



**DATE:** March 13, 2019

**TO:** Distribution

**FROM:** Michael Werner for the JPL Palomar Advisory Committee (JPAC)

**SUBJECT:** JPL/IPAC Palomar 200-inch Observing Time Proposals for 2019B, covering the period 01 August 2019 – 31 January 2020

Proposals for 200-inch observing time in the 2<sup>nd</sup> semester of 2019 should be submitted to the JPL Palomar Advisory Committee (JPAC) by

**5:00 PM California Time, Wednesday, April 10, 2019**

The following proposal information is enclosed:

- Instructions for filling out the on-line cover sheet and submitting your Palomar proposal
- Please read these instructions very carefully and follow them in preparing and submitting your proposals**

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All proposals for JPL Palomar time must be submitted via our proposal web site:

<https://jpac.ipac.caltech.edu/jpac/proposal.php>

To submit a proposal, you must fill in some basic information and attach your Caltech coversheet and your scientific justification, both in PDF format. You can find a link to the Caltech P200 coversheet here:

<http://www.astro.caltech.edu/observatories/coo/solicit/2019B/C200.html>

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A list of instruments available for 2019B and links to performance and operational information is available on the Palomar observers web site:

<http://www.astro.caltech.edu/palomar/observer/P200observers.html#instruments>

*Private* and *Semi-private* instruments may be requested only with the prior approval of the instrument builder. Please include in the discussion a confirmation that appropriate arrangements have been made. Although the Large Field Camera for visible imaging at the Prime Focus is still available, we strongly recommend that the new WaSP camera be used for this type of observation. The NESSI instrument for exoplanet spectroscopy brought to the 200-inch by Mark Swain and Rob Zellem (not included in the observatory list) will be available in 2019B. Interested users should contact Mark or Rob for more information. NESSI will also be discussed by Rob at the Palomar Jamboree (see below).

Applications for JPL 200-inch time will be accepted only from JPL/IPAC scientists as the principal investigator (PI). All PI's should submit one proposal for each 200-inch project. The PI is expected to be an experienced observer, with previous use of the requested instrument, or to be prepared to learn how to use the requested instrument prior to any assigned time. The PI is also expected to be present at the telescope – or remotely - for the full duration of any time allocated. Postdocs may apply as PI, but the proposal must be accompanied by a letter from the JPL advisor describing the qualifications of the postdoc as a Palomar PI. This letter can be sent via email to Mike Werner ([mww@ipac.caltech.edu](mailto:mww@ipac.caltech.edu)), and it must arrive by the proposal deadline.

**JPL Engineering time:** A limited number of JPL engineering nights will be available to JPL scientists in the 2019A semester. No more than two nights will be awarded to any PI (or team). This time can be used to test new instruments or observing techniques on the Hale Telescope, but requires the agreement of the Observatory Director. If you wish to apply for this time, please contact Mike Werner ([mww@ipac.caltech.edu](mailto:mww@ipac.caltech.edu)) at least one week prior to the proposal deadline. A full proposal for this time must also be submitted on or before the deadline. In this proposal, the PI must make it clear that the request is for JPL engineering time, indicate what support might be required from the Palomar staff, and whether or not the engineering nights need to be scheduled contiguously with night(s) for which a science proposal is also submitted. You should also describe briefly the science which will be enabled by the engineering activities.

**Large Projects:** We encourage large-scale observing projects by individuals or teams that will use the facilities of the 200-inch telescope to attack problems that would be difficult to engage within the constraints of semi-annual allocations. Large Projects should require more than five nights of observing time per semester, or more than 10 nights of observing time per year. Accepted Large Projects will be allocated time for two semesters, with the possibility of renewal. A completed cover sheet and a comprehensive 1-page status report must be submitted during the open call for proposals for the second semester of an approved Large Project. Large Projects already allocated time in two semesters must be resubmitted, following updated proposal instructions, if additional time is sought. In all cases a clear indication of the duration of the project must be given. Proposers of Large Projects must follow the same application process as other proposers, with the exception that an additional page of scientific justification (a total of up to 3-pages, maximum) may be used for Large Project proposals. Large Project proposals will be evaluated by the JPAC simultaneously with standard proposals. There is no *a-priori* allocation of time to Large Projects.

**Strategic Projects:** We are not soliciting new strategic proposals this time around. If you are executing a strategic project, you will still have to submit a proposal for 2019B, if this semester were included in your strategic proposal. Your proposal should include a one-to-two page status report of progress on the work to date (plus a page of figures and tables) highlighting continued justification for strategic status, and a copy of the original proposal under which you received strategic project status. Be sure to fill in the Caltech coversheet as well. Specify the number of nights you have been allocated for 2019B, and request more

only if there is compelling justification. Please use the phrase "A Strategic Observing Program for Palomar Observatory" as part of the proposal title.

### **Important Further Information:**

We presently anticipate significant P3K downtime (Aug -- Oct 2019) in 2019B while the team finishes a long-delayed upgrade. You may propose to use the 64x64 mode of P3K after November 1, 2019. The 16x16 mode will not be available until the 2020A semester.

Under the editorship of Lin Yan, COO has initiated an electronic newsletter to be made available several times per year containing information of interest to users of the 200-inch telescope. If you have not previously signed up to receive this newsletter and wish to do so, please drop an email to Mike Werner [mww@ipac.caltech.edu] expressing your interest. The two issues published to date can be found at <http://www.astro.caltech.edu/palomar/observer/newsletter.html> and present interesting information relevant to the 200-inch. The second issue, in particular, presents information about data processing packages available for a number of the 200-inch instruments.

In addition, as part of the 2019B call we have scheduled a Palomar Jamboree on several dates between 28 March and 2 April to stimulate and support proposal preparation. You should have received an email announcement of this event on March 5, 2019.

Finally, a number of JPL and IPAC colleagues who are experienced users of Palomar instruments have volunteered to provide tips and advice about proposing and using the data from the different instruments. This roster is presented here. I thank these folks for their willingness to help out in this fashion:

<b>Instrument</b>	<b>Contact</b>
Triple Spec	Eric Mamajek
	Federico Marocco
P3K	Seth Meeker
P3K+PHARO	Dave Ciardi (IPAC)
DBSP	Dan Stern
	Joe Masiero
WIRC - Pol and exoplanets	Max Millar-Blanchaer
WIRC - Imaging	Jacqueline McCreary
CWI	Phil Appleton (IPAC)
NESSI	Rob Zellem
Fatherly advice	Geoff Bryden

# PROPOSAL INSTRUCTIONS

## The Cover Sheet

All observers must fill out the Caltech on-line cover sheet. Fill out the form, save it in PDF format, and then upload this file, together with your science justification, via the JPL on-line proposal submission system web site. The target list should be part of your scientific justification.

When filling out the Caltech coversheet, please take care to:

List the relative priority in case you submit more than one proposal.

Enter the number of nights requested in the appropriate column. Indicate your preferred run or runs with a "P", and acceptable runs with an "A", regardless of type (light or dark). For maximum flexibility in scheduling, it is important to know all the times you can observe. <sup>1</sup>

Fill in the instrument you wish to use. An up to date listing of all 200-inch instrumentation is available at <http://www.astro.caltech.edu/palomar/observer/P200observers.html#instruments>. *Private* and *Semi-private* instruments may be requested only with the prior approval of the instrument builder. Please include in the discussion a confirmation that appropriate arrangements have been made. If you list "Own Equipment," identify the instrument in the proposal abstract.

If you wish to use more than one instrument in the course of the project, use a separate line for each instrument. At the 200-inch telescope, you may request instruments to be installed simultaneously at the prime focus and Cassegrain focus but you must fully justify the request in your proposal. Secondary instruments should be requested *only* if they are *integral* to the program and if there is a *very high probability* that they will be used during the observing run.

Check the box provided if scheduling constraints apply to the request. Give the specifics in the proposal abstract and in the body of the proposal. **Following this instruction is particularly important now that more and more programs are requesting specific nights in order to study exoplanet transits and eclipses. You should be filling out a separate form detailing your timing requirements.**

Observers may request full or half nights for Hale/P200. Observers should be advised that it may not always be possible to schedule partial night allocations.

DBSP, LFC, WASP, WIRC and TripleSpec may be operated by remote observing, eliminating the need for and cost of travel to Palomar. For additional information, see [Cahill Remote Observing Facilities](#).

The system of *P*s and *A*'s to designate preferred and acceptable runs (respectively), intended to take the guess-work out of scheduling, rests on two conditions: First, observers need to be as generous as possible in designating acceptable runs, since overly-constrictive selections make scheduling difficult and, in extreme cases, may even preclude the assignment of observing time to the project. A good approach would be to tag any observing run as Acceptable if the data can be obtained during that period. Second, the scheduler will not assign observing time in a run that has not been tagged by the observer with a P or an A. Should circumstances obtain that such assignment might be needed, the scheduler will discuss the situation with the observer before any exception to the rule is applied. Putting all the *P*s and *A*'s on a single line means you want the time scheduled in a single block, if possible. If you want the time distributed into two or more blocks, use a separate line for each block

## **Scientific Justification, Target List and Summary of Previous Allocations**

The scientific justification should include:

- A short description of the project (2 pages maximum, 3 pages maximum for Large Projects)**, including your science goals, methodology, and the appropriateness of the Palomar 200-inch telescope. If this is an ongoing project, describe what has been done. If the project will require time beyond the current semester, describe how much observing time will be needed to complete the work. Remember to **give the big picture** (e.g., the total scope of the project, what will be done at Palomar vs. what will be done with other facilities, who will do the work, etc.). Remember, not all members of the TAC will be experts in your field, so make sure you explain the significance of your research to a broader audience.
- A detailed **estimate of the time required** for the observations. No standard format can be specified for this, as it will vary from program to program. Obvious factors to take into account are the brightness of your objects, the signal-to-noise ratio required, instrumental characteristics, potential systematic errors and how you will deal with them, and assumptions about sky brightness (i.e., phase of the moon). Be as specific as you can.
- Up to **two pages** of figures, tables, and references supplementary to the written discussion. We particularly welcome \*legible\* figures which can be read by the JPAC and used to publicize the results of our work at Palomar.
- A list of objects to be observed**, including name, coordinates, and approximate magnitude (specify band). In case objects will be selected from large samples, it is not necessary to list all the objects; however, make sure that in the text discussion the sample and its size are well-defined, and the selection criteria and the number of objects to be observed are specified clearly.
- Any **scheduling constraints** that may apply. If you are proposing observations which must be scheduled at specific times [e.g. occultations, transits, critical phase coverage in a binary, etc.], check the Date-Specific box on the proposal cover sheet and justify the date specificity. For the 200-inch, download the Date-Specific supplement to the proposal cover sheet (<http://www.astro.caltech.edu/observatories/coo/solicit/2019B/DS.html>), fill in the required information, and include it in your proposal as an addendum to the cover sheet. If there are dates when you cannot observe, or if the observation must be made within a window of a couple of days, again check the Date-Specific box and explain and justify the need for the specificity in the proposal.
- The **status** of 200-inch observing time allocated to you over the past two years, plus an updated list of publications – including conference proceedings, abstracts, and submitted papers - from the past two years based solely or in part on Palomar observations. **It is particularly important that you provide this publication information, not only in support of your proposal, but in support of JPL's investment in the 200-inch.**

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## **Shared-Risk Observing**

*Shared Risk Observing* is not relevant for this solicitation.

## **Publication Acknowledgement**

We request the following acknowledgement to appear in any publication based wholly, or in part, on observations obtained at the Hale Telescope: "Based on observations obtained at the Hale Telescope, Palomar Observatory as part of a continuing collaboration between the California Institute of Technology, NASA/JPL, Yale University, and the National Astronomical Observatories of China."