive Module (SAM)

<http://www.ctio.noao.edu/soar/content/soar-adaptive-optics-module-sam>

SMARTS

Time on the small telescopes at CTIO will be available to NOAO users in 2019A via the usual proposal process. The telescopes are operated by the SMARTS consortium.

The SMARTS web site is <http://www.astro.yale.edu/smarts/>

The 0.9m + CFCCD is available in user mode only. A total of 12 nights will be available during the 2019A term. For more information on the 0.9m, please contact Dr. Todd Henry at thenry@astro.gsu.edu.

The 1.3m + ANDICAM (dual channel optical / IR imager) is available in queue / service mode only. The 1.3-m telescope is primarily used for monitoring projects, thus programs are scheduled in non-contiguous segments of an hour or less with a limit of three hours total within any given night. For inquiries about scheduling or 1.3m + ANDICAM observing capabilities,

please contact the SMARTS 1.3m queue manager Bryndis Cruz at bryndis.cruz@yale.edu. For any other inquiries about the 1.3m, please contact Charles Bailyn at charles.bailyn@yale.edu. Unfortunately the availability of the 1.3m is uncertain at the time of the publication of this CfP pending repairs to the ANDICAM instrument.

Non-sidereal tracking is no longer supported as service or queue observing. The only option for non-sidereal is user time on the 0.9m.

The 1.5m + CHIRON (fiber-fed cross-dispersed echelle) is being operated on a part time basis (operating on up to 60% of nights) during the 2019A semester. We anticipate that 70-120 hrs will be available for scheduling by the CNTAC.

For more information on the 1.5m, please contact Dr. Todd Henry at thenry@astro.gsu.edu

Instruments available:

The 1.5m + CHIRON (fiber-fed cross-dispersed echelle)

<http://www.astro.yale.edu/smarts/1.5m.html>

<http://www.ctio.noao.edu/~atokovin/echelle/>

1.3m - ANDICAM (dual channel optical / IR imager) <http://www.astro.yale.edu/smarts/1.3m.html>
Currently ANDICAM needs to be repaired and it is unclear if it will be operational during 2019A

0.9m – CFCCD

<http://www.astro.yale.edu/smarts/0.9m.html>

PROMPT

Please see details at: <https://skynet.unc.edu/sites/view?id=2>

The contact person is Dan Reichart, dan.reichart@gmail.com

SARA

Contact: William Keel, wkeel@bama.ua.edu

SARA-South is a remotely-operated 0.6m telescope sited at Cerro Tololo. Its imager uses a Kodak* 230-42 chip, giving 0.37" pixels over a 12.5-arcminute field. Thermoelectrically cooled to -110 C, the device has dark current which is negligible for most purposes. Filters are currently SDSS ugriz, Bessel UBVRi, "white-light", and an old set of stepped H-alpha filters about 70 Å wide with 6563, 6600, 6675, 6825, 6900, 6975 Å center wavelengths (replacement of old, deteriorating filters from these is in progress). Operation uses the RAdmin remote-management software or VNC protocol (RAdmin for Windows; for Mac users, the VPN client built into the OS for recent versions (10.10) will work properly with the CTIO VPN without an additional client) via the NOAO VPN (which needs a Cisco client that can be downloaded from NOAO; access from within Chile might have a more direct path into the CTIO local network). Our remote operation rules require new observers to eavesdrop for parts of three nights to become familiar with the system. The telescope has its own weather station and all-sky camera. A single-fiber echelle

spectrograph with $R \sim 25,000$ is on site, but the camera cooling system was defective and awaits a site visit to replace parts. Note that the telescope is still using a temporary FLI CCD for imaging pending coolant repairs ($0.606''$ pixels, 1024^2).

New observers: Once time is allocated, you must contact facility director Todd Hillwig (todd.hillwig@valpo.edu) well in advance to arrange for training on the operating software.

The SARA 2019A schedule will run from January through June.

*The Kodak camera will be replaced by a new Andor 2048x2048 camera already at the Arizona support offices to be installed on the next maintenance visit, rather than using the repaired cooling system for the ACE camera. This will not run as cold (-50 instead of -110 C, approximately) but its cooling system is much more robust against, for example, power outages.

Las Cumbres Observatory

Las Cumbres Observatory (LCO) operates robotically. Requested observations are scheduled by a single scheduling program that dynamically optimizes queues for each telescope. To benefit time-domain science, specialized scheduling modes are supported, including the ability to request cadence-driven observation sequences, a "rapid-response" (RR) mode that triggers observations to begin a few minutes after a request is submitted, and a "time-critical" (TC) scheduling mode for observations that must be made at relatively tightly constrained times that rarely occur. The special scheduling modes are described at <https://lco.global/documentation/special-scheduling-modes/>. We expect that nearly all observations will be made in standard queue-scheduled mode. Proposals that seek RR or TC observations must explicitly justify those requests.

LCO's 2019A semester will begin on June 1. The Chilean share of time is 300 hours on the 1m telescopes and 200 hours on the 0.4m telescopes. We have started allocating observing time by instrument, rather than telescope class. All of our 1m telescopes are equipped with (Sinistro) imagers, but three of them are also equipped with (NRES) spectrographs. Proposals should indicate how much time they need on each instrument. The 0.4m telescopes are only equipped with (SBIG) imagers. Information on LCO's instruments is available at <https://lco.global/observatory/instruments/>.

KASI:

KMTNet/Chile is a 1.6m telescope with an 18Kx18K CCD Mosaic camera with a 2×2 square degree field of view. The available filters are B, V, Rc, Ic. The camera overhead time between exposures is 60 seconds. A simple script observation mode is available now, so multi target observation with multi filters can be conducted. It also helps to minimize the overhead time by combining tasks such as moving the telescope while downloading images etc. The essential information for scripting observation is object name, RA, DEC, Filter name, exposure time. Therefore, at least the five columns should be included in the observation method.

At KASI we use MSCRED package in IRAF to handle the MEF images. We can provide X-talk correction code and preprocessing script. The observed data can be stored on the disk at CTIO for a while, then Chilean researcher can download the images via internet. Please Note that the date shown in the table is universal time.

The block for Chilean time will be updated soon.

T80S:

Contact: Claudia Mendes de Oliveira, claudia.oliveira@iag.usp.br

T80S is a queue-scheduled robotic 0.8m telescope at CTIO. The telescope was designed to do a Sloan-like imaging survey in 12 filters (u',g',r',i',z' + 7 narrow-band filters, listed below). Proposers are strongly encouraged to use the full 12-filter set for their observations, as this will make the scheduling easier. The imager has an E2V 9.2x9.2 pixel CCD, giving 0.55 arcsec/pixel over a 1.4x1.4 degree field.

We expect that 17 nights will be available for the 2019A semester. If the telescope is closed for technical problems or engineering for any substantial amount of time in the semester, all users will have their times proportionally reduced.

Successful proposers will be given instructions on how to format their observing plans so that they can be incorporated into the queue. In the interest of maximising the scientific return of the T80S, we advise that proposers avoid targeting fields within the footprint of the S-PLUS survey (see file on CNTAC webpage). If you want to observe targets within this region, you should contact the PI of S-PLUS (Claudia Oliveira - claudia.oliveira@iag.usp.br) in advance of writing your proposal. Due to limited resources, we cannot guarantee to pipeline-reduce any of the Chilean Time data at this time, but we will deliver the raw images and appropriate calibration frames. Please note that if calibration images are needed, they should be included in the proposed time.

ASAS-SN

More information on Chilean time on ASAS-SN will be available soon.

Please see details at: <http://www.astronomy.ohio-state.edu/~assassin/index.shtml>

The contact person is José Luis Prieto (jose.prietok@mail.udp.cl)

4.2. LCO Facilities

For the **Baade** and **Clay** telescopes, this proposal round will cover the first semester of 2019, which will run from January 14 through July 8, 2019.

For the **du Pont** and **Swope** telescopes, this proposal round will cover the 2019 observing year, which will run from January 14, 2019 through January 16, 2020. This proposal round will also cover external programs using **APOGEE** on the du Pont telescope in the 2019B semester, which will run from July 9, 2019 through January 16, 2020.

General guidelines

Please note that all observers at Las Campanas are expected to be experienced and self-sufficient. All Magellan observers should read the Magellan Telescopes Observer Guidelines found at <http://www.lco.cl/lco/observer-information/visiting-observer> .

All observers at the Swope and du Pont telescopes should read the Small Telescopes Guidelines found at <http://www.lco.cl/lco/observer-information/visiting-observer> .

Instrumentation

A description of the instrumentation available for use on the Baade, Clay, du Pont and Swope telescopes can be found at <http://www.lco.cl>.

Note that there is an Exposure Time Calculator for the optical slit spectrographs on Magellan (LDSS, MIKE, IMACS, and MagE). The ETC can be found at http://alyth.lco.cl/gblanc_www/lcoetc/lcoetc_sspect.html .

+ Baade: IMACS (including GISMO and MMTF modules), FIRE, FourStar and MagE.

+ Clay f/11: LDSS3 and MIKE. The new CCD for LDSS3 has been commissioned. The new CCD has an extended red response, the performance is described in the paper to be found at http://snap.lbl.gov/ccdweb/estrada_et_al_proc_spie_7735_77351R_2010.pdf .The new CCD has become the default detector for LDSS3.

+ Clay f/11 PFS: PFS is a high resolution echelle spectrograph optimized for precision radial velocity measurements. PFS is a PI instrument and will only be available via collaborative arrangement with the instrument team.

If you are interested in applying for time on PFS in the 2019A semester contact Steve Sheckman (shec@obs.carnegiescience.edu) before submitting a proposal. Upgrades are presently being made to the PFS CCD camera and spectrograph optics. Please contact Steve for updates on the progress of the upgrade.

+ Clay f/11 M2FS: M2FS is a multifiber spectrograph with both high ($20K < R < 34K$) and low ($1.5K < R < 2.7K$) resolution modes. M2FS is a PI instrument and will only be available via collaborative arrangement with the instrument team. If you are interested in using M2FS, please contact Mario Mateo (mmateo@umich.edu) for further details before submitting proposal.

+ Clay f/5: MegaCam. There will be one f/5 run on Clay in 2019A. During the f/5 run none of the other Clay instruments will be available.

+ Clay AO: There will one MagAO run in the 2019A semester.

+ Clay PISCO: PISCO is a simultaneous griz-band imager, covering a 7.3 by 5.4 arcmin field with 0.11 arcsec/pixel sampling. PISCO is a PI instrument, those interested in using it should contact Tony Stark (aas@cfa.harvard.edu) before submitting a proposal.

+ du Pont APOGEE: The APOGEE survey began in early in 2017.

A limited number of nights are planned to be available for external programs beyond the survey. A draft summary of the procedures and technical aspects involved in conducting external APOGEE-2S observing programs is now available on the APOGEE-2 wiki: <https://trac.sdss.org/wiki/APOGEE2/ExternalObservations>.

New users can register at this site (see upper right corner of window). Because of the lead time in preparing the plug plates used in the observations, this proposal round will also cover external program observations for the second semester of 2019 running from July 9, 2019 through January 16, 2020.

+ du Pont RetroCam: Two technical issues (communications with the imaging array and physical problems with the filter wheel) took RetroCam out of service for most of the 2018 observing year. Pending on-sky testing, the first problem has been solved. Work will soon commence on the second issue, and it is expected that this problem can be solved. Observers who propose to use RetroCam should realize that it is only offered on a shared risk basis pending full on-sky testing.

+ Swope: The sole instrument is a camera with a 4K x 4K x 15 micron pixel CCD from E2V.

Magellan block schedule

This schedule is still pending and will be added once it becomes available.

CHAT:

The Chilean-Hungarian Automated Telescope is a 70cm diameter telescope installed in Las Campanas by a team led by Andrés Jordan (PI; PUC) and Gaspar Bakos (co-PI; Princeton). CHAT is a fully automated facility requiring no human intervention and is designed to deliver high quality relative photometric time series of fixed objects (no support for solar system object tracking). It is equipped with a back-illuminated 2kx2k CCD camera (0.6 arcsec per pixel; FOV of approx 20 x 20 arcmin²) and a filter wheel containing the Sloan griz filters. Approximately 16 nights are available for the CNTAC in 2019A and time can be requested in one or half-night units. If the CNTAC and the CHAT board approve a proposal that needs observation during specific nights, the CHAT team will do its best to accommodate it. Note that due to the time critical and ToO nature of the targets belonging to the programs CHAT was designed for, the allocated nights may have to be re-scheduled (PI will be informed). To observe, the PI must specify the target coordinates, the filter, a fixed cadence, a defocus level and the desired timing and total duration of the observations; a template will be provided to successful proposers. No other mode of observations will be supported. CHAT is mounted on a modified equatorial mount and the CCD orientation is fixed with N-S along columns and E-W along rows. When observations are successful, observers will receive reduced fits files. Typical performance of differential photometry so far is an RMS precision of ~1 mmag at ~120 sec cadence for a V~12.5 mag star. Some more information about CHAT can be found at <http://chat.hatsurveys.org>. The CHAT board is composed of Andrés Jordan, Gaspar Bakos and

David Osip; questions can be directed to Andrés Jordán (ajordan@astro.puc.cl). The CHAT hardware was funded by FONDEQUIP project EQM130030 of CONICYT.

4.3. ESO National telescopes

1. EULER

The instruments on EULER are still the same: the CORALIE high resolution spectrograph in the visible (R=50,000) and a CCD camera. To comply with the operational and safety requirements of the EULER operation (the telescope and instrumentation is operated by the observer himself, without telescope operator, and the documentation is mostly in French), a minimum number of training nights are required for new observers (2-3). Even trained observers are required to arrive on the mountain at least 1 night before the start of her/his observing run. The time allocation for 2019A will be 17 nights.

2. REM

REM is a 60 cm robotic telescope that can observe simultaneously with a visible and an infrared camera. The observation will be carried out in unmanned, service mode. Allocation for the 2019A semester is 112 hours.

2.1 Time for REM should be expressed in terms of hours. Also, different hours must be given for the two instruments (REMIR and ROS2, which can be used simultaneously, and this is in fact encouraged to not waste time) and the greater of the two counts as the requested time.

2.2 Applicants can have a look at the REM web site (www.rem.inaf.it) and follow the ->Instruments ->REMIR ->ROS2 links to have data on the filter pass-bands and the limiting magnitude for both instruments.

2.3 The ROS2 visible camera is equipped with set of filters Sloan/SDSS g', r', i', z' and is capable of obtaining the 4 images in the 4 different filters at the same time, using dichroics.

3. TRAPPIST

TRAPPIST-South is a 60 cm telescope installed in la Silla by Liège University and Geneva Observatory and operated remotely from Belgium. It is exclusively devoted to photometry of exoplanets, comets and other solar system minor bodies. TRAPPIST is equipped with a 2Kx2K CCD camera with pixels of 0.65" and two filter wheels. One is loaded with B,V,R,exoBB,z,I+z filters and a clear slot and the other one with special NASA narrow band cometary filters (Jehin et al., The ESO Messenger, 145, 2, 2011). Three full nights per month are offered and will be allocated depending on the TRAPPIST observing schedule. If the CNTAC approves a time-critical proposal that needs observation during specific nights, the TRAPPIST team will do its best to accommodate it. Note that due to the time critical and ToO nature of many TRAPPIST programs (that cannot be known 6 months in advance) the allocated nights might be shifted by one or more nights (PI will be informed). Targets brighter than V mag 9 are not allowed as they saturate the detector and minimum exposure time is 10 seconds until a better shutter is installed. With a defocus (of +300 steps or a 5" psf) the mag limits are (exptime of 5 s): B (9.5 mag), V (9.5mag), R (10 mag), ExoBB (11), z (8.5), I+Z (10), Clear (11.5). To avoid mechanical

failure the filter wheel cannot be moved at a frequency higher than 1x per 4 minutes for long series. The PI will prepare a sequence of observations by filling in a template that the TRAPPIST team will provide and execute.

More information can be found at: <http://www.trappist.ulg.ac.be/>

4. Danish telescope

Observing time with the Danish 1.54m telescope is offered in 2019A in visitor mode only. Proposal PIs must be aware that there is no technical assistance and no staff to introduce the telescope for new observers during the specified Chilean time slots. Observations in visitor mode can therefore be run only by observers having previous experience with using the telescope. The observer(s) will need to be approved by the telescope team before going up the mountain. For this purpose please contact Petr Pravec and Uffe Jorgensen well in advance.

Following time slots are offered:

2019 January 16/17 to January 24/25 (9 nights)

2019 April 8/9 to April 16/17, (9 nights)

The only instrument available at the Danish telescope during 2019A is a direct imaging 2k x 2k CCD camera with its main sensitivity in the red end of the spectrum and a 13.7' FOV with a pixel size of 0.39", equipped with Johnson-Cousins UBVRI, Stromgren uvby, Gunn z, g2, Hbeta filters. H-alpha filter may be available too, but it is not guaranteed.

5. Max-Planck-Gesellschaft 2.2m telescope

The MPI 2.2m telescope hosts the following instruments:

-WFI: Wide Field Imager, a focal reducer-type camera at the Cassegrain focus and with a field of view of 34'x33'

-FEROS: A state-of-the-art bench-mounted, high-resolution, environmentally controlled, astronomical echelle spectrograph.

-GROND: An imaging instrument especially built to investigate Gamma-Ray Burst Afterglows and other transients simultaneously in seven filter bands. Several dichroic beam splitters feed light into three NIR channels and four visual channels, each equipped with its own detector.

There is no service observing. Proposal PIs must be aware that there is only rudimentary support at the telescope.

6. TAROT

TAROT (Rapid Action Telescope for Transient Objects) is a set of three, very fast moving (1 second), optical robotic telescopes able to observe from the beginning a Gamma Ray Burst (GRB). One is located in Chile (TCH), another in France (TCA) and another (TRE) in La Reunion Island (France Overseas). Satellites detecting GRBs send timely signals to the TAROT network, which in turn is able to give a sub-arc second position to the community. The data from

the TAROT telescopes are useful to study the evolution of GRBs, the physics of the fireball and of the surrounding material. The TAROTs are also used for the multimessenger follow-up of the Advanced Virgo and LIGO gravitational observatories, as well as the ANTARES high energy neutrino deep-sea facility. The TAROT network observes also other sources like SNs, RR Lyrae, occultation of solar system bodies, and more generally is adapted to the study of variable/rapid phenomena.

There is the possibility of asking for time on the 3 TAROTs through the CADOR server. Chilean users can use 5% of the total system, an amount larger than 10% on a single system. There is no need to balance the observations between telescopes, the total quota can be spent on TCH only (in that case with a limit of 10%), but if the user wishes, then they can use any of the 3 telescopes.

The scheduling system of TAROT scan requests that are in form of several "scenes", each requiring a set of actual telescope configurations (exposure time, filter, coordinates, eventually time constraints). An interface on CADOR allows the user to build the requests. The TAROT web pages are at <http://tarot.obshp.fr/infos/>.

When a program is approved by the Chilean TAC, a user/password will be sent to the PI, which will contain a link to the request system with its documentation. A noticeable change made is the use on TCA and TCH of SDSS filters, instead of the previous Cousin ones. Before the end of 2018 we plan to install a new camera on TCA, namely the ANDOR Ikon L936 BEX2-DD with an enhanced quantum efficiency curve (see <http://www.andor.com/scientific-cameras/ikon-xland-ikon-large-ccd-series/ikon-l-936#graphs>) in place of the current old (2003) camera.

8. MiniTAO

MiniTAO will not be operational during the 2019A term and therefore will not be offered to the Chilean community.

4.4 Radio Telescopes

NANTEN2

NANTEN2 will not be operational during the 2019A term and therefore will not be offered to the Chilean community

ASTE

There will be approximately 100 hours available for the CNTAC during June-September, 2019. For more information on ASTE, please visit <http://www.ioa.s.u-tokyo.ac.jp/~kkohno/ASTE/>.

María Fernanda Durán.

CNTAC Coordinator on behalf of the CNTAC, October 2019.