

# Spitzer Space Telescope



## Guidelines for Submission of Director's Discretionary Time Proposals

Version 2.0

15 December 2017

*DDT proposals are submitted through the online application form, not Spot.*

Apply here: <https://catcopy.ipac.caltech.edu/ddt/proposal.php>

Proposal Kit: <http://ssc.spitzer.caltech.edu/warmmission/propkit>

Helpdesk: [help@spitzer.caltech.edu](mailto:help@spitzer.caltech.edu)

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### Document Change Control Record

<b>Date</b>	<b>Version</b>	<b>Author</b>	<b>Description</b>
2017 December 15	2.0	Lisa Storrie-Lombardi, Nancy Silbermann & the SSC Community Affairs Team	Updated to take into account the Cycle-14 call for proposals. Only time critical DDT proposals may be submitted.
2017 March 14	1.1	Lisa Storrie-Lombardi, Nancy Silbermann & the SSC Community Affairs Team	Text added to specifically state that previously rejected GO proposals should not be resubmitted as DDT proposals.
2016 October 13	1.0	Lisa Storrie-Lombardi, Nancy Silbermann & the SSC Community Affairs Team	Initial version issued

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# 1 Overview

Spitzer is executing the “Beyond” phase of the mission – the final 2.5 years. The Beyond phase of the mission is funded through March 2019. The Cycle-14 call for proposals, issued simultaneously with these guidelines, is the final proposal call for Spitzer.

**Discretionary Time (DDT) proposals should only be submitted to support time-critical, high-impact science that could not be proposed for Cycle-14. Observations that could reasonably have been proposed, including generic targets, by 16 March 2018 will not qualify as time critical observations and will not be considered for DDT approval after 16 March 2018.**

1. DDT proposals may be submitted at any time through February 2019. Investigators should not utilize DDT to resubmit all or part of a proposal that was rejected by the normal peer review process.
2. The default proprietary period for all DDT programs is zero days but a maximum 90-day proprietary period can be proposed.
3. DDT requests must include:
  - a. A justification for why the proposal was not submitted in Cycle-14.
  - b. A justification of the time criticality.
  - c. A strong scientific justification.
  - d. A description of the long-term legacy value of the program.
  - e. Completed Astronomical Observation Requests (AORs).
4. The proposal must be submitted using the **DDT proposal template** and follow the page limits and other instructions provided in these guidelines.
5. The proposal must be submitted through the DDT web form (not Spot) at <https://catcopy.ipac.caltech.edu/ddt/proposal.php>.

## 2 Quick Proposal Submission Guide

All DDT proposals must be submitted through the online application webpage at (<https://cat.ipac.caltech.edu/DDT/application.html>). *Spot* is required for creating your AORs.

1. Go to the Proposal Kit webpage (<http://ssc.spitzer.caltech.edu/warmmission/propkit/>). All of relevant information is available there.
2. Install the *Spot* software package.
3. Create your AORs in *Spot* and save the AOR file.
4. Download the proposal template. Use this to write the proposal and then save as a PDF file.
5. Go the DDT application webpage (<https://cat.ipac.caltech.edu/DDT/application.html>).
  - a. Enter the coversheet information into the web form.
  - b. Attach the proposal PDF file.
  - c. Attach the AOR file.
6. Hit the submit button. Proposals cannot be updated through the web form. If you need to resubmit a proposal, just submit it again and notify the Helpdesk that the earlier version should be ignored.

The Spitzer Observing Rules (<http://ssc.spitzer.caltech.edu/warmmission/propkit/sor/>) and the Cycle-14 Call for Proposals (<http://ssc.spitzer.caltech.edu/warmmission/propkit/cp/>) provide detailed information about proposal planning, supporting documentation and policies.

## 3 Operational Observing & Data Volume Constraints

Proposals can include observations that are constrained, with the caveat that the more constrained the program, the harder it is to schedule. Though the project has implemented enhanced data compression strategies, data volume is a limiting factor due to the downlink rate, as Spitzer is more than 1.5AU from the Earth. Very high data volume proposals are not prohibited but will be executed only in extraordinary circumstances. Table 1 summarizes the observing modes, frame times and a rating of the expected data volume. If your observations require a ‘very high’ data volume mode, please consult with the SSC before you submit your proposal to determine the feasibility of your proposed observation.

Mode	Frame Time (secs)	Data Volume
<b>Full-array</b>	0.4, 2	Very High
<b>Full-array &amp; HDR</b>	6, 12, 30	Moderate
<b>Full-array &amp; HDR</b>	100	Low
<b>Sub-array</b>	0.02, 0.1	Very High
<b>Sub-array</b>	0.4	Moderate
<b>Sub-array</b>	2	Low

**Table 1: The Data Volume Ratings for the available observing modes and frame times. These ratings apply to data taken with “data collection” turned on for one or both arrays.**

The SSC IRAC Instrument Support Team recommends that single target staring observations that would require 6-12 second full-array observations be done with 2 second sub-array observations (<http://irachpp.spitzer.caltech.edu/page/exptime>).

Starting in late 2015 a new operational observing constraint was implemented to maintain the minimum recommended battery charge level. All observations for two hours after a downlink must be at a pitch angle < 10 degrees. The time required at low pitch angle may increase in 2018-19.

## 4 Proposal Page Limits

The page limits for DDT proposals are summarized in

DDT Proposal Size	Hours ≤ 10	Hours > 10
<b>Justification for why not submitted in C14</b>	No page limit	
<b>Science Plan Sections</b>		
Science Justification, including legacy value	1	2
Technical Justification	1	1
Figures, Tables, Refs	1	2
<b><i>Total for Science Plan</i></b>	<b>3</b>	<b>5</b>
<b>Additional Required Sections</b>		
<b>Summary of Existing Programs</b>	1	1
<b>Observations Summary Table</b>	No page limit	
<b>Modification of Proprietary Period</b>	No page limit	
<b>Summary of Duplicate Observations</b>	No page limit	
<b>Summary of Scheduling Constraints</b>	No page limit	

Table 2. The descriptions of what should be included in each section are provided in the Cycle-14 Call for Proposals (<http://ssc.spitzer.caltech.edu/warmmission/propkit/cp/>).

<b>DDT Proposal Size</b>	<b>Hours ≤ 10</b>	<b>Hours &gt; 10</b>
<b>Justification for why not submitted in C14</b>	No page limit	
<b>Science Plan Sections</b>		
Science Justification, including legacy value	1	2
Technical Justification	1	1
Figures, Tables, Refs	1	2
<b>Total for Science Plan</b>	<b>3</b>	<b>5</b>
<b>Additional Required Sections</b>		
<b>Summary of Existing Programs</b>	1	1
<b>Observations Summary Table</b>	No page limit	
<b>Modification of Proprietary Period</b>	No page limit	
<b>Summary of Duplicate Observations</b>	No page limit	
<b>Summary of Scheduling Constraints</b>	No page limit	

**Table 2: Page limits for DDT proposals.**

Figures and tables can be embedded in the narrative or segregated. *Do not include any additional material, e.g., letters of endorsement.* The DDT proposal template is available from the proposal kit webpage (<http://ssc.spitzer.caltech.edu/warmmission/propkit/>).

## 5 Special Telescope Overheads

Special overhead burdens are applied to observations that need to be executed less than 8 weeks after the AORs are available to schedule at the SSC. During the cryogenic mission these were designated as high- or medium-impact Targets of Opportunity. This special overhead is added to the normal overhead applied to each Astronomical Observation Request (AOR) computed by *Spot*, the software required for Spitzer observation planning. It accounts for the time required to prepare for the observation and to return the Telescope to its nominal schedule. As described in the *Spitzer Space Telescope Warm Mission Observing Rules*, the special overhead is intended to reflect the observing time lost in other programs as a result of executing the relevant observation(s).

If your DDT proposal includes requested execution of the AORs within 8 weeks of approval of the proposal you must include these overheads in the total requested observation time. The relevant special overheads are:

### **Execute in < 1 week • High-Impact Target of Opportunity: 6.5 hours**

This overhead will be applied to the first AOR in a *group*, *chain* or *sequence* of AORs to be executed consecutively during a single observing session on a single target. For observations that are constrained with a *follow-on* constraint, the overhead must be applied to every AOR individually. The *group*, *chain* or *sequence* constraints mean that observations can be scheduled contiguously and therefore have less impact on the schedule than those constrained with a *follow-on* constraint.

### **Execute in 1 – 8 weeks • Medium-Impact Target of Opportunity: 2.6 hours**

This overhead will be applied to the first AOR in a *group*, *chain* or *sequence* of AORs to be executed consecutively during a single observing session on a single target. For observations that are constrained with a *follow-on* constraint, the overhead must be applied to every AOR individually.

These overheads must be specified using *Spot* when the AORs for the proposal are created. From within the relevant AOR dialog click the **Special ...** button and select the overhead from the list. *Spot* will calculate the required time and add it to the Total Duration returned on the main *Spot* AOR page.