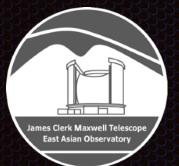
LEGWIG JCMT Proposal Preparation & Integration Time Calculator

James Clerk Maxwell Telescope



The Hedwig Proposal Management System was created by Dr. Graham Bell, EAO / JCMT.

Mark G. Rawlings East Asian Observatory /



Image: Martin Leber, FreePik

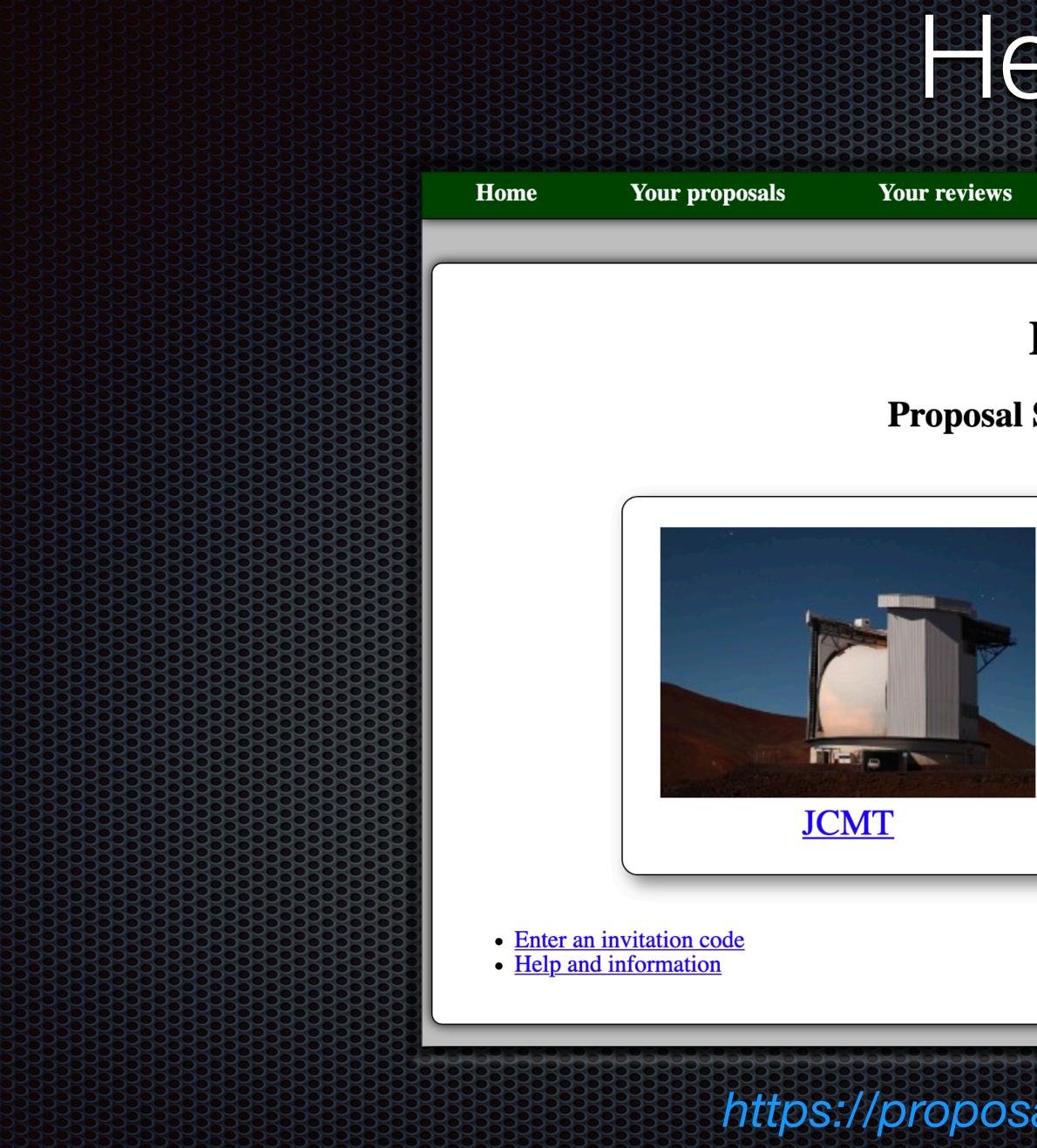


Overview

- Introduction to Hedwig: JCMT web-based proposal submission & review system
- User Registration & Login
- Proposal Preparation
 - General Proposal Preparation
 - Science & Technical Justifications
 - Time needed for Proposal: Integration Time Calculator (ITC)
 - Target Tools: Clash Tool & Target Availability Tool
 - Proposal Submission

Other useful resources for proposal preparation



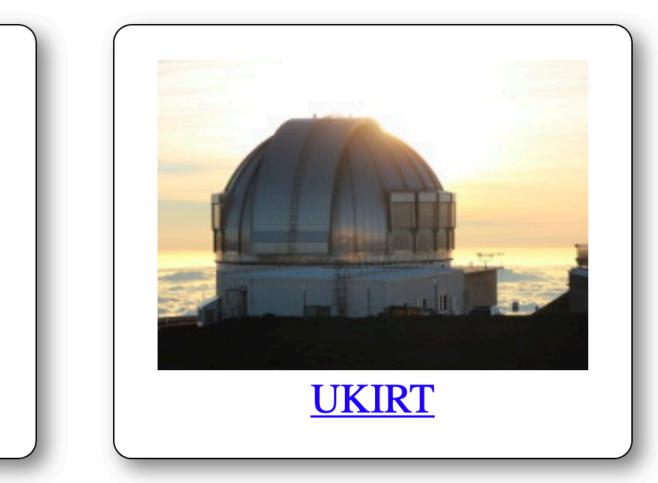


Hedwig

Log in Help

Hedwig

Proposal Submission System

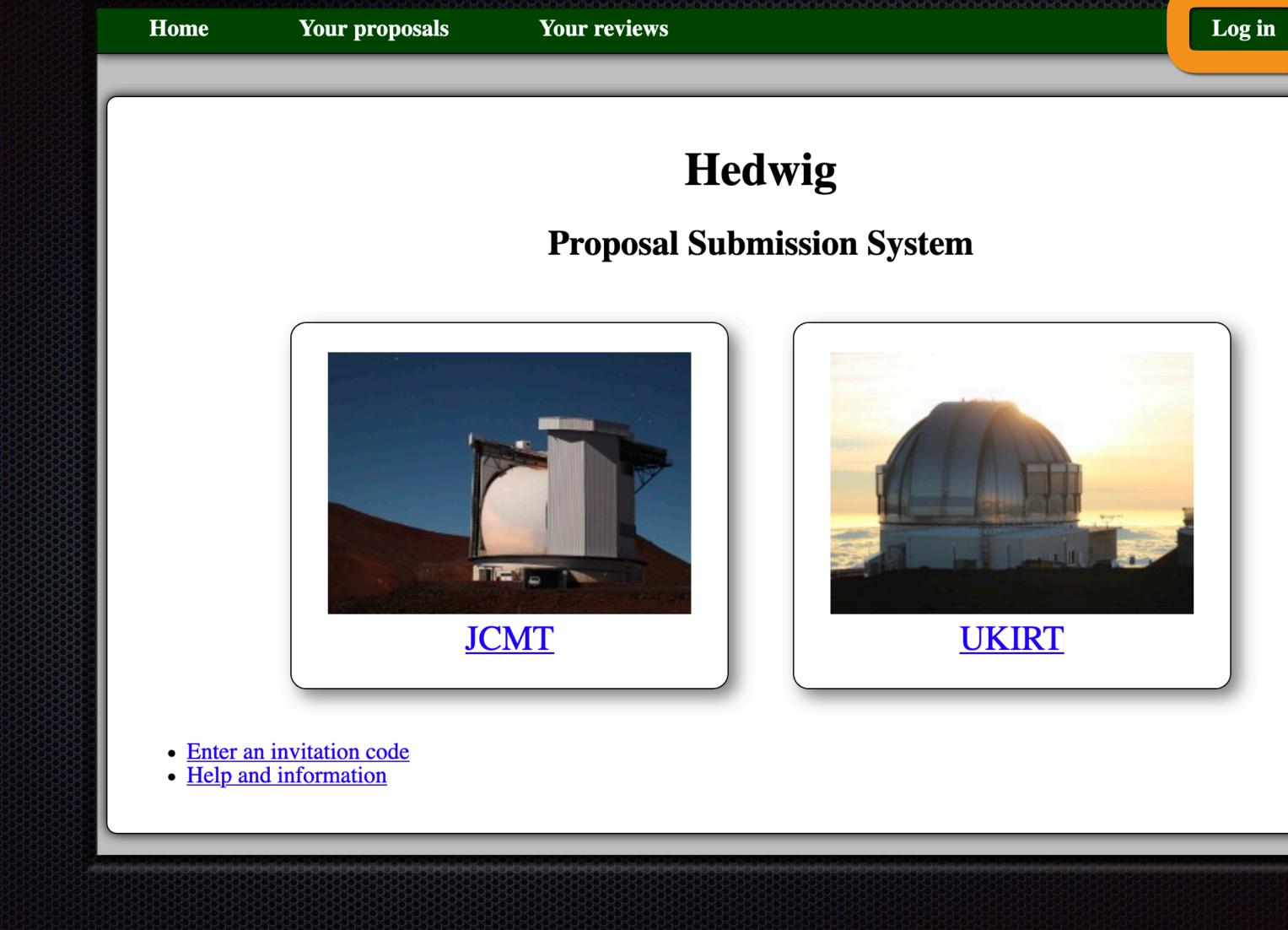


https://proposals.eaobservatory.org

Hedwig User Registration & Login

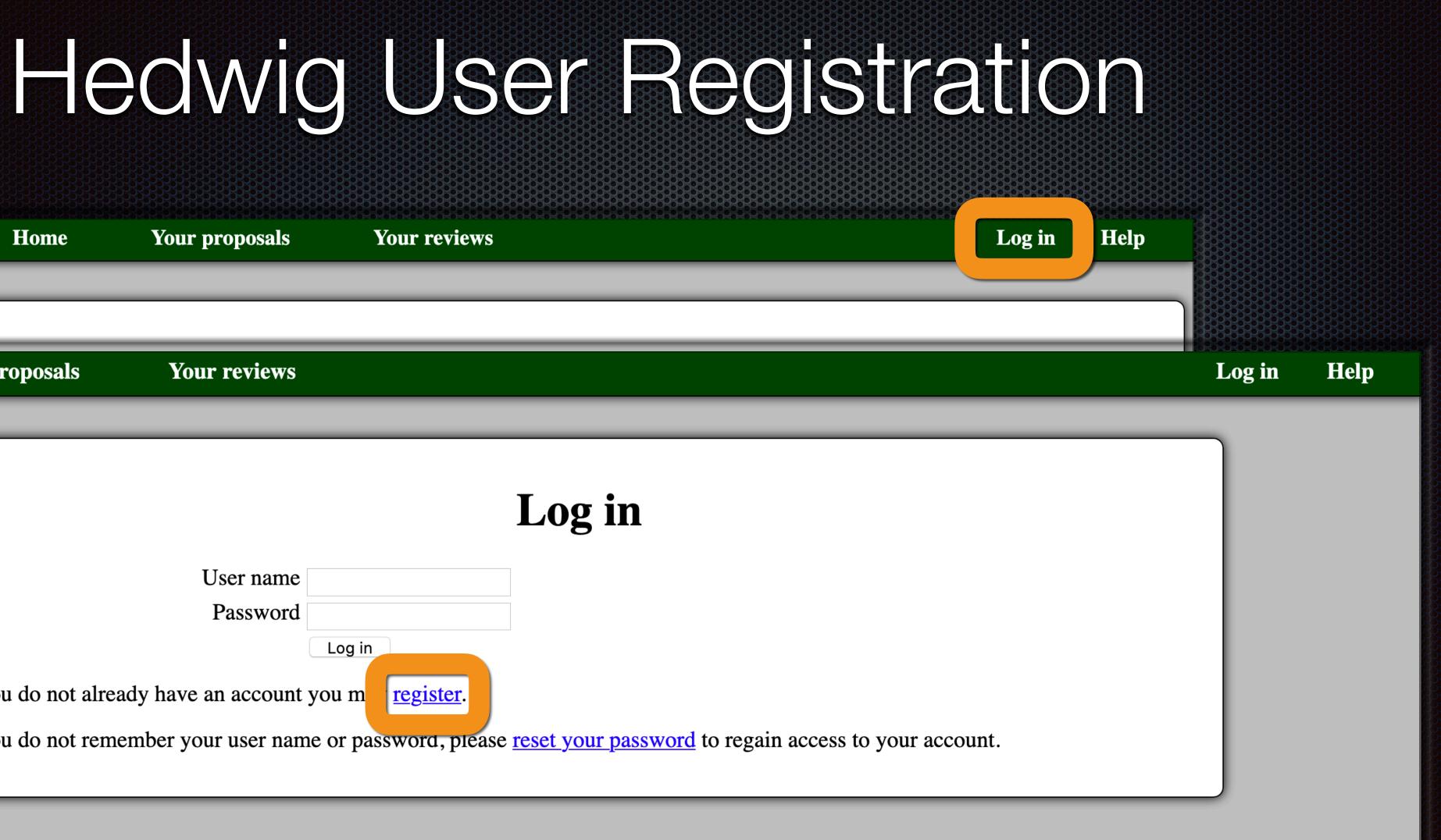


Hedwig User Registration



Help

| | Home | Your proposals | Your reviews |
|------|--------------------|--------------------------|--|
| | | | |
| Home | Your proposals | Your reviews | |
| | | | |
| | | | |
| | | | |
| | | User name | |
| | | Password | |
| | | | og in |
| | If you do not alre | eady have an account you | ı m <u>register</u> . |
| | | | |
| | If you do not ren | nember your user name o | or password, plea |
| | | | |
| | | | |
| | | | Help ar |
| | • Enter a | n invitation code | |
| | | nd information | |
| | | | |
| | | | 0- |



information Contact us

Hedwig User Registration

| Ī | ļ | lome | |
|---|---|------|--|
| | | | |

Your proposals

Your reviews





Please only register a new account if you do not already have one. You may log in to an existing account to update your personal details and email addresses, or reset a forgotten password.

| User name | |
|-------------------|----------|
| Password | |
| Re-enter password | |
| | Register |

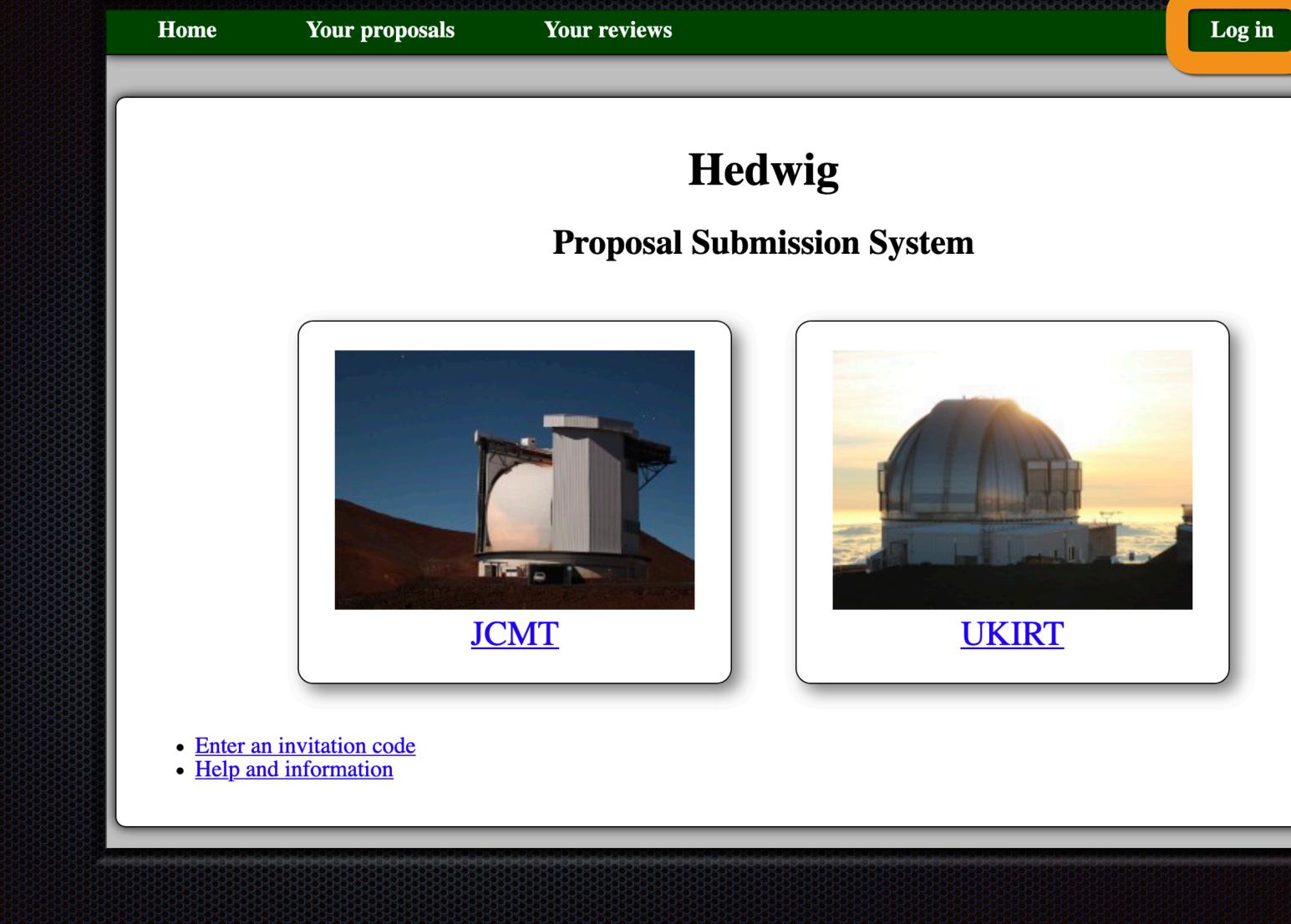


Log in Help

Register

Registration step 1/3.

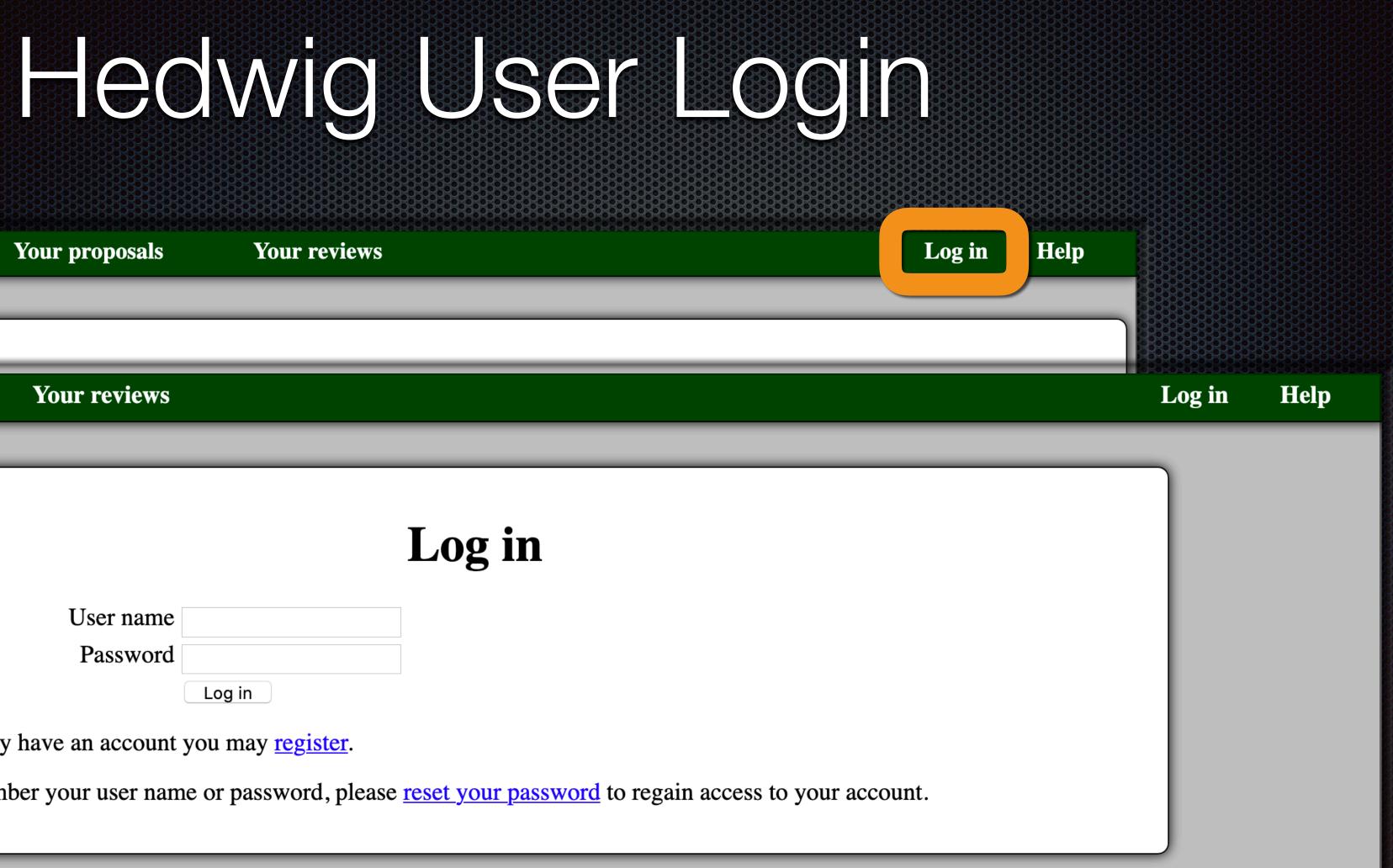




Hedwig User Login

Help

| Home Your proposals Your reviews User name User name Password Log in If you do not already have an account you may register If you do not remember your user name or password, p Help • Enter an invitation code • Help and information | | Home | Your proposals | Your reviews |
|---|------|--------------------|--------------------------|-------------------------|
| User name Password Log in If you do not already have an account you may register If you do not remember your user name or password, pi Help | | | | |
| Password Log in If you do not already have an account you may register If you do not remember your user name or password, p Help • Enter an invitation code | Home | Your proposals | Your reviews | |
| Password Log in If you do not already have an account you may register If you do not remember your user name or password, p Help • Enter an invitation code | | | | |
| Password Log in If you do not already have an account you may register If you do not remember your user name or password, p Help • Enter an invitation code | | | | |
| Password Log in If you do not already have an account you may register If you do not remember your user name or password, p Help • Enter an invitation code | | | | |
| Log in If you do not already have an account you may register If you do not remember your user name or password, p Help • Enter an invitation code | | | | |
| If you do not already have an account you may register. If you do not remember your user name or password, por Help • Enter an invitation code | | | Password | |
| If you do not remember your user name or password, p Help • Enter an invitation code | | | | .og in |
| • Enter an invitation code | | If you do not alre | eady have an account you | u may <u>register</u> . |
| • Enter an invitation code | | If you do not ren | nember vour user name o | or password, plea |
| Enter an invitation code | | | | - F, F, F |
| Enter an invitation code | | | | |
| Enter an invitation code | | | | Help a |
| | | | | <u>1101p a</u> |
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Contact us information

| | Home | Your proposals | Your reviews |
|------|----------------------|-------------------------|-------------------------|
| Home | Your proposals | Your reviews | |
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| | | User name | |
| | | Password | |
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| | If you do not alread | ady have an account you | ı may <u>register</u> . |
| | If you do not rem | ember your user name o | or password, plea |
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| | | | |
| | | | Help an |
| | | invitation code | |
| | • <u>Help and</u> | d information | |
| | | | |
| | | | |

Hedwig User Login

Log in Help

Logged in as <User Name> Help

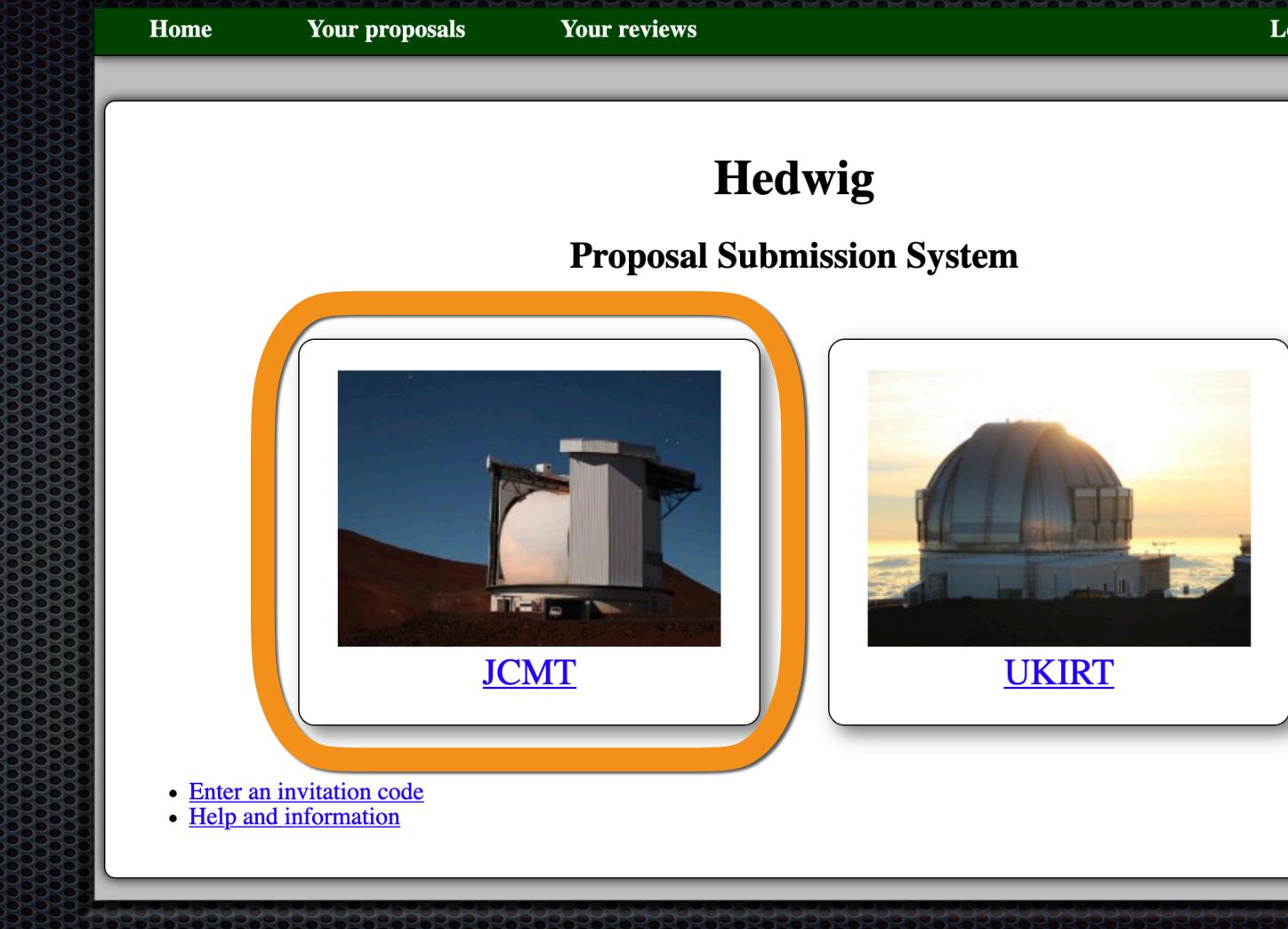


reset your password to regain access to your account.

Contact us <u>iformation</u>

Hedwig Proposal Preparation

Hedwig - JCMT Proposal Preparation



Help Log in

Home

Your proposals

Your reviews

Calls for Proposals

There are currently no open regular calls for proposals.

Other calls for proposals

Previous calls for proposals

Calculators

- SCUBA-2 ITC
 - Time required for target RMS
 - RMS expected in given time
- Heterodyne ITC
 - Time required for target RMS
 - RMS expected in elapsed time
 - RMS for integration time per point

Target Tools

- Clash Tool
- Target Availability

Hedwig - JCMT Proposal Preparation

JCMT

Log in Help

JCMT

Access Open Calls for Proposals here

Access ITCs for SCUBA-2 & heterodyne instruments

Access Clash & Target **Availability Tools**

Home

Your proposals

Your reviews

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Hedwig - JCMT Proposal Preparation

JCMT

Log in Help

JCMT

Access Open Calls for **Proposals** here

Access ITCs for SCUBA-2 & heterodyne instruments

> Access Clash & Target **Availability Tools**

Your proposals

Example Call for Proposals

This is a call for test proposals. For regular calls for proposals, please see the *facility home page*.

Semester Information

Semester start of observi

Semester end of observin

Queue

Call for proposals closing

Test Call Information

This call is intended solely for student training purposes.

Please do not submit any real proposals in response to this call!

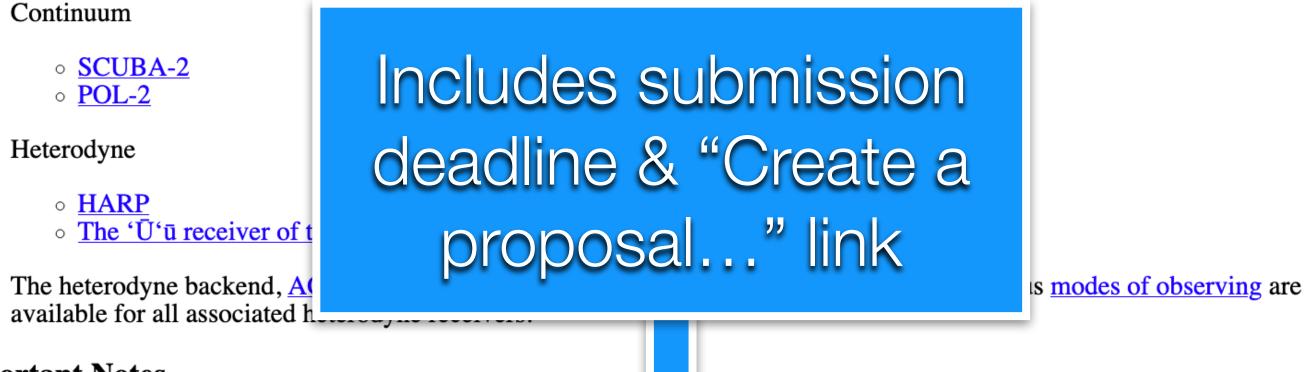
Available Instruments

- Continuum
 - <u>SCUBA-2</u> • <u>POL-2</u>
- Heterodyne
 - HARP • The ' \overline{U} ' \overline{u} receiver of t

Important Notes

Test Call for Semester 20B

| ng | 20 | 20-08-02 00:00 UT | | | |
|--------|---------------------|---------------------|--|--|--|
| g | 2021-02-02 00:00 UT | | | | |
| | | PI Science | | | |
| g date | | 2020-12-04 01:00 UT | | | |





Example Call for Proposals

Further Questions

For any remaining further questions, please use the <u>"Contact us"</u> link at the bottom of any page of the proposal submission system.

Available Queues

The following queues have open calls for this semester. Please select a queue to start a new proposal.

PI Science

Call for proposals opens 2020-11-29 03:00 UT Call for proposals closes 2020-12-04 01:00 UT

This is the combined queue used for all JCMT PI prosals other than University of Hawaii projects.

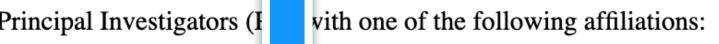
Affiliations

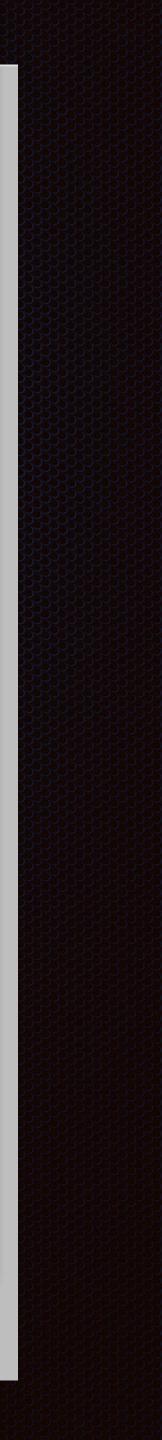
This queue is available for Principal Investigators (I

- China
- EAO Staff (Hilo, Hawaii)
- Indonesia
- Japan
- Malaysia

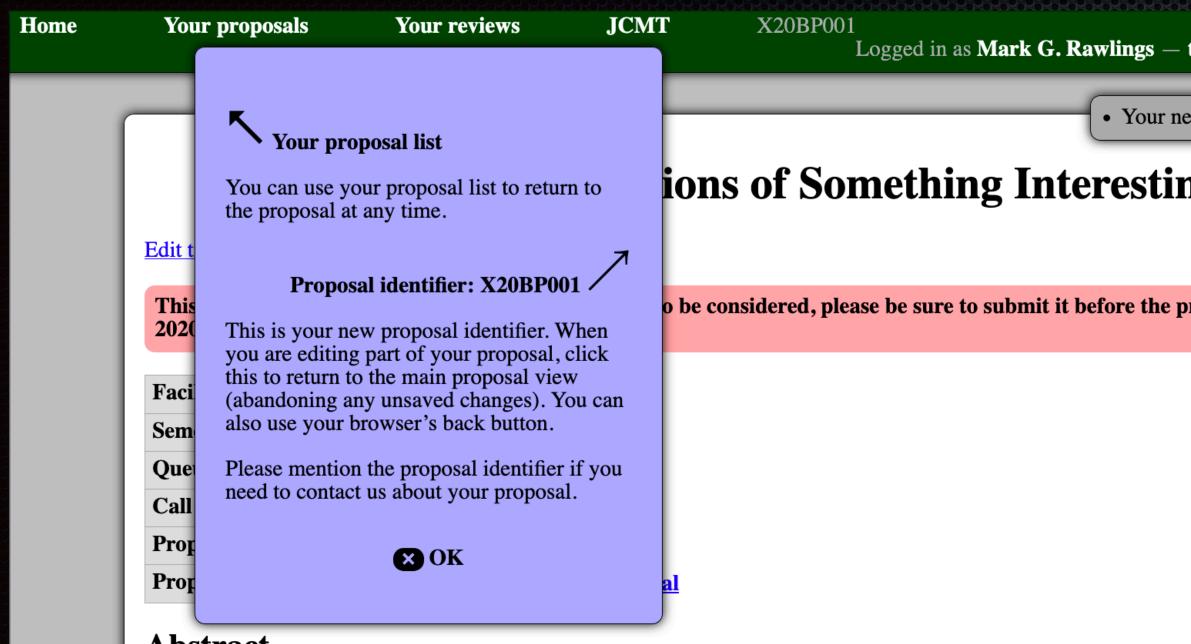
• South Korea • Taiwan • Thailand • UK & Ireland (listed institut • Vietnam Includes submission And additionally to Co-Investigate deadline & "Create a Canada Please see the <u>eligibility requirem</u> proposal..." link Other (non-PI) members of the pro ffiliations apply.

+ Create a proposal for the PI Science Queue (Test Call)





General Proposal Preparation



Abstract

This proposal does not yet have an abstract.

Edit abstract and categories

Scientific Justification

This proposal does not yet have a scientific justification.

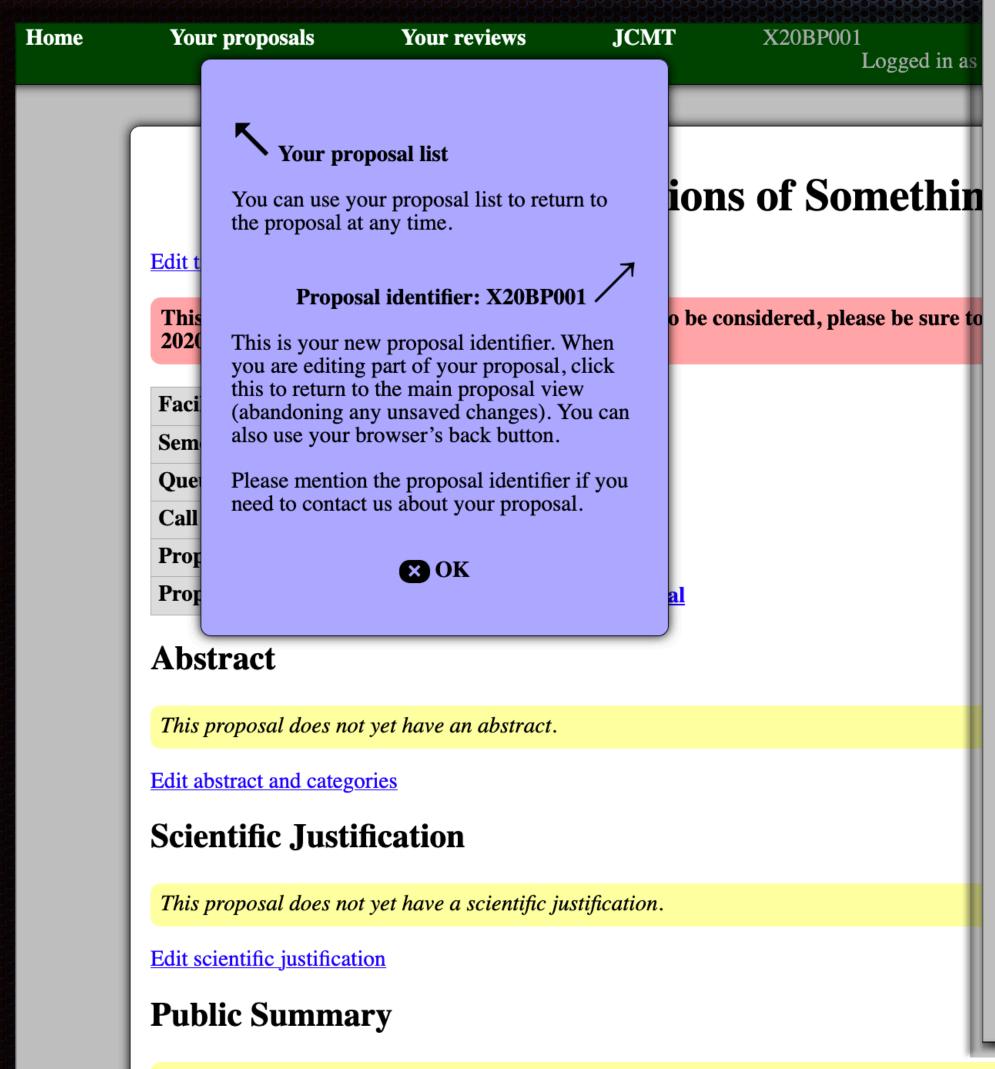
Edit scientific justification

Public Summary

This proposal does not yet have a public summary.

| ke admin — log out Help proposal has been created. | | | |
|---|--|--|--|
| | | | |
| 5 | | | |
| osal deadline, | | | |
| | | | |
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General Proposal Preparation



This proposal does not yet have a public summary.

Members

| Name | Affiliation | Institution | Role |
|------------------|-------------|---------------------------------------|--------------------|
| Mark G. Rawlings | EAO Staff | East Asian Observatory, United States | PI editor reviewer |

Add member Edit members

Remove yourself from this proposal

No students are listed as needing data from this proposal.

Edit student list

Observing Request

This proposal does not yet have an observing request.

Edit observing request

Target Objects

This proposal does not yet have any target objects.

Edit targets Upload target list

Calculation Results

This proposal does not have any calculation results.

Add calculation: <u>SCUBA-2 ITC</u>, <u>Heterodyne ITC</u>

Technical Justification

This proposal does not yet have a technical justification.

Edit technical justification

Previous Proposals and Publications

This proposal does not yet have a list of previous proposals.

Edit previous proposals and publications



Science & Technical Justifications

Sometimes also referred to as the "Science & Technical Cases" In Hedwig, both can be either entered in 2 ways: Via text boxes (with attached figure images) PDF files may be uploaded Follow Call for Proposals instructions for overall length, font size, etc.

They are <u>rules</u>, not guidelines!

Time Needed for Proposal?

JCMT Integration Time Calculator (ITC)



Your proposals

Your reviews

Calls for Proposals

There are currently no open regular calls for proposals.

Other calls for proposals

Previous calls for proposals

Calculators

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Target Tools

- Clash Tool
- Target Availability

Hedwig - JCMT Proposal Preparation

JCMT

Log in Help

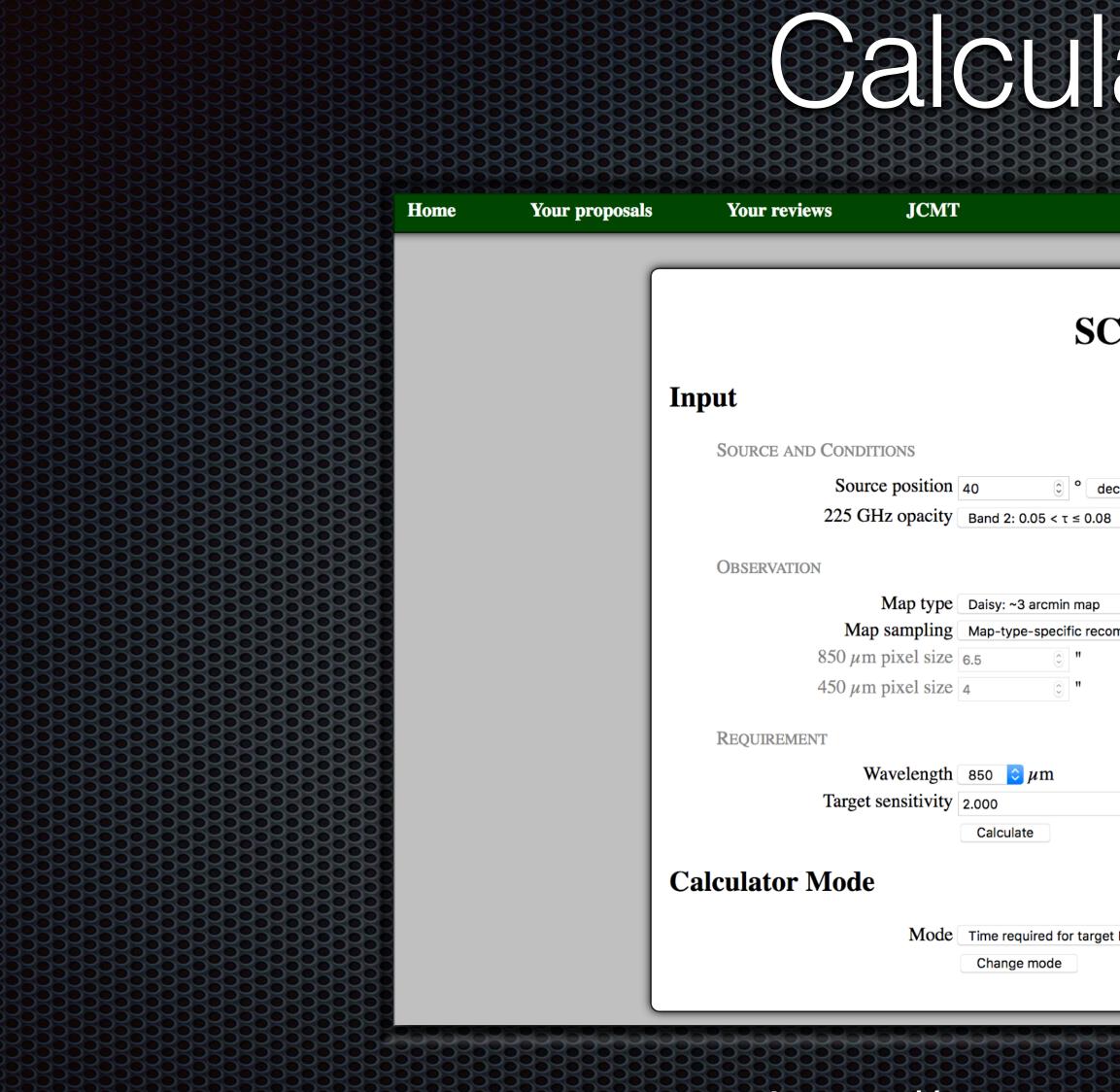
JCMT

Access Open Calls for Proposals here

Access ITCs for SCUBA-2 & heterodyne instruments

Access Clash & Target **Availability Tools**

JCMT Inte



| egration Tin ator (ITC) | | | |
|----------------------------|--------|------|--|
| | Log in | Help | |
| CUBA-2 ITC | | | |
| clination 🗘 0.065 | | | |
| mmendation | | | |
| mJy/beam | | | |
| | | | |

https://proposals.eaobservatory.org

JCMT Inte

Home

Your proposals

Your reviews

Results

| Observing time | 1.265 hours (1:15:54) |
|----------------------------|-----------------------|
| Time on source | 1.215 hours (1:12:54) |
| Sensitivity at 450 μ m | 25.757 mJy/beam |

| Parameter | 850 µm | 450 µm |
|-----------------|----------|--------|
| Sampling factor | 2.640625 | 4.0 |
| Opacity | 0.279 | 1.379 |
| Transmission | 0.719 | 0.195 |
| Airmass | 1.184 | |

| | Band 1 | Band 2 | Ban |
|----------------|-------------|---------------|------|
| Representative | 0.978 hours | 1.265 hours | 1.99 |
| Range | 1.043 | 1.043 - 1.556 | 1.55 |

Link to this calculation

| ur reviews | JC | MT | | | | | | Log in | Help | |
|------------|------------------|------------|---------|---------------|-----------------|--------------|--|--------|------|--|
| ts | | | | SCU | J BA-2 I | TC | | | | |
| ing time | 1.26 | 5 hours (1 | :15:54) | | | | | | | |
| n source | 1.21 | 5 hours (1 | :12:54) | _ | | | | | | |
| vity at 45 | 0 μm 25.7 | 57 mJy/be | eam | | | | | | | |
| eter | 850 µm | 450 μm | | | | | | | | |
| ng factor | 2.640625 | 4.0 | | | | | | | | |
| 7 | 0.279 | 1.379 | | | | | | | | |
| ission | 0.719 | 0.195 | _ | | | | | | | |
| S | 1.184 | | | | | | | | | |
| | Band 1 | Band 2 | 2 | Band 3 | Band 4 | Band 5 | | | | |
| entative | 0.978 hour | rs 1.265 h | nours | 1.995 hours | 4.239 hours | 12.329 hours | | | | |
| | 1.043 | 1.043 - | - 1.556 | 1.556 - 2.575 | 2.575 - 6.837 | 6.837 | | | | |
| his calcul | ation | | | | 1 | | | | | |

https://proposals.eaobservatory.org

Input

RECEIVER

| Receiver | HARP | 0 | |
|---------------------|----------------------------|---------|---|
| Spectral resolution | 1000 MHz | mode | ¢ |
| Sideband mode | Single | sideban | d |
| Dual polarization | | | |
| Continuum mode | □ ? | | |

SOURCE AND CONDITIONS

| Transition line | со | |
|-----------------|----------------|----------|
| Rest frequency | 345.7959899 | GHz (|
| Radial velocity | o 🗘 | redsh |
| Source position | 40 🗘 | ° dec |
| 225 GHz opacity | Band 3: 0.08 < | τ ≤ 0.12 |

OBSERVATION

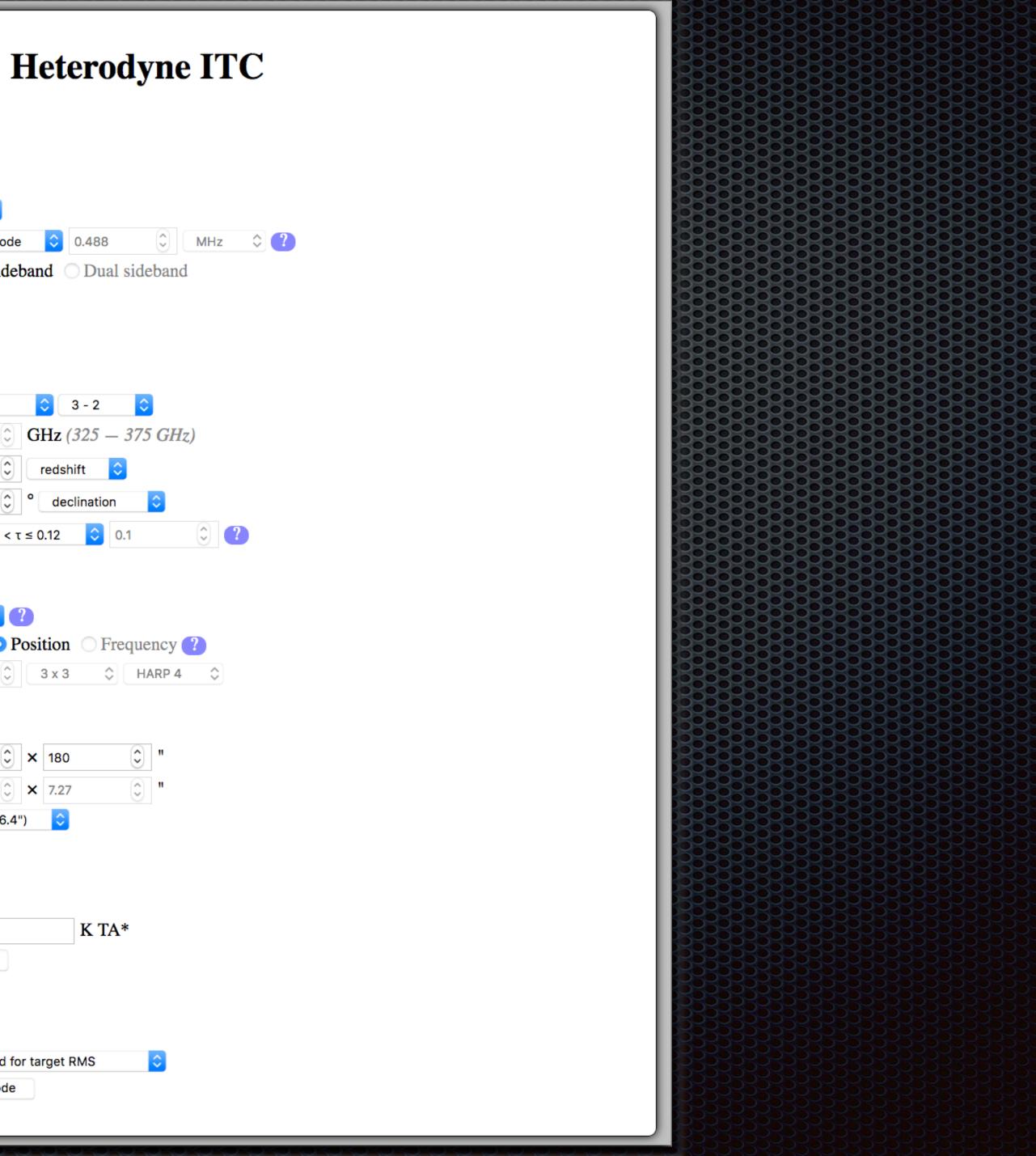
| Mapping mode | Raster | | 2 | | | | |
|---------------------|-----------------------|-----|-----|-------|--|--|--|
| Switching mode | Beam | O P | osi | tion | | | |
| Number of points | 1 | ٢ | | 3 x 3 | | | |
| Separate offs | | | | | | | |
| | | | | | | | |
| Raster map size | 180 | ٢ | × | 180 | | | |
| Raster pixel size | 7.27 | ٢ | × | 7.27 | | | |
| Raster scan spacing | Full array (116.4") 🗘 | | | | | | |
| Basket weave | | | | | | | |

REQUIREMENT

Target sensitivity 1.000 Calculate

Calculator Mode

| Mode | Time required for target | | | | | |
|------|--------------------------|--|--|--|--|--|
| | Change mode | | | | | |



| Ĥ | ome |
|---|-----|
| | |

| SCU |
|---|
| ıt |
| Source and Conditions |
| Source position 40 🗘 ° declination |
| 225 GHz opacity Band 2: 0.05 < τ ≤ 0.08 🗘 |
| OBSERVATION |
| Map type POL-2 daisy (~3 arcmin) |
| Matched filter ? |
| 850 μ m pixel size 4 \bigcirc " |
| 450 μ m pixel size 2 \bigcirc " |
| Requirement |
| Wavelength 850 ᅌ µm |
| Target sensitivity 2.000 m. |
| Calculate |
| culator Mode |
| Mode Time required for target RMS |
| Change mode |
| |

| Log in | Help |
|--------|------|
| Lug m | |

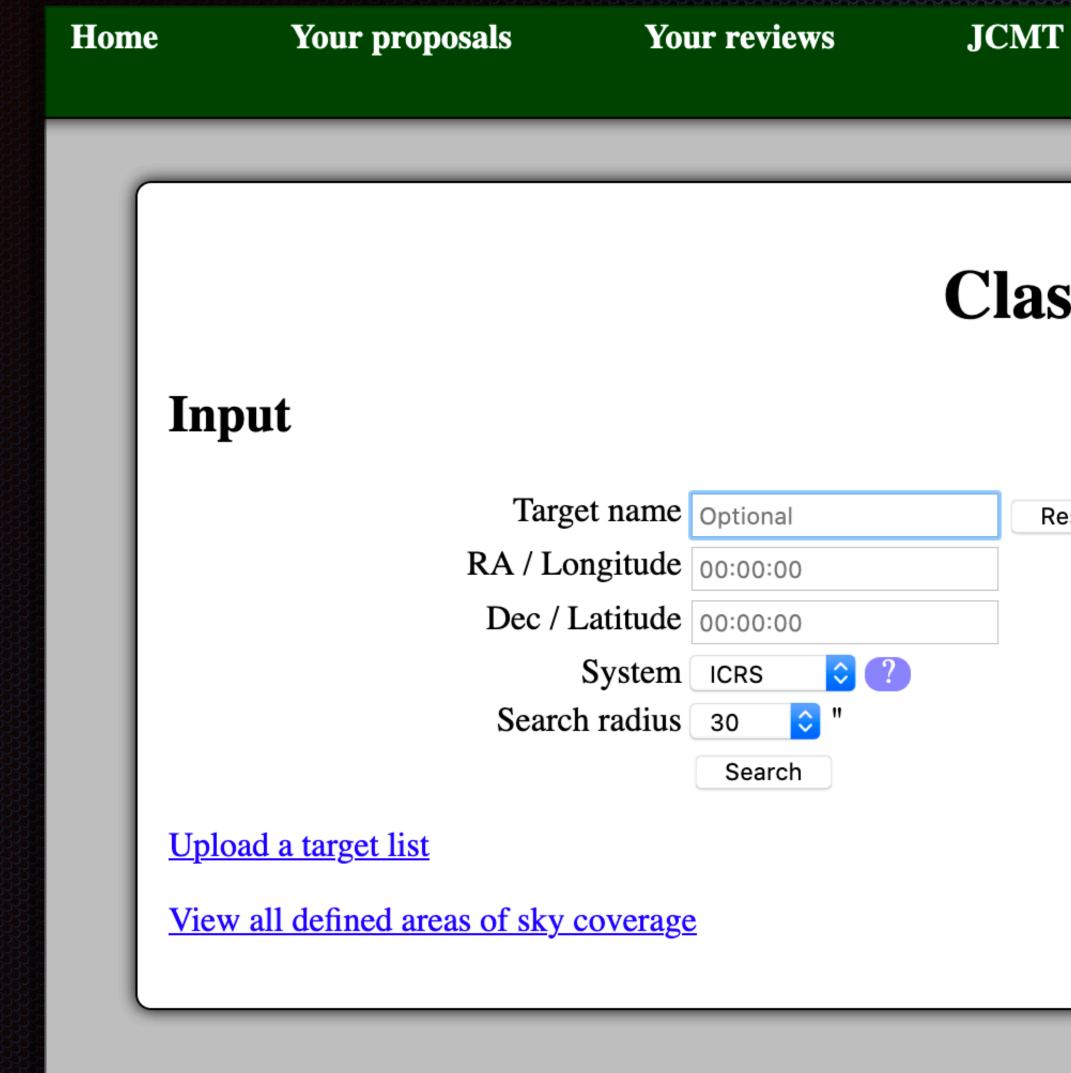
JBA-2 ITC tion ᅌ ? 0.065 **?** X SCUBA-2 offers two types of standard observing mode: "daisy" for compact sources (\leq 3 arc-minutes) and "pong" patterns of various sizes. An additional observing mode is offered for polarimetry with <u>POL-2</u>. Jy/bean SCUBA-2 observing modes \Diamond

calculator Contact us

SCUBA-2 ITC (Hedwig) POL-2 Daisy supported (since 16B)



Hedwig Target Tools



Hedwig Clash Tool

Logged in as Mark G. Rawlings — drop admin — log out Help

Clash Tool

Resolve name

Help on this page Contact us

Home

Output

Matches

Yo

Input

Upload a ta

View all de

Matches were found for the following targets.

Please investigate each match and add a note to your proposal to explain why you still wish to observe these targets. You can click the name of a match for more information on how the corresponding coverage area is defined.

• M31

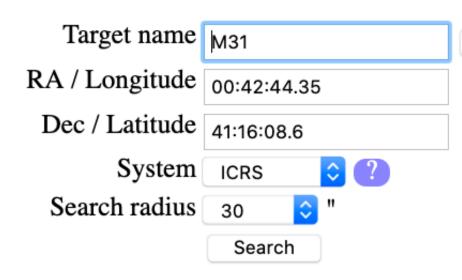
Matches were found in the following defined areas of sky coverage:

- Existing HARP observations
- Existing SCUBA-2 observations
- Large Program M17BL005: HASHTAG
- <u>Proprietary HARP observations</u> private
 <u>Proprietary SCUBA-2 observations</u> private

Search archive at 00:42:44.35 +41:16:08.6

Link to this query

Input

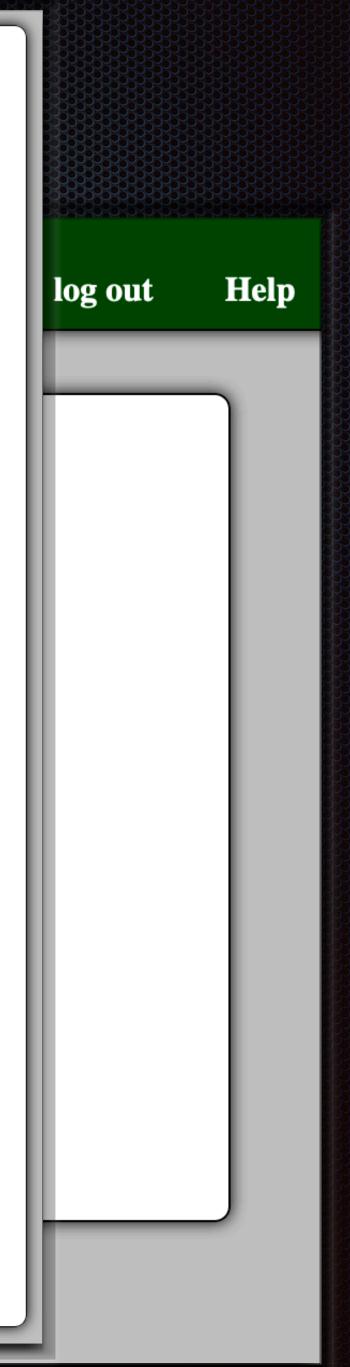


Upload a target list

View all defined areas of sky coverage

Clash Tool

Resolve name



Hedwig Target Availability Tool

| Home | Your proposals | Your reviews |
|------|------------------------------|---------------------|
| | | Targ |
| Inj | put | |
| | TARGET INFORMATION | |
| | Target n | ame M31 |
| | RA / Longit | tude 00:42:44.35 |
| | Dec / Latit | tude 41:16:08.6 |
| | Sys | item ICRS ᅌ ? |
| | OBSERVING INFORMATION | |
| | Start | date 02 / 02 / 2021 |
| | End | date 08 / 02 / 2021 |
| | | Check |
| Uple | oad a target list | |
| | | |

CMT

Logged in as Mark G. Rawlings — take admin — log out Help

et Availability

Resolve name

Help on this page Contact us

Target Availability

Output

Ho

Availability b ate

The followi

Targets

able shows how many targets are available as a tection of date and (UT) time.

sidered to be available if they are above an eleva

| Date (UT) | 04:00 | 05:00 | 06:00 | 07:00 | 08:00 | 09:00 | 10:(| 11:00 | 12:00 | 13:00 | 14:00 | 15:00 | 16:00 |
|------------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|
| 2021-02-02 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2021-02-16 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2021-03-02 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2021-03-16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2021-03-30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| 2021-04-13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2021-04-27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2021-05-11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 2021-05-25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 2021-06-08 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| 2021-06-22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 |
| 2021-07-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 |
| 2021-07-20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |

Not good for "A" Semesters!

a of 30.0 degrees.

lp

Output

Better for "B" Semesters!

Availability by Date

The following tab ows how many targets are available as a func

dered to be available if they are above an elevation Targets are

| Date (UT) | 04:00 | 05:00 | 06:00 | 07:00 | 08:00 | 09:00 | 10:00 | 1 | 0 | 12:00 | 13:00 | 14:00 | 15:00 | 16:00 |
|------------|-------|-------|-------|-------|-------|-------|-------|---|---|-------|-------|-------|-------|-------|
| 2021-08-02 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | | | 1 | 1 | 1 | 1 | 1 |
| 2021-08-16 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | | | 1 | 1 | 1 | 1 | 1 |
| 2021-08-30 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | | | 1 | 1 | 1 | 1 | 1 |
| 2021-09-13 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | | | 1 | 1 | 1 | 1 | 1 |
| 2021-09-27 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | | | 1 | 1 | 1 | 1 | 0 |
| 2021-10-11 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | Y | | 1 | 1 | 1 | 0 | 0 |
| 2021-10-25 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | 1 | 1 | 0 | 0 | 0 |
| 2021-11-08 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | 1 | 0 | 0 | 0 | 0 |
| 2021-11-22 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | 0 | 0 | 0 | 0 | 0 |
| 2021-12-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | | 0 | 0 | 0 | 0 | 0 |
| 2021-12-20 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 |
| 2022-01-03 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 |
| 2022-01-17 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 |
| 2022-01-31 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 |

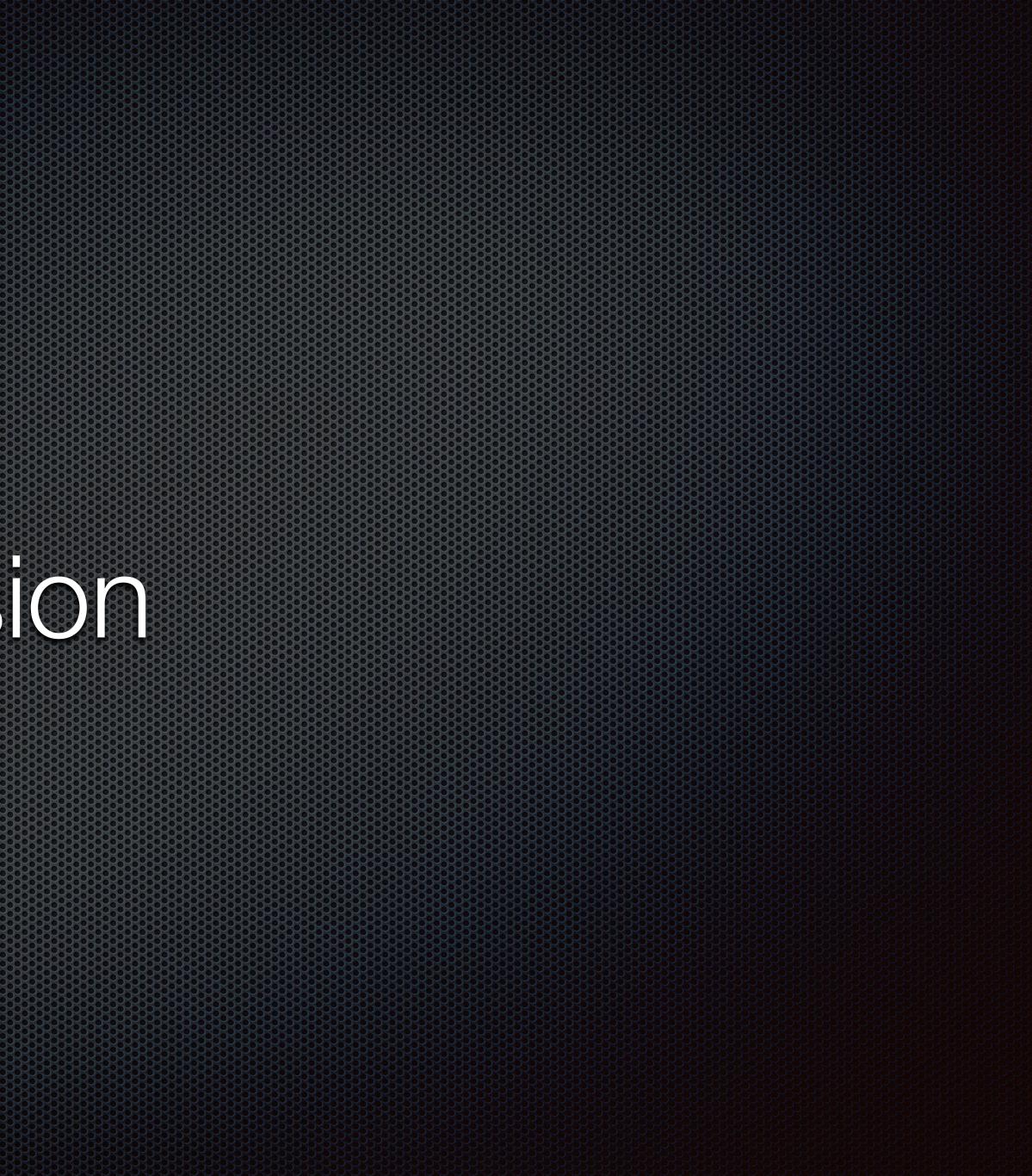
Link to this query

Target Availability

n of date and (UT) time.

30.0 degrees.

Proposal Submission



Proposal Submission

- Simple process
- Submit from Hedwig proposal creation / editing page
- Proposal validity checked by Hedwig
 - Errors / warnings reported for potential proposal issues
- - No need to leave proposal submission until last few minutes!

Proposals can be repeatedly submitted up to the proposal deadline

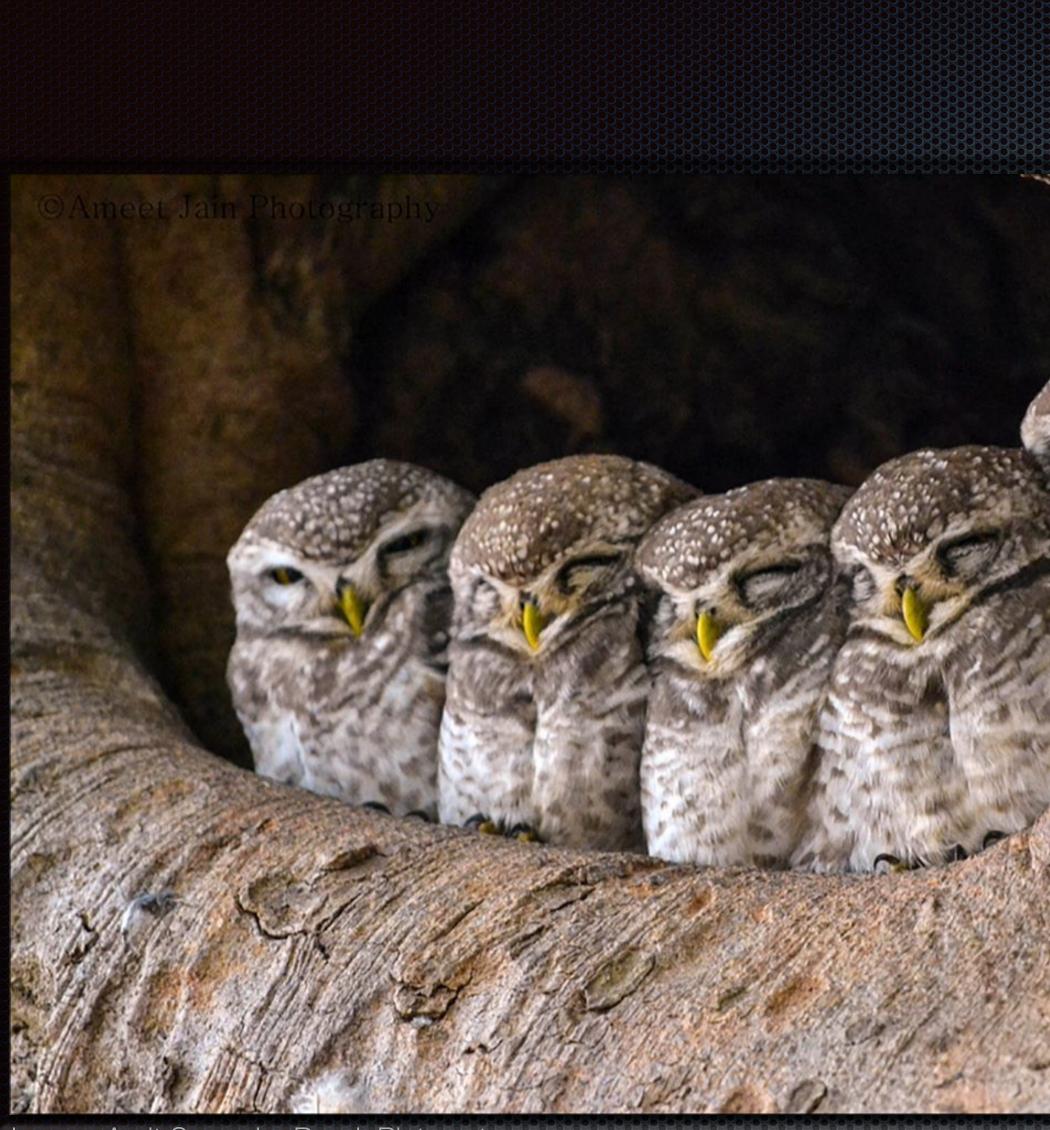


Image: Amit Surendra Band, Pinterest

Additional Useful Resources for Proposal Preparation

SIMBAD: Learn More Details About Astronomical Sources

ذ 🍘

Portal Simbad VizieR Aladin X-Match Other Help

SIMBAD Astronomical Database - CDS (Strasbourg)

What is SIMBAD ?

| Queries | Documentation | Information |
|------------------------------|--------------------------------|------------------------|
| basic search | User's guide | Presentation |
| by identifier | | |
| by coordinates | | Image thumbnails |
| by criteria | Query by urls | |
| reference query | Nomenclature Dictionary | |
| scripts | Object types | |
| TAP queries | List of journals | SimWatch 🔊 |
| | Measurement description | |
| options | Spectral type coding | Release: |
| | User annotations documentation | SIMBAD4 1.6 - Feb-2018 |
| Display all user annotations | Acknowledgment | Release history |

Content

The SIMBAD astronomical database provides basic data, cross-identifications, bibliograph measurements for astronomical objects outside the solar system.

SIMBAD can be queried by object name, coordinates and various criteria. Lists of objects can be submitted.

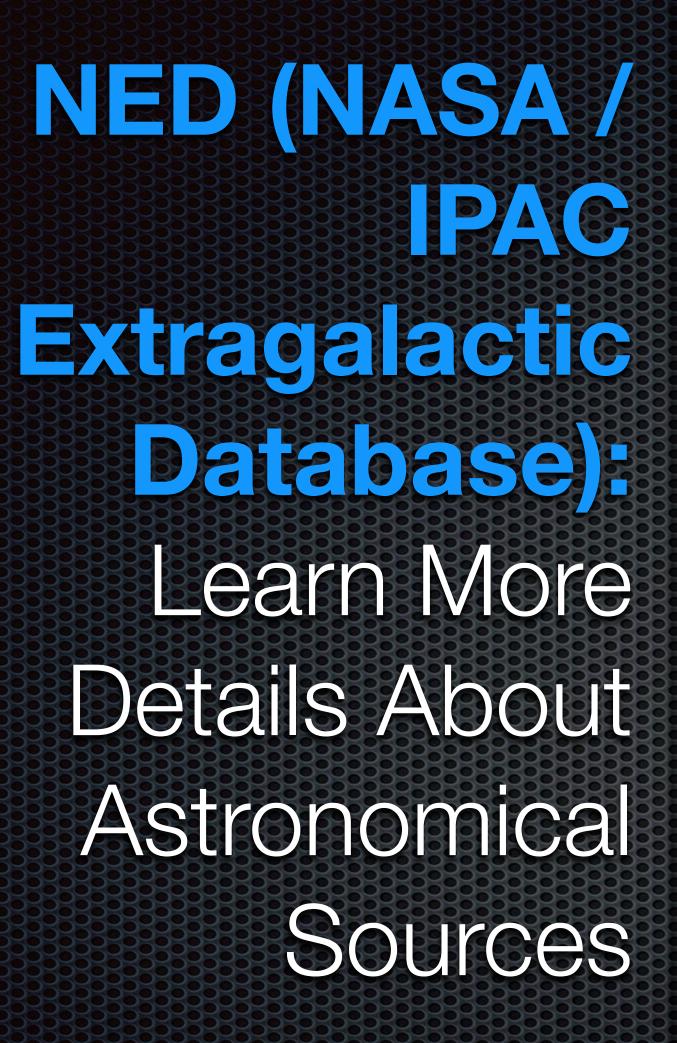
Links to some other on-line services are also provided.

Enables searches for previous observational details, e.g. position, source brightnesses, etc.

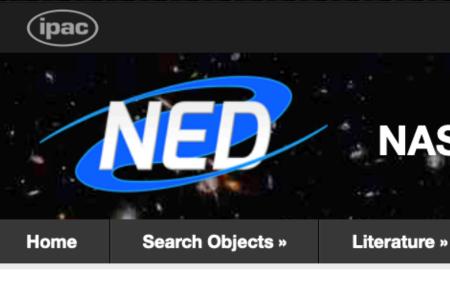
http://simbad.u-strasbg.fr/simbad/

| | Basic search | | | |
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| | identifier, coordinates (radius=10 arcmin), or bibcode | | | |
| | SIMBAD search clear help | | | |
| | SIMBAD search clear help | | | |

Stinead



https://ned.ipac.caltech.edu/



Object Name, coordinates with search radius, etc.

August 2020 Release Highlights

User Interface

- A new References by Author Name form under Literature on the top menu bar enables author name searches in ADS constrained to articles containing objects in NED.
- By Name object search results now include a tab for each data type, even when some are empty, so tab locations no longer change for different objects.
- Under the Overview tab in By Name search results, a "View in IRSA Finderchart" link is provided to explore available images for the given object using the IRSA Finderchart service.
- SED plots in the Photometry & SED tab are improved by adding upward pointing arrows to represent lower limit values. An example is shown on the right.

For further details, please visit Information » Overview » News.

The NASA/IPAC Extragalactic Database (NED) is funded by the National Aeronautics and Space Administration and operated by the California Institute of Technology.

About NED Acknowledging NED Connect with NED: EMail

to-bottom

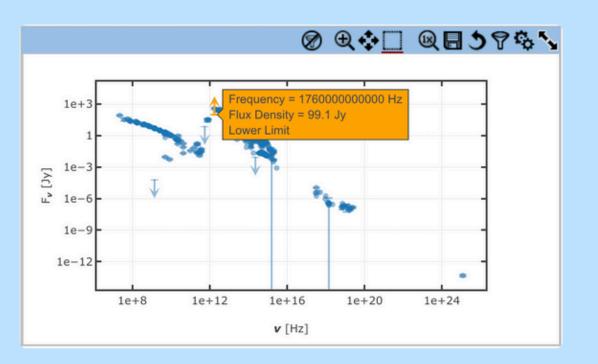
NASA/IPAC Extragalactic Database

Services »

Tools »

Information »

Go



Improved SED plots

Under the "Photometry & SED" tab in By Name object search results, upward pointing arrows are added to the SED plots to indicate lower limit values from the photometry table. The example above is for NGC 1068. When hovering on the arrow, a tooltip box gives details of the measurement and clarifies it is a lower limit.







ADS (Astrophysics Data System): To Find Scientific Papers & Other References





| | | | Feedback | D ORCID - | 🕜 About 🗸 | Sign Up | Log In |
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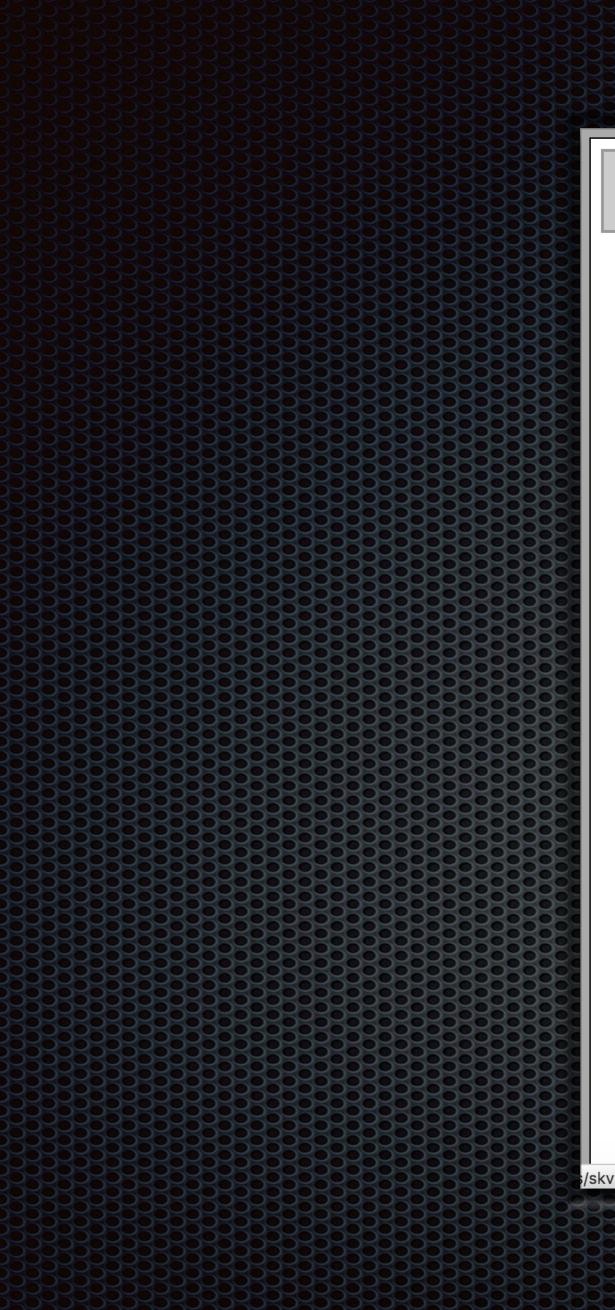
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https://ui.adsabs.harvard.edu/

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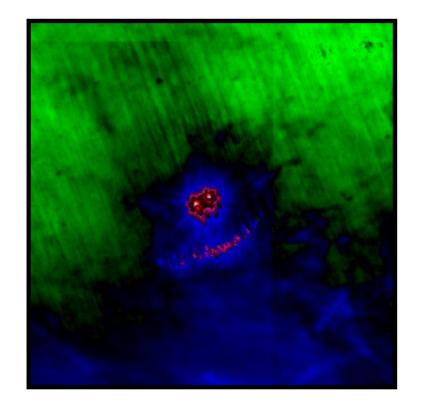
Skyview Virtual Observatory: For Images of Targets



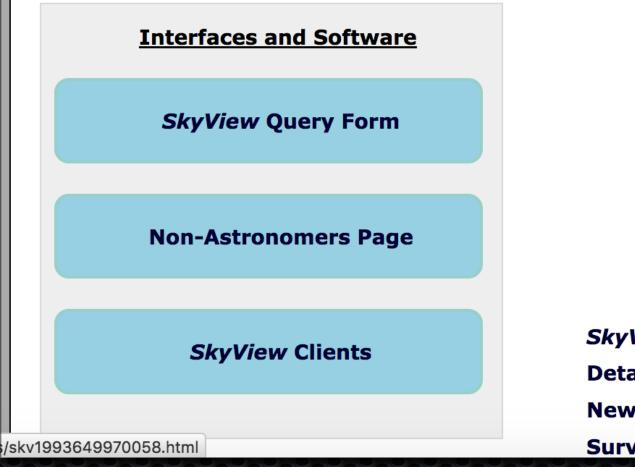


NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

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Check the *SkyView* Blog for the most recent news.



https://skyview.gsfc.nasa.gov/

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Splatalogue: To Obtain Information About Spectral Lines

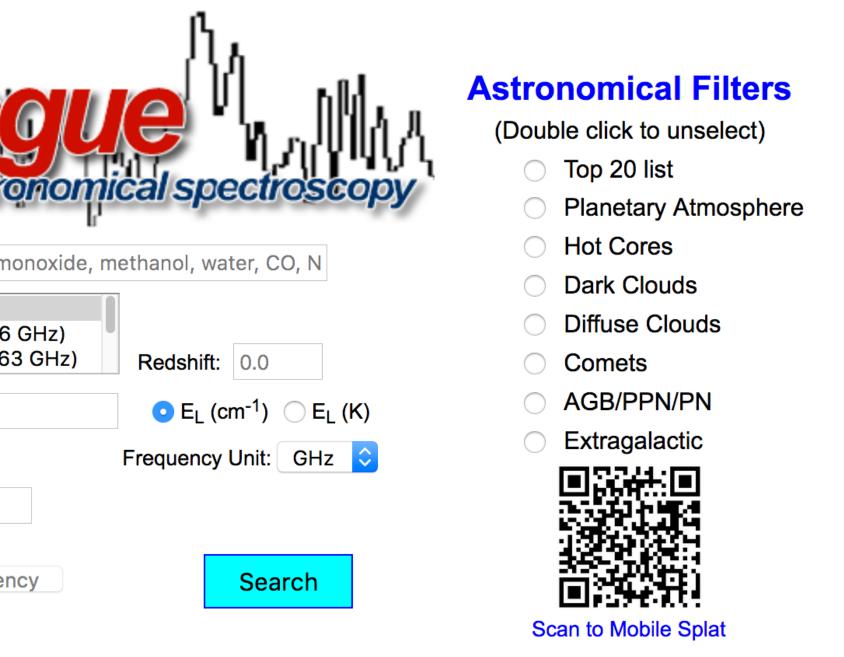
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| \Box CH ₃ OH v _t = 0 | □ H ₂ CO | 6 I |
| □ HCN v = 0 | □ HNC v = 0 | Search: ex: ammonia, carbon m |
| □ H ¹³ CN v = 0 | $\square HC^{15}N v = 0$ | Any ALMA Band 3 (84-116 |
| \Box DCN v = 0 | □ HCO ⁺ v = 0 | Telescope Bands: ALMA Band 3 (84-110 |
| | □ H ¹³ CO ⁺ | Energy Range: Min Max |
| \Box NH ₃ | | Frequency Range: |
| | ΟΙ | |
| | | Min Max |
| \square H ₂ O v = 0 | | + Frequency - Frequer |
| □ SiO <mark>v</mark> = 0 | More molecules | |
| | | Save Settings Restore Settings |
| | | Settings Name |

Welcome to the "New" Splatalogue!

Over the past several years, there has been an active effort to improve the overall functionality and usability of Splatalogue. We are now offering new options to navigate the nearly 6 million spectral lines available via Splatalogue. The user community has suggested a simpler, more efficient way of searching for and obtaining the more common spectral line features from the radio to submillimeter wavelength.

This new Splatalogue Basic search page is now available and has several new and quick search features including: Redshift Converter: Located in the center of the page, you can now enter your desired redshift and the appropriate frequency or wavelength conversion will be completed. Both the redshifted value and the rest frame value will be displayed under the Ordered column as labeled. If nothing is entered, the default redshift is set to 0.

Wavelength or Frequency Search: You can choose whether you would like to search by frequency or wavelength. The options range from Hz to THz for



https://www.cv.nrao.edu/php/splat/



CADC - JCMT Archive: To Download JCMT Datasets



Government Gouvernement of Canada du Canada

Canadian Astronomy Data Centre

| Telescope Data Products | Advanced Data Products | - Services - | Docum |
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| CADC Home > Advanced Search | | | |
| Advanced Search | | | |
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| Click on 🔞 for explanations | S | | |
| Observation Constraints | Spatial Con | straints | |
| Observation ID P.I. Name Proposal ID Proposal Title Proposal Keywords Data Release Date Science and Calibration data | Target Pixel Scale Do Spate Target | tial Cutout | |
| Additional Constraints | | | |
| Band C | ollection Instru | ument | Filter |

Observation Type **Calibration Level** Data Type http://www.cadc-ccda.hia-iha.nrc-cnrc.gc.ca/en/search/

Canada.gc.ca Services Departments Français

Canada

Advanced Search entation

Harriet AL Parsons

Temporal Constraints

| Observation Date |
|------------------|
| Integration Time |
| Time Span |

Spectral Constraints

| Spectral Coverage | 2 |
|--------------------|---|
| Spectral Sampling | ? |
| Resolving Power | ? |
| Bandpass Width | ? |
| Rest-frame Energy | ? |
| Do Spectral Cutout | |
| | |

