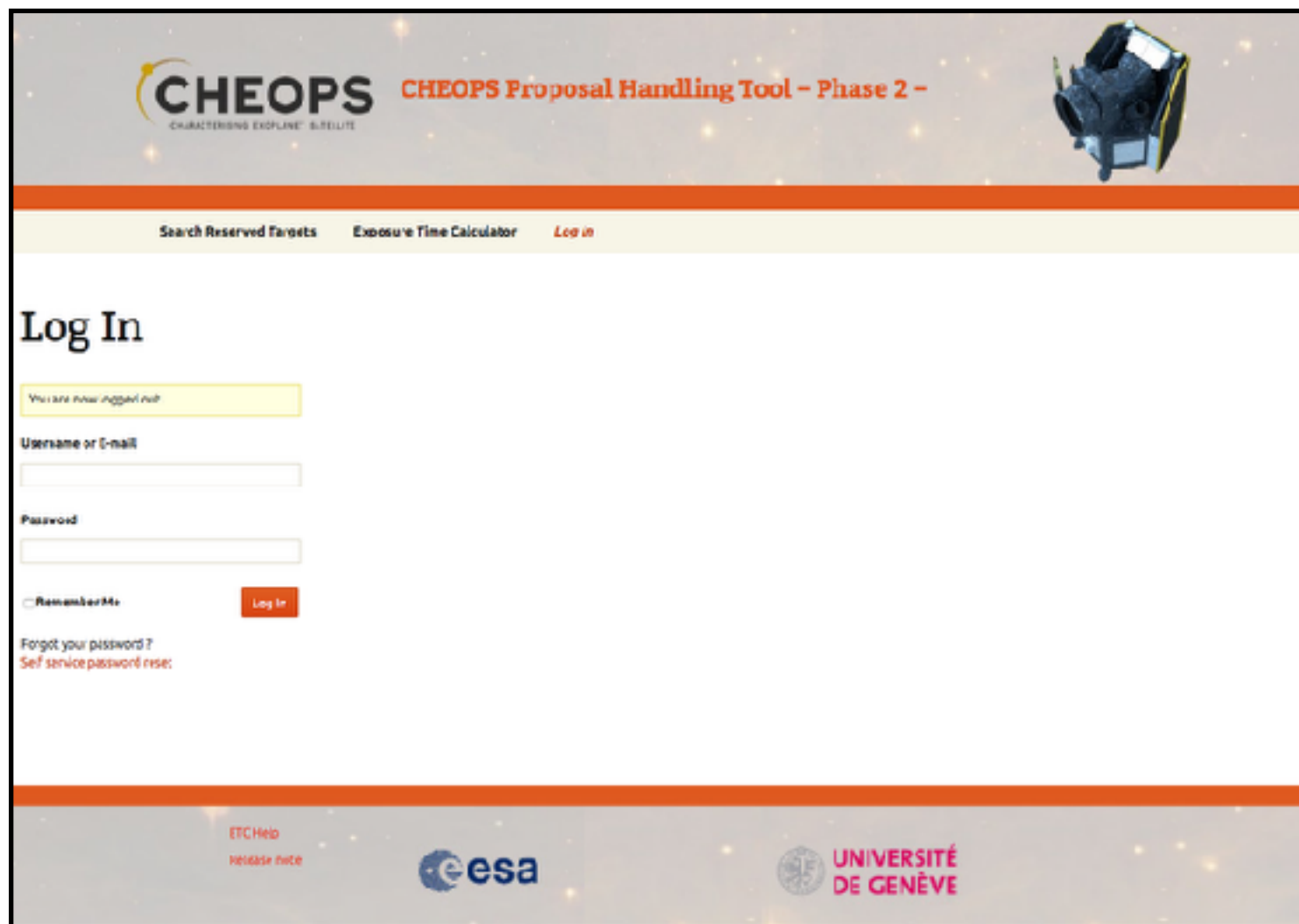


CHEOPS Proposal Handling Tool Phase 2 (PHT2) Guidelines (v_1.3)

Proposal Handling Tool Phase II

PHT2 Guidelines

URL: <https://cheops.unige.ch/pht2/>



The screenshot shows the login interface of the CHEOPS Proposal Handling Tool - Phase 2. The header features the CHEOPS logo (CHARACTERISING EXOPLANET SATELLITE) and a 3D model of the satellite. Below the header is a navigation bar with links: Search Reserved Targets, Exposure Time Calculator, and Log in. The main section is titled 'Log In' and contains a yellow box with the text 'You are now logged out'. Below this are input fields for 'Username or E-mail' and 'Password'. There is a 'Remember Me' checkbox and a 'Log In' button. A link for 'Forgot your password?' is also present, with a sub-link for 'Self service password reset'. The footer includes a link to 'ETC Help' (release note), the ESA logo, and the University of Geneva logo.

Note: PHT2 was tested on Chrome, Safari and Firefox web browsers.

Please consult the [***CHEOPS Observers Manual***](#) for details on how to observe with CHEOPS

Proposal Handling Tool Phase II

PHT2 Guidelines

Please login

with username and password
received from SOC



Proposal Handling Tool Phase II

PHT2 Guidelines

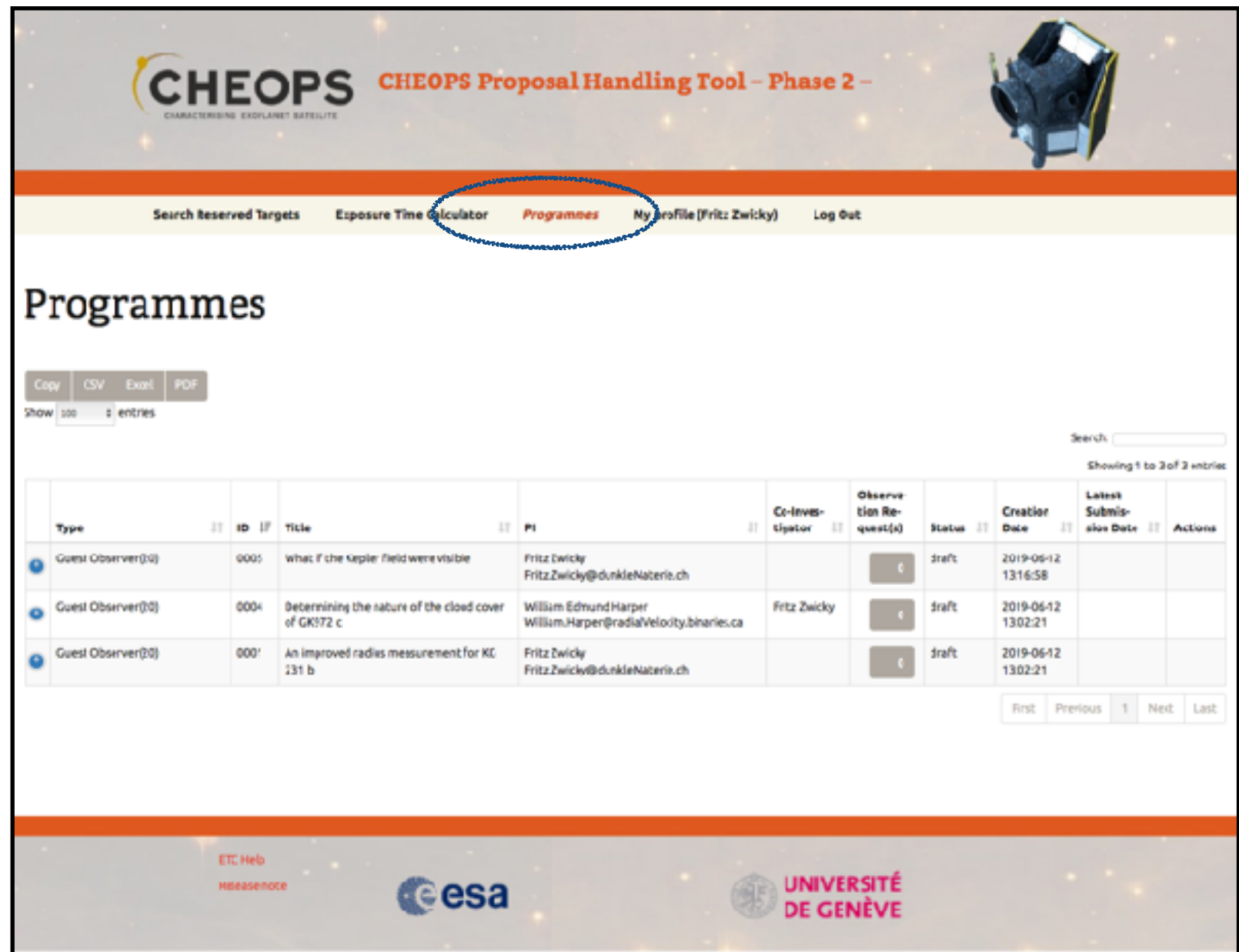
Your accepted “Programmes”

PHT2 programme = CHEOPS
Proposal submitted to ESA

List of ***accepted*** GO and DDT
programmes on which *you are*
the PI or the additional Co-I

Pre-filled information ingested
from Phase-1 stage (e.g. title)

You see only proposals for which
you are either the PI or the
additional co-I as noted in the
Phase I Proposal Handling Tool
web inputs



CHEOPS CHEOPS Proposal Handling Tool – Phase 2 –

Search Reserved Targets Exposure Time Calculator **Programmes** My profile (Fritz Zwicky) Log Out

Programmes

Copy CSV Excel PDF

Show 100 entries

Showing 1 to 3 of 3 entries

Type	ID	Title	PI	Co-Investigator	Observation Request(s)	Status	Creation Date	Latest Submission Date	Actions
Guest Observer (GO)	0005	What if the Kepler field were visible	Fritz Zwicky Fritz.Zwicky@dunkleMaterie.ch		1	draft	2019-06-12 13:16:58		
Guest Observer (GO)	0004	Determining the nature of the cloud cover of GK172 c	William Edmund Harper William.Harper@radiaVelocity.bharis.ca	Fritz Zwicky	1	draft	2019-06-12 13:02:21		
Guest Observer (GO)	0001	An improved radius measurement for KIC 131 b	Fritz Zwicky Fritz.Zwicky@dunkleMaterie.ch		1	draft	2019-06-12 13:02:21		

First Previous 1 Next Last

ETC Help MESSAGE

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Proposal Handling Tool Phase II

PHT2 Guidelines

Your accepted “Programmes”

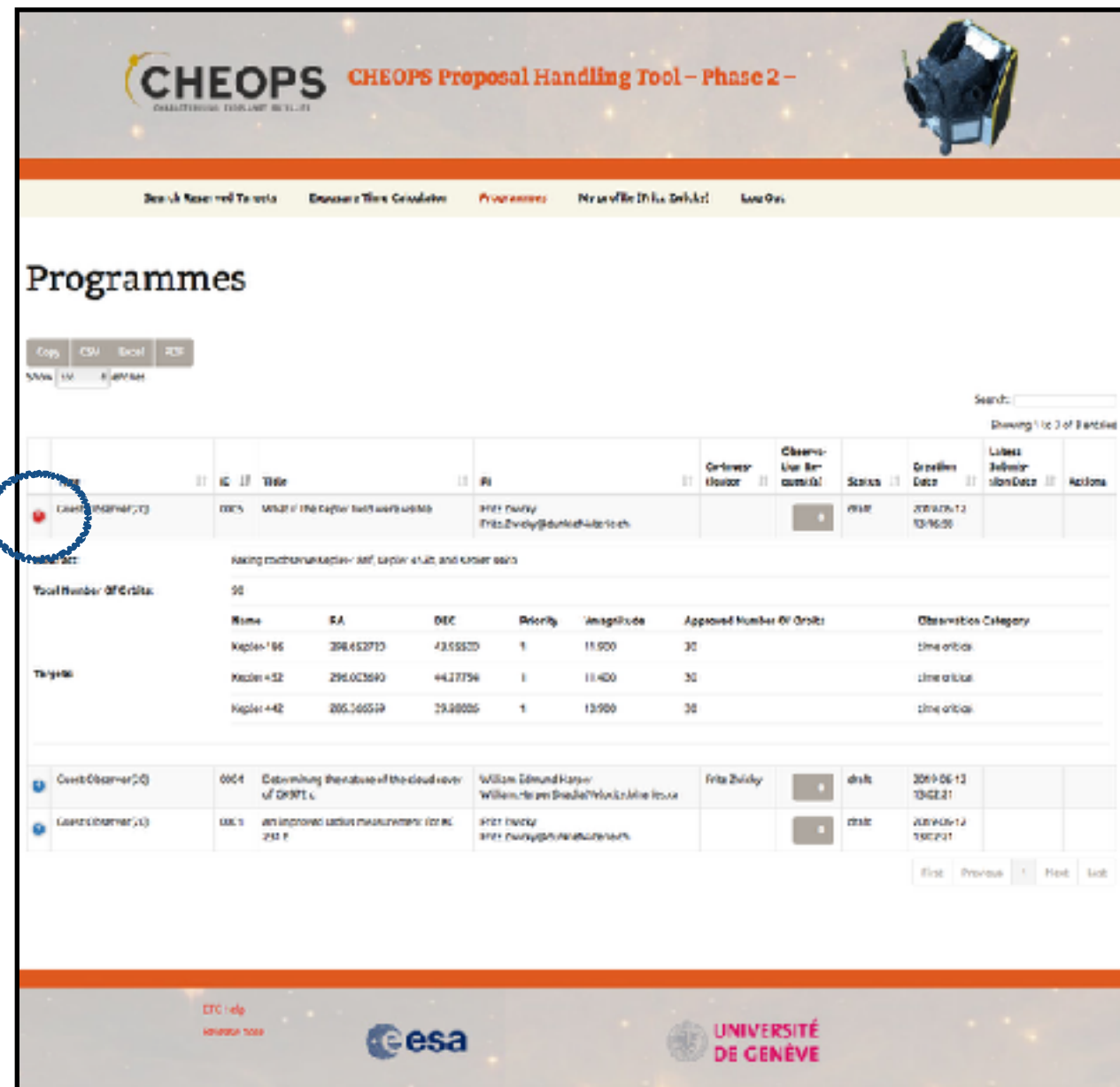
Explore Programme summary

Accepted targets

Accepted telescope time

ESA-assigned Science priority

Programme-level information
cannot be edited




CHEOPS CHEOPS Proposal Handling Tool – Phase 2 –

Search Reserved Targets Browse This Cycle's Programmes New or Edit This Cycle's Save On

Programmes

Copy CSV Excel PDF





Showing 1 of 3 of 8 entries

Programme	IC	Title	PI	Observer	Observer Email	Status	Creation Date	Last Revision Date	Actions
 CHEOPS-2017-01	0001	What if the Kepler team were asked to observe the Kepler field?	Fritz Zwicky	Fritz.Zwicky@univ-geneve.ch		draft	2017-06-12 13:16:00		

Programme Summary: Making observations of the Kepler field and Kepler stars



Total Number of Orbits: 90

Name	RA	DEC	Priority	Magnitude	Approved Number of Orbits	Observation Category
Kepler-186	308.452713	43.555320	1	11.900	30	time critical
Kepler-52	296.023693	44.17756	1	11.400	30	time critical
Kepler-42	285.165519	29.88005	1	13.900	30	time critical

 CHEOPS-2017-01	0001	Determining the nature of the cloud cover of DRIFT-1	William Edmund Harris	William.Harris@univ-geneve.ch	Fritz Zwicky		draft	2017-06-12 13:16:00	
 CHEOPS-2017-01	0002	An improved astrometric measurement for the Kepler field	Fritz Zwicky	Fritz.Zwicky@univ-geneve.ch			draft	2017-06-12 13:16:00	

First Previous 1 Next Last

ETC help version 1000

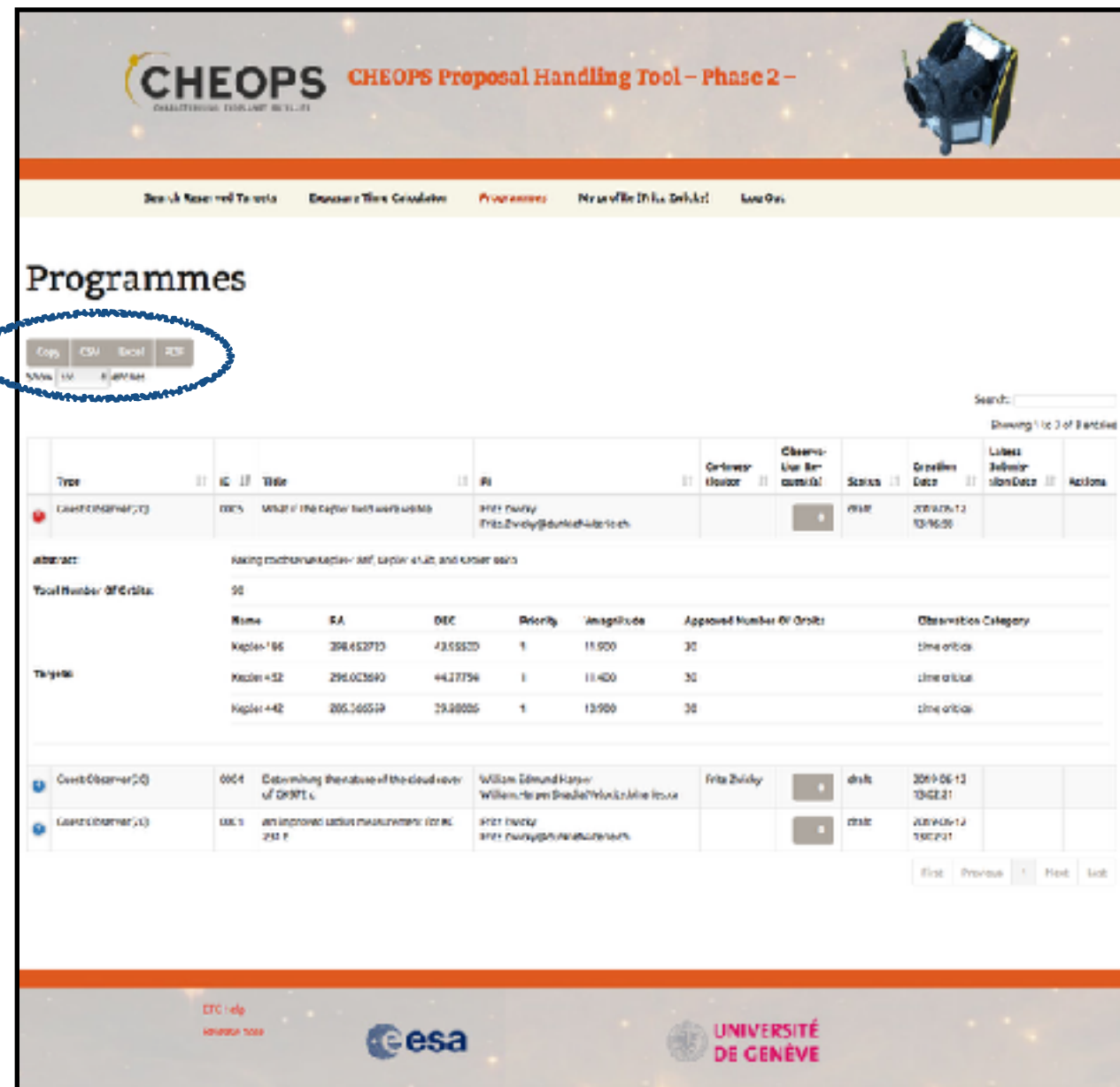
 

Proposal Handling Tool Phase II

PHT2 Guidelines

Your accepted “Programmes”

Programmes list can be exported in various formats for convenience.



CHEOPS CHEOPS Proposal Handling Tool – Phase 2 –

Search Requested To go to Browse Your Credentials Programmes My Profile (This Default) Save Data

Programmes

Copy CSV Excel PDF

Showing 1 of 3 of 8 entries

Type	IC	Title	PI	Observer	Observer Email	Status	Creation Date	Last Submission Date	Actions
Guest Observer (G)	0001	What if the Kepler team were asked	Fritz Zwicky	Fritz.Zwicky@unige.ch	draft	2019-06-12 13:16:00			

Abstract: Taking exoplanets like Kepler-90f, Kepler-90d, and Kepler-90e

Total Number Of Orbits: 90

Name	RA	DEC	Priority	Magnitude	Approved Number Of Orbits	Observation Category
Kepler-90f	308.452713	43.555320	1	11.900	30	time critical
Kepler-90d	296.003693	44.177596	1	11.400	30	time critical
Kepler-90e	285.365519	29.888005	1	12.900	30	time critical

Guest Observer (G)	0004	Determining the nature of the cloud cover of DRIFT-1	William Edmund Kasper	William.Kasper@nasa.gov	Fritz Zwicky	draft	2019-06-12 13:16:00	
Guest Observer (G)	0005	An improved astrometric measurement for IC 2141	Fritz Zwicky	Fritz.Zwicky@unige.ch	draft	2019-06-12 13:16:00		

First Previous 1 Next Last

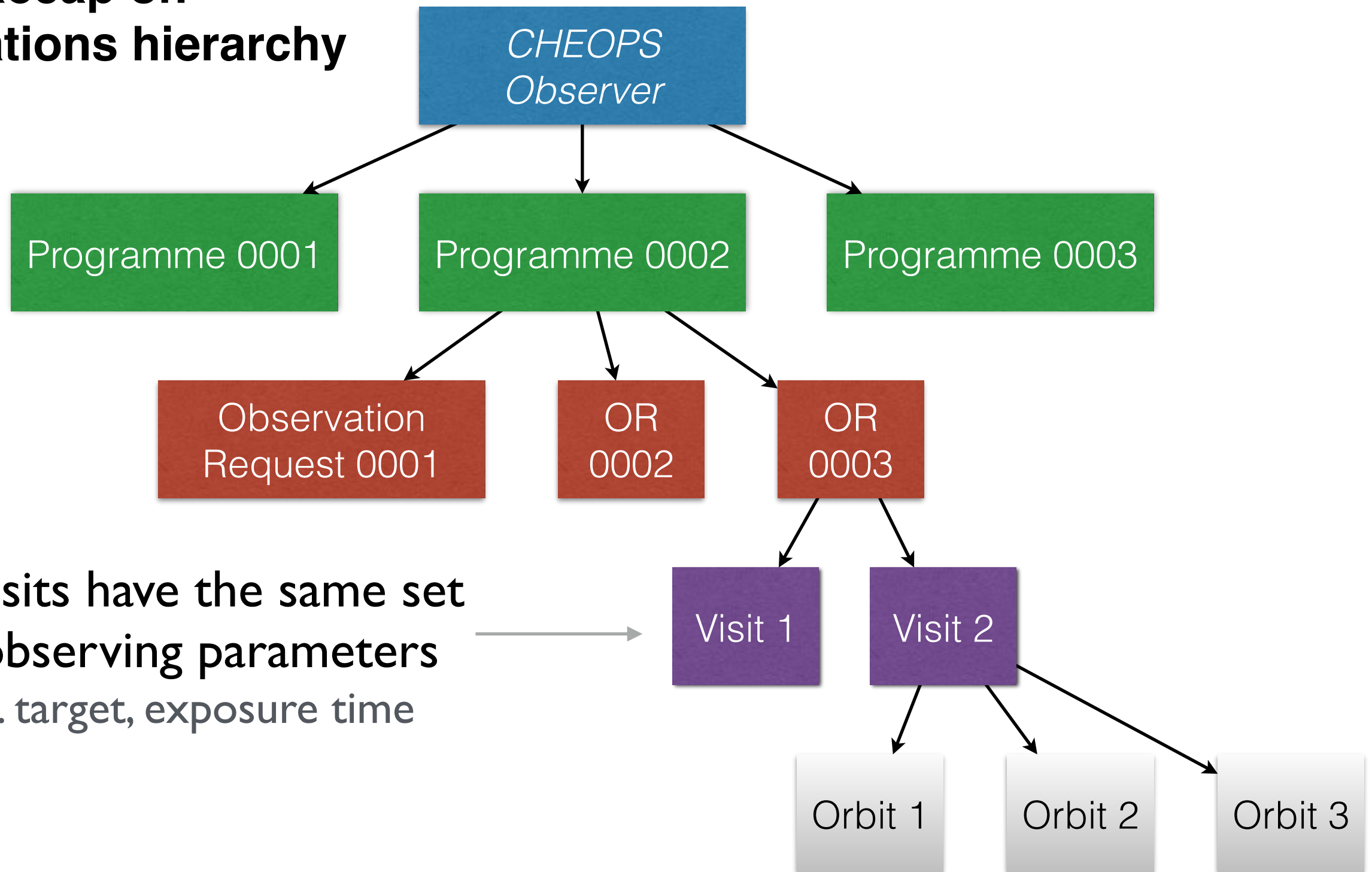
ETC help version 1000

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Proposal Handling Tool Phase II

PHT2 Guidelines

Recap on Observations hierarchy

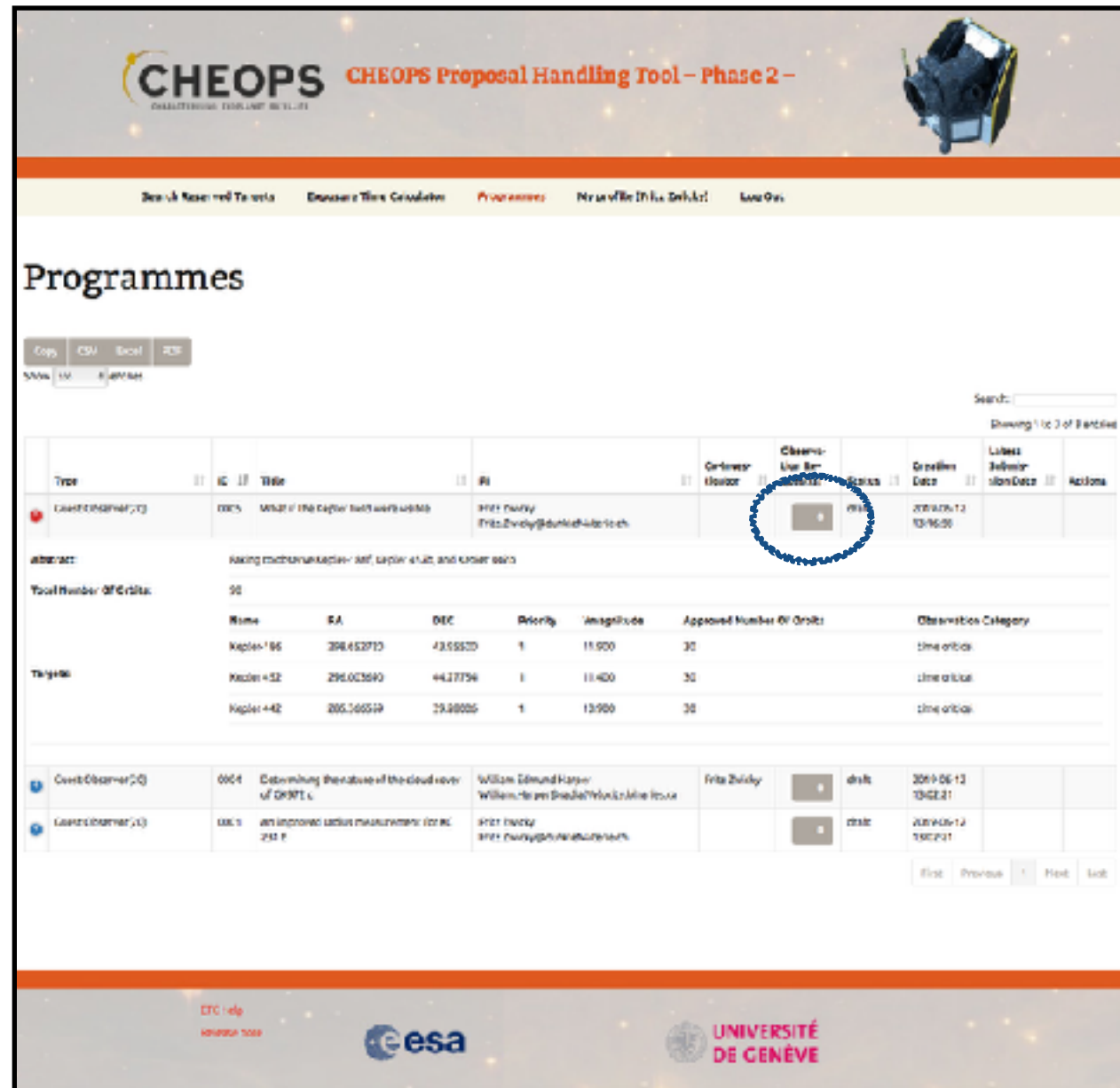


Proposal Handling Tool Phase II

PHT2 Guidelines

Create an Observation Request

Click this icon to view / create observation requests




CHEOPS CHEOPS Proposal Handling Tool - Phase 2 -

Search Requested To: Search This: Create New: Programme: Name of the: Save On:

Programmes

Copy CSV Excel PDF



Showing 1 of 3 of 8 entries

Type	IC	Title	PI	Observer	Observation Request	Status	Creation Date	Last Revision Date	Actions
Guest Observer (G)	0001	What if the Kepler team were asked?	Fritz Zwicky	Fritz Zwicky		draft	2019-06-12 13:16:00		

Abstract: Taking exoplanets like Kepler-90f, Kepler-90d, and Kepler-90e.

Total Number of Entries: 90

Name	RA	DEC	Priority	Magnitude	Approved Number of Orbits	Observation Category
Kepler-90f	308.452713	43.555320	1	11.900	30	time critical
Kepler-90d	296.003693	44.17756	1	11.400	30	time critical
Kepler-90e	285.365519	29.88005	1	12.900	30	time critical

Guest Observer (G)	0004	Determining the nature of the cloud cover of DRIFT-1	William Edmund Harris	William Harris	Fritz Zwicky		draft	2019-06-12 13:16:00	
Guest Observer (G)	0005	An improved astrometric measurement for IC 2141	Fritz Zwicky	Fritz Zwicky	Fritz Zwicky		draft	2019-06-12 13:16:00	

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ETC help November 2019

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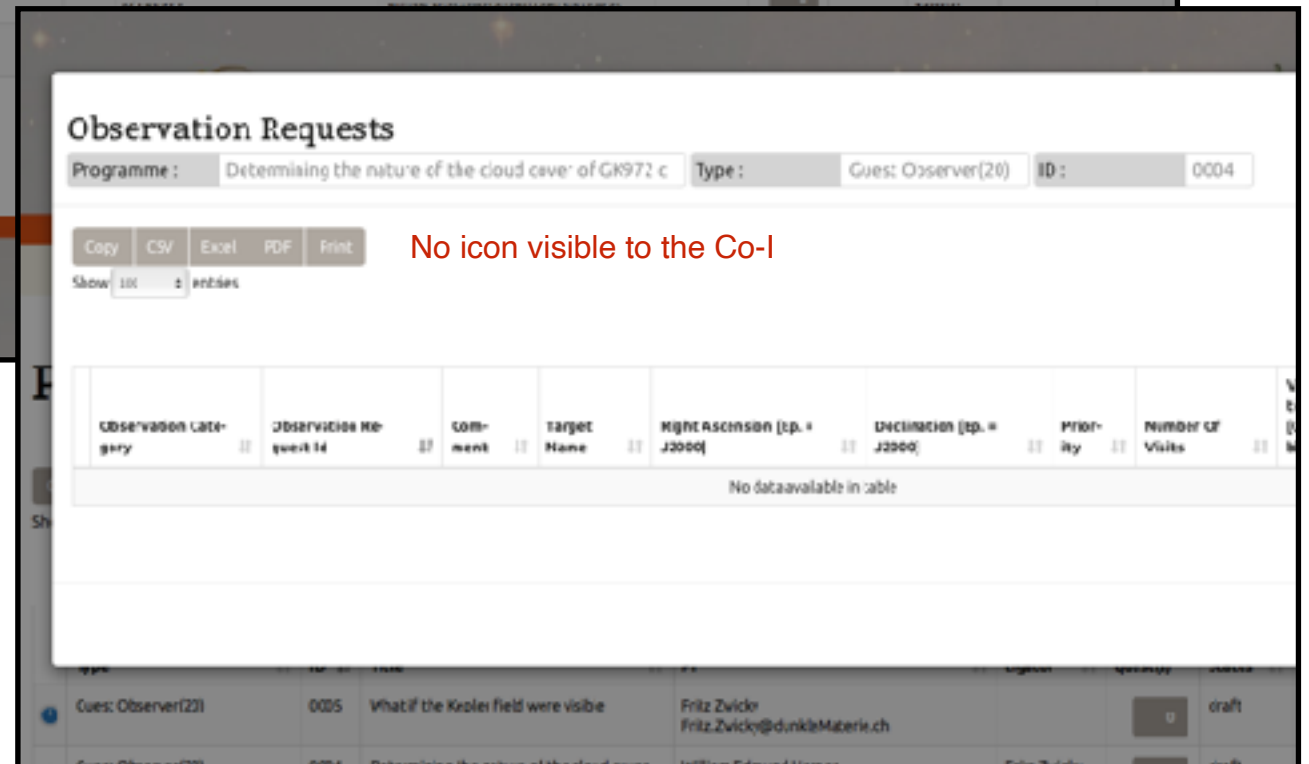
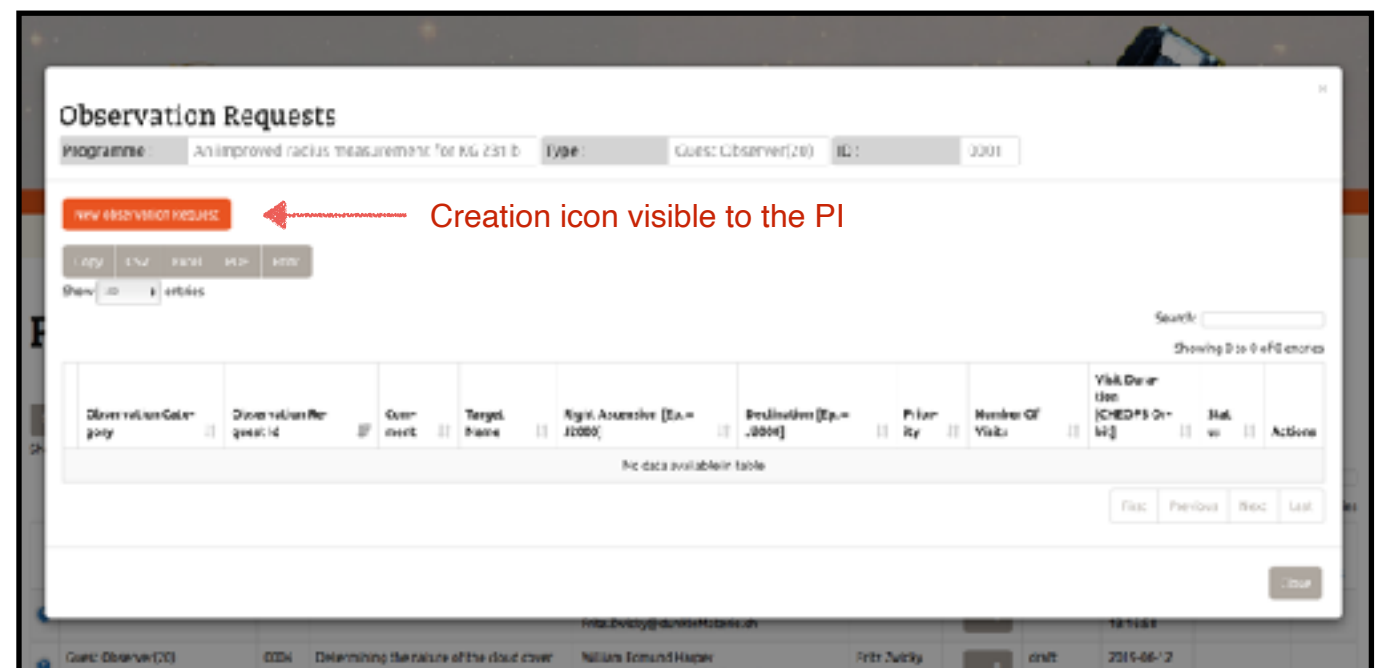
Proposal Handling Tool Phase II

PHT2 Guidelines

Create an Observation Request

The PI owns the programme and can create / edit / delete observation requests.

Co-Is can only consult observation requests, not edit them.



Proposal Handling Tool Phase II

PHT2 Guidelines

Create an Observation Request

Take the following example of 3 targets, each with 30 accepted orbits.

Click the observation request icon to create one.

Abstract: Faking tooobserve Kepler-186f, Kepler 452b, and Kepler 442b

Total numberOf Orbits: 90

Name	RA	DEC	Priority	Vmagnitude	Approved Number Of Orbits	Observation Category
Kepler-186	298.652723	41.35500	1	11.900	30	time critical
Kepler 452	294.003690	44.27754	1	11.400	30	time critical
Kepler 442	281.366559	39.28006	1	10.900	30	time critical

Targets:

ID	Title	PI	Co-Investigator	Observation Request(s)	Status	Creation Date	Latest Submission Date	Actions
0004	Determining the nature of the cloud cover of GK972 :	William Edmund Harper William.Harper@radialvelocity.binaries.ca	Fritz Zwicky	0	draft	2015-06-12 13:00:21		
0001	An improved radius measurement for KO 231 b	Fritz Zwicky Fritz.Zwicky@dunkleMaterie.ch		0	draft	2015-06-12 13:00:21		

First Previous

Programmes

Copy CSV Excel PDF

Show 10 entries

Search:

Showing 1 to 3 of 3 entries

Type	ID	Title	PI	Co-Investigator	Observation Request(s)	Status	Creation Date	Latest Submission Date	Actions
Guest Observer(0)	0001	What if the Kepler field were visible	Fritz Zwicky Fritz.Zwicky@dunkleMaterie.ch		0	draft	2015-06-12 13:16:58		

Abstract: Faking tooobserve Kepler-186f, Kepler 452b, and Kepler 442b

Total numberOf Orbits: 90

Name	RA	DEC	Priority	Vmagnitude	Approved Number Of Orbits	Observation Category
Kepler-186	298.652723	41.35500	1	11.900	30	time critical
Kepler 452	294.003690	44.27754	1	11.400	30	time critical
Kepler 442	281.366559	39.28006	1	10.900	30	time critical

Targets:

ID	Title	PI	Co-Investigator	Observation Request(s)	Status	Creation Date	Latest Submission Date	Actions
0004	Determining the nature of the cloud cover of GK972 :	William Edmund Harper William.Harper@radialvelocity.binaries.ca	Fritz Zwicky	0	draft	2015-06-12 13:00:21		
0001	An improved radius measurement for KO 231 b	Fritz Zwicky Fritz.Zwicky@dunkleMaterie.ch		0	draft	2015-06-12 13:00:21		

First Previous 1 Next Last

ETC Help Release note

eesa

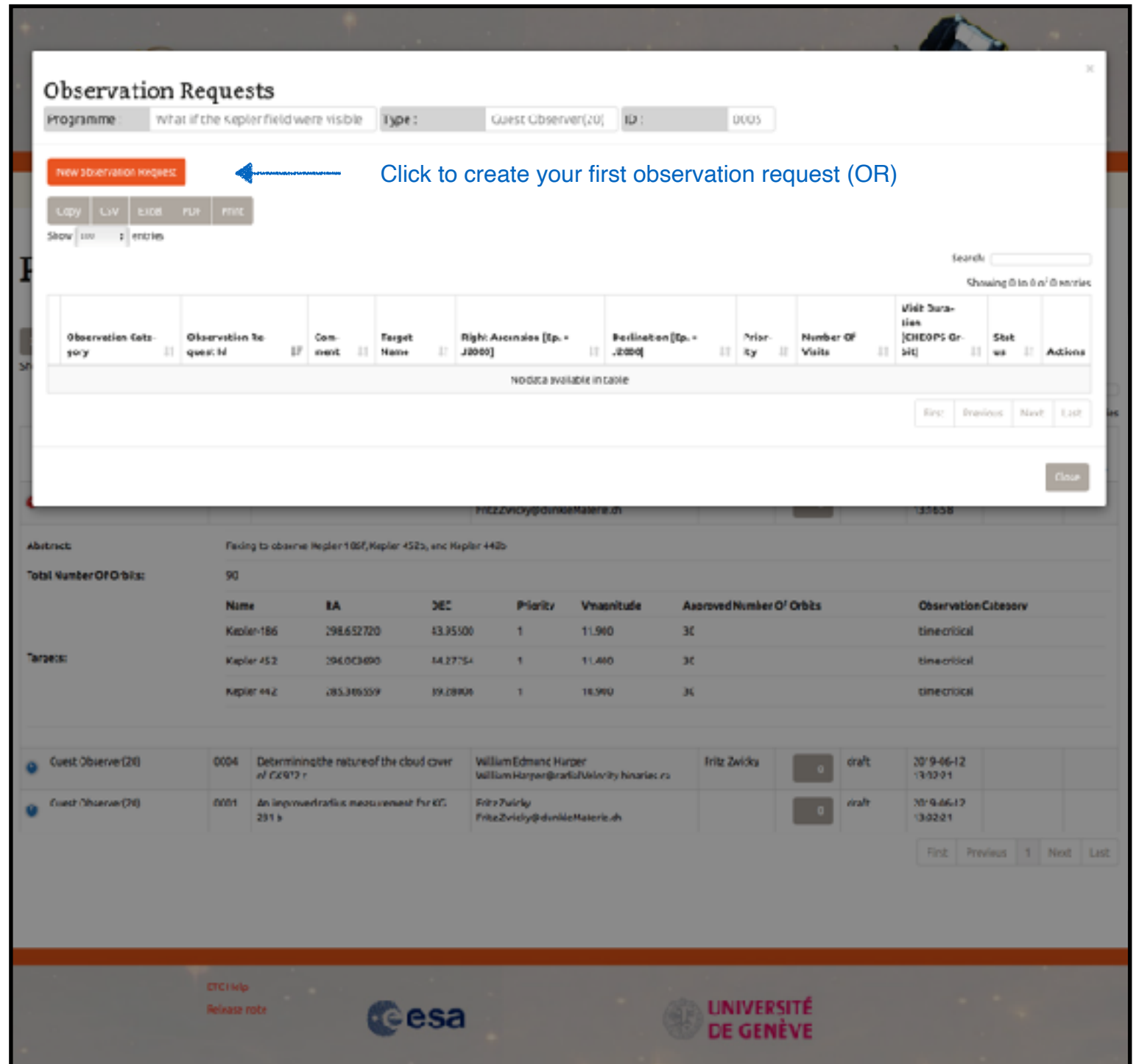
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Proposal Handling Tool Phase II

PHT2 Guidelines

Create an Observation Request

List of Observation Request is empty at this stage



Observation Requests

Programme: Type: ID:

[New Observation Request](#) Click to create your first observation request (OR)

Copy Liv Edit Print

Show 100 entries

Observation Category	Observation Request ID	Comment	Target Name	Right Ascension [Ep. = J2000]	Declination [Ep. = J2000]	Priority	Number Of Visits	Visit Duration [CHEOPS Gr-bit]	Status	Actions
No data available in table										

First Previous Next Last

Close

Abstract: Finding to observe Kepler 106f, Kepler 452b, and Kepler 442c

Total Number Of Orbits: 90

Name	RA	DEC	Priority	V magnitude	Approved Number Of Orbits	Observation Category
Kepler 106f	298.652720	43.95500	1	11.940	30	time critical
Kepler 452	294.003490	44.27754	1	11.460	30	time critical
Kepler 442c	285.389359	39.28806	1	16.940	30	time critical

Guest Observer(20)	ID	Determining the nature of the cloud cover of EXO 12 b	William Edmund Harper William.Harper@univie.ac.at	Fritz Zwicky	0	craft	2019-06-12 13:02:21
Guest Observer(20)	0001	An improved radius measurement for K2-381 b	Fritz Zwicky Fritz.Zwicky@univie.ac.at		0	craft <td>2019-06-12 13:02:21</td>	2019-06-12 13:02:21

First Previous 1 Next Last

CTC Help Release note

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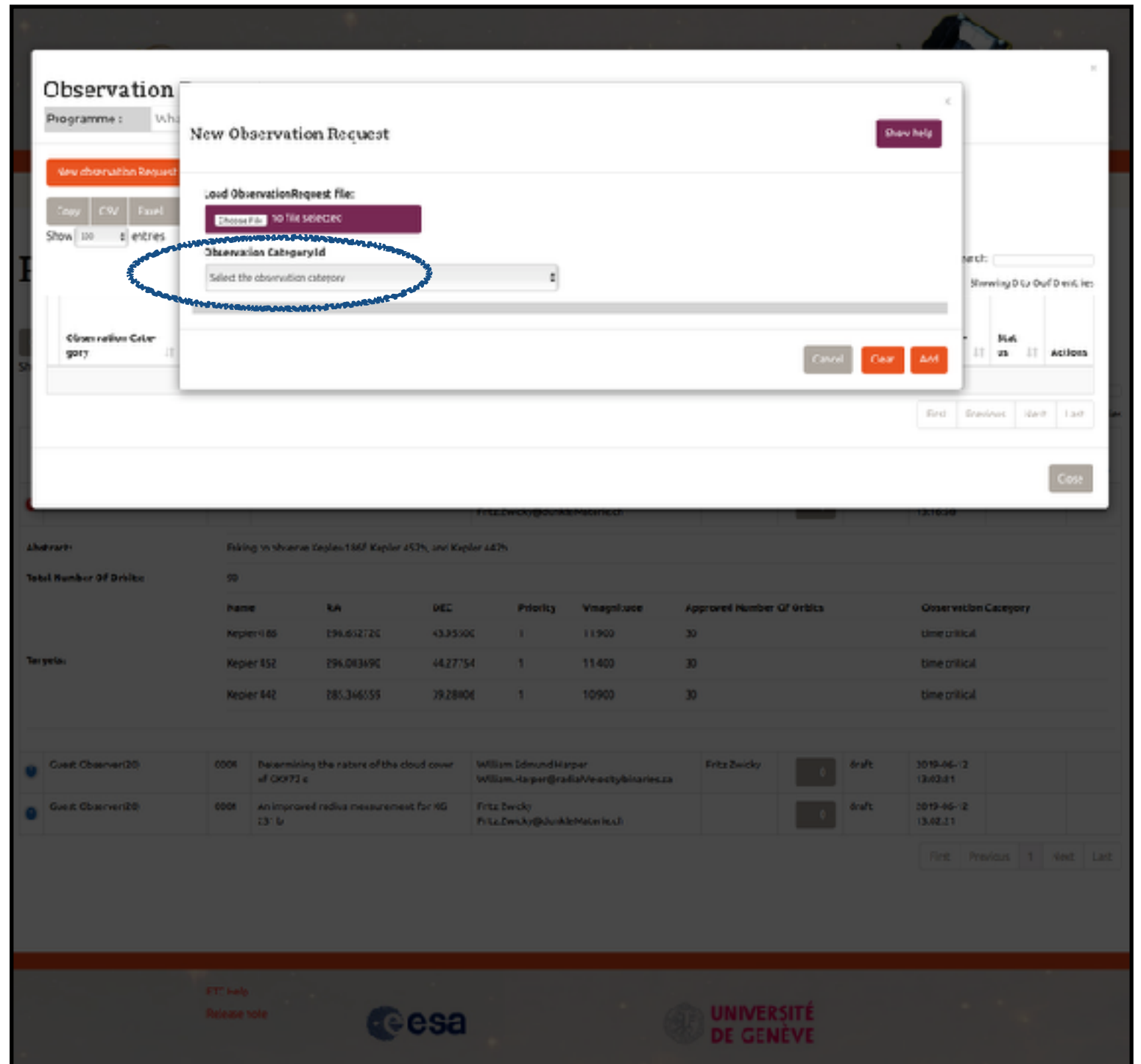
Proposal Handling Tool Phase II

PHT2 Guidelines

Create an Observation Request

Select the observation category:

- **Time-Critical:**
Observation associated with a transit (more generally any periodic event)
- **Non-Time-Critical:**
Observation not associated with a periodic event, typically for phase curves or other filler programmes



New Observation Request

Load ObservationRequest file:

Choose file No file selected

Observation CategoryId

Select the observation category

Cancel Clear Add

Name	RA	DEC	Priority	Vmag	Approved Number of Orbits	Observation Category
Kepler 186	296.632726	43.35306	1	11900	30	time critical
Kepler 452	296.083490	44.27754	1	11400	30	time critical
Kepler 442	285.346555	39.28806	1	10900	30	time critical

First Previous 1 Next Last

EEA help Release note

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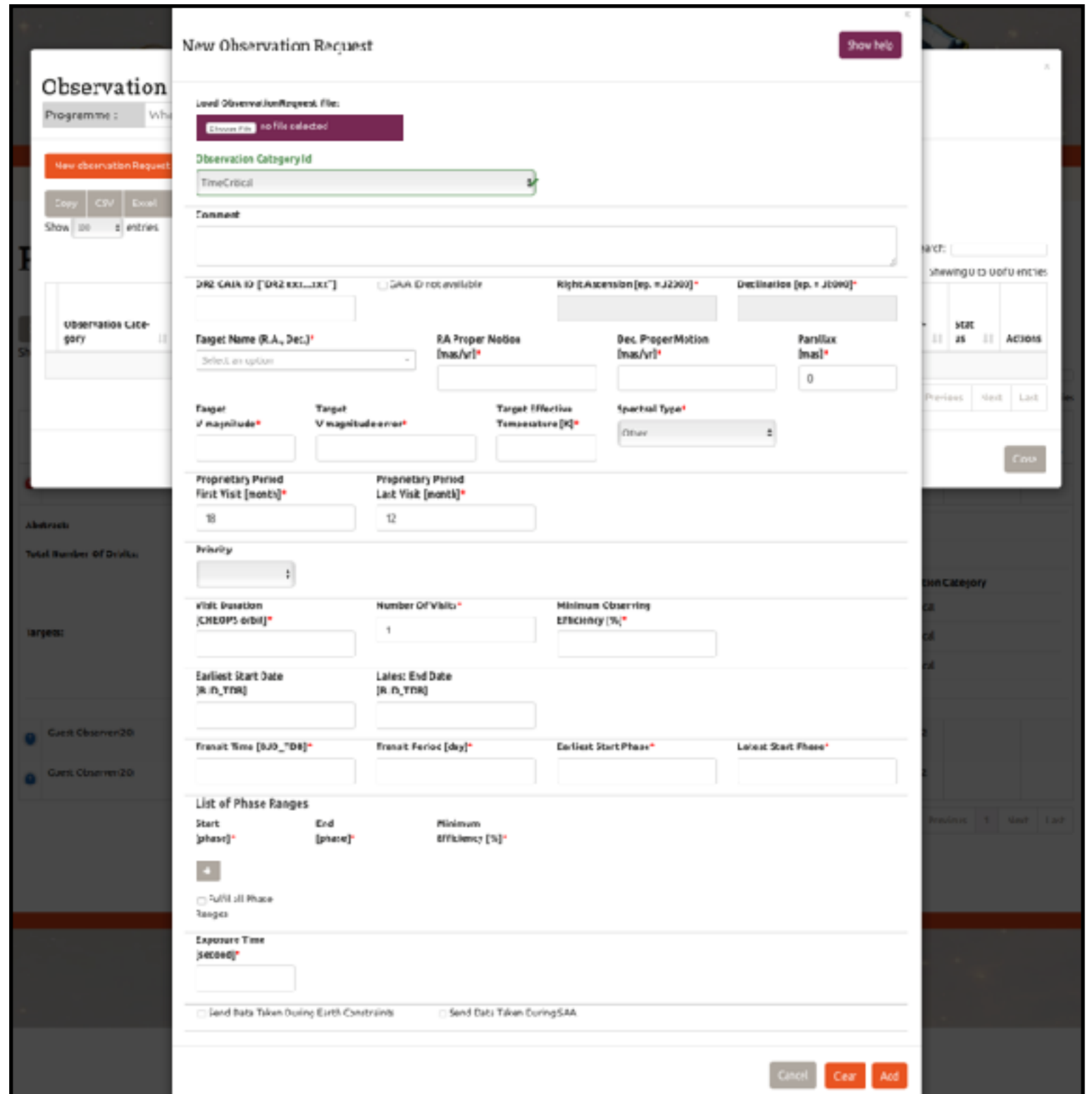
Proposal Handling Tool Phase II

PHT2 Guidelines

Fill in the Observation Request

Define the parameters of your observation

Some parameters are mandatory (indicated with a *****)



New Observation Request Show help

Load Observation/Request file:
 no file selected

Observation Category Id

Comment

DR2 CAIA ID ["DR2 EXT...TXT"] ☐ CAIA ID not available

Right Ascension [eq. "J2000"] Declination [eq. "J2000"]

Target Name (R.A., Dec.) RA Proper Motion [mas/yr] Dec. Proper Motion [mas/yr] Parallax [mas]

Target V magnitude* Target V magnitude error* Target Effective Temperature [K] Spectral Type*

Proprietary Period First Visit [month]* Proprietary Period Last Visit [month]*

Priority

Visit Duration [CHEOPS orbit]* Number Of Visits* Minimum Observing Efficiency [%]

Earliest Start Date [R.D.YHR] Latest End Date [R.D.YHR]

Transit Time [BJD_TDB]* Transit Period [day]* Earliest Start Phase* Latest Start Phase*

List of Phase Ranges

Start [phase]*	End [phase]*	Minimum Efficiency [%]*
<input type="button" value="+"/>		

☐ Fill all Phase Ranges

Exposure Time [second]*

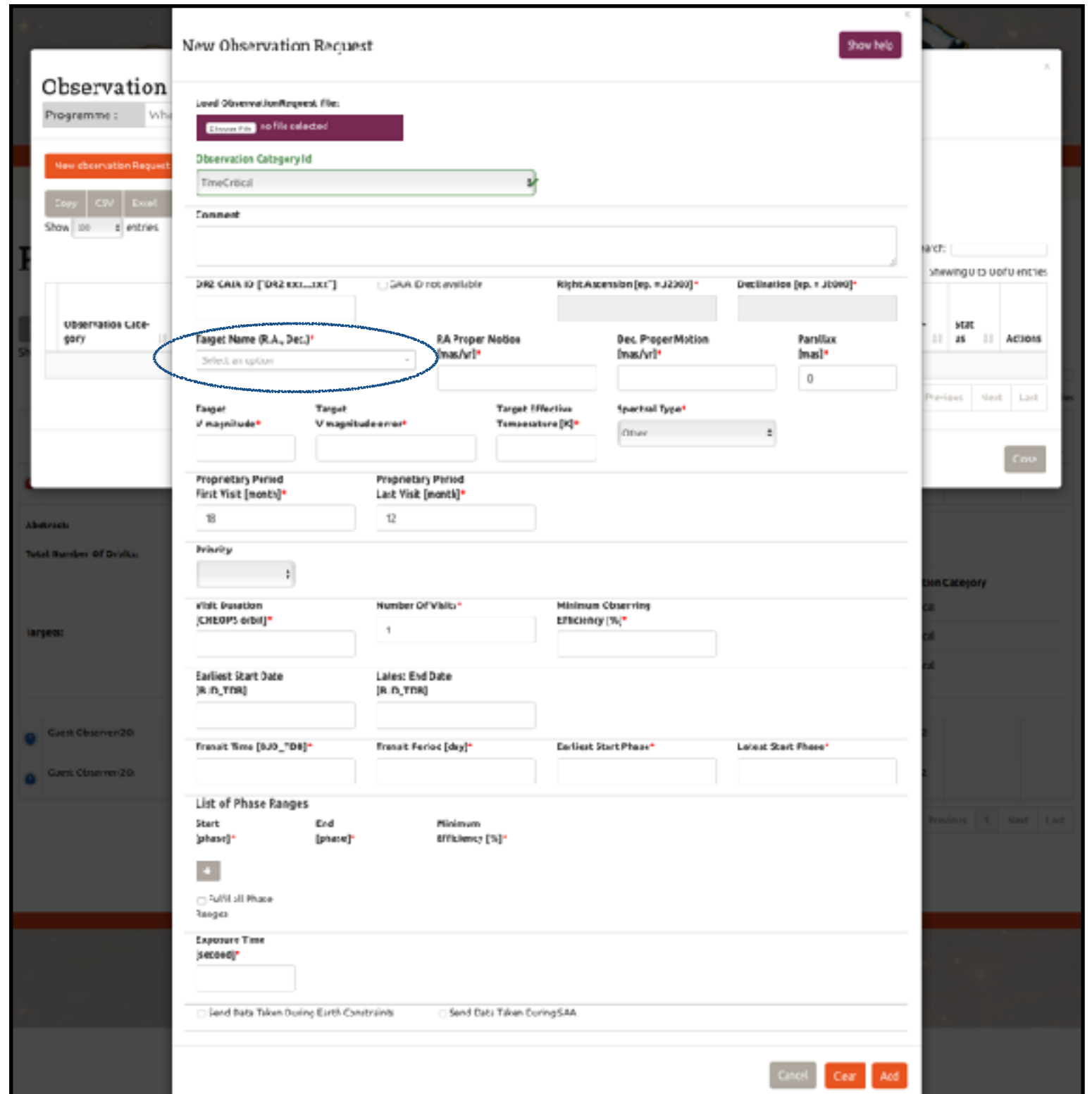
☐ Send Data Taken During Earth Constraints ☐ Send Data Taken During SAA

Proposal Handling Tool Phase II

PHT2 Guidelines

Fill in the Observation Request

First select a target star from the scroll-down menu
(only targets accepted by the ESA TAC show in the menu)



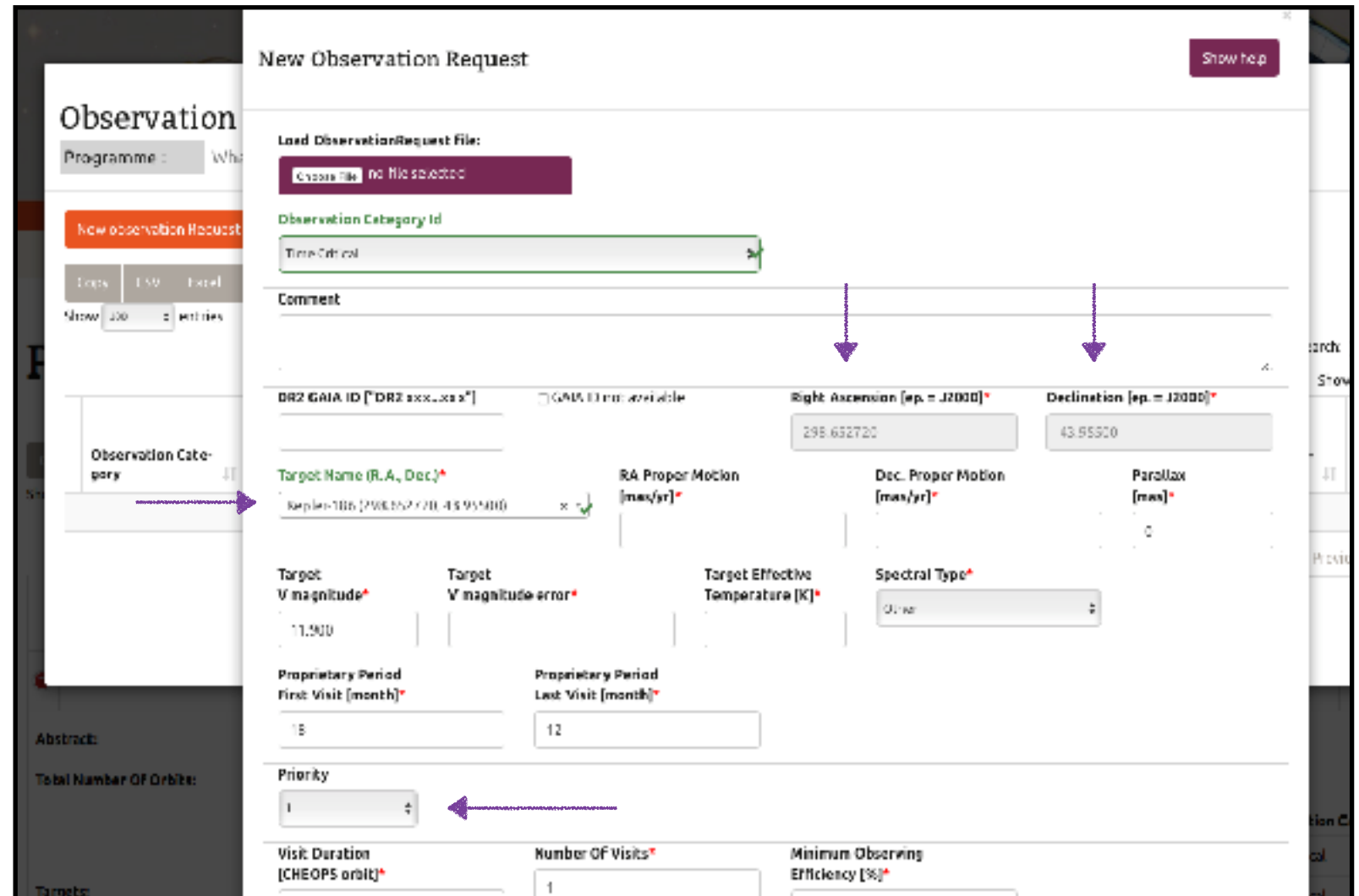
Proposal Handling Tool Phase II

PHT2 Guidelines

Fill in the Observation Request

Target coordinates are pre-filled with user-defined values from PHT-1

Priority field is pre-filled with the ESA-assigned priority for this target

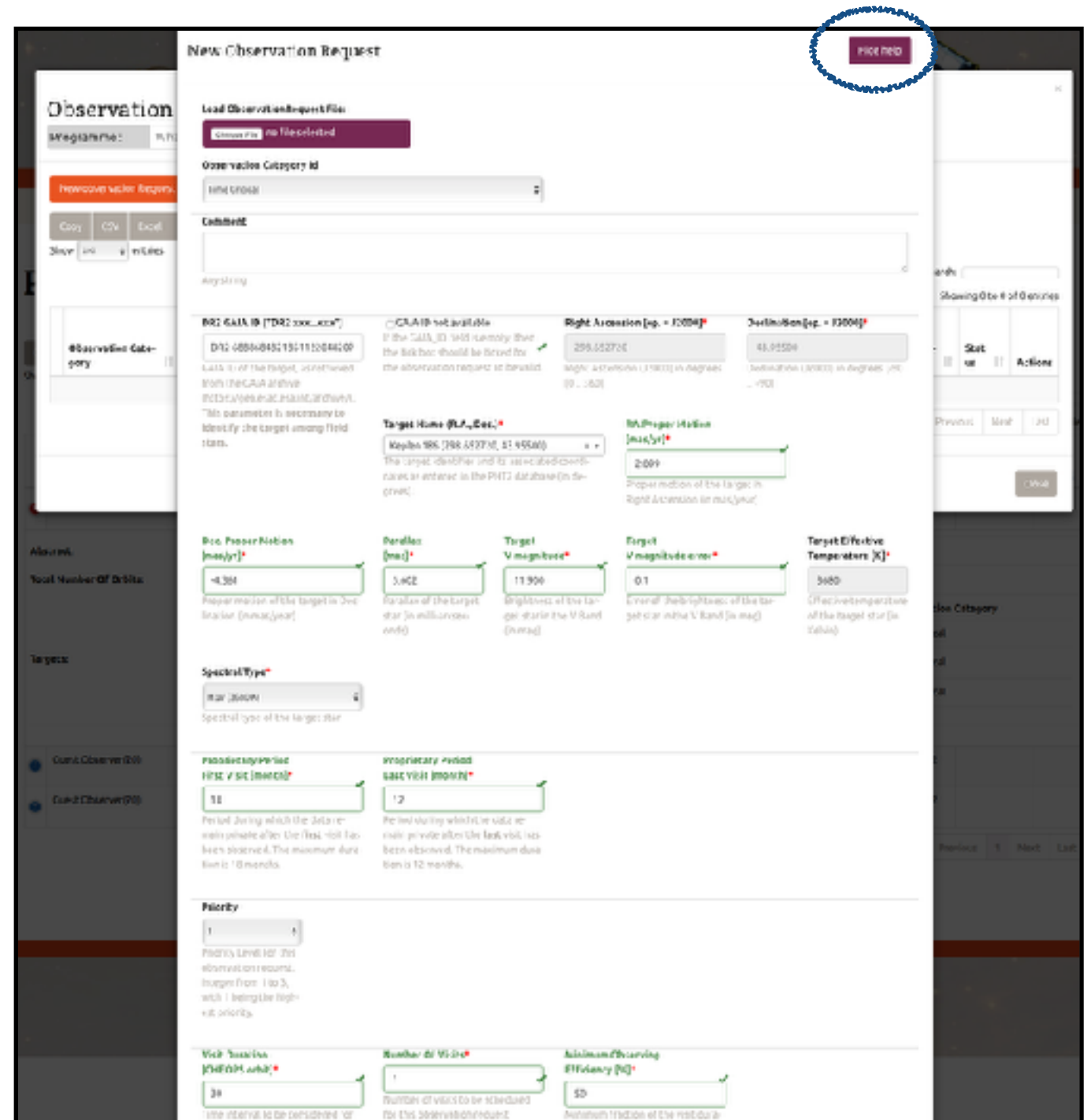


Proposal Handling Tool Phase II

PHT2 Guidelines

Fill in the Observation Request

Click on the “*Show help*” button to view additional information that will guide you to fill in individual fields.



New Observation Request

Load Observation Request File
 no file selected

Observation Category Id

Comment

Target Name (RA, Dec)

The target identifier and its associated coordinates are entered in the PHT2 database (in degrees).

Right Ascension [deg. = J2000]

Right Ascension (J2000) in degrees [0. - 360]

Declination [deg. = J2000]

Declination (J2000) in degrees [90. - -90]

Target HJD [MJD, Sec.]

The target identifier and its associated coordinates are entered in the PHT2 database (in degrees).

RA Proper Motion [mas/yr]

Proper motion of the target in Right Ascension (in mas/yr)

Dec Proper Motion [mas/yr]

Proper motion of the target in Declination (in mas/yr)

Parallax [mas]

Parallax of the target star (in milliarcseconds)

Target V magnitude

Brightness of the target star in the V band (in mag)

RA Proper Motion [mas/yr]

Proper motion of the target in Right Ascension (in mas/yr)

Dec Proper Motion [mas/yr]

Proper motion of the target in Declination (in mas/yr)

Spectral Type

Spectral type of the target star

Proprietary Period [MJD]

Period during which the data remains private after the first visit has been observed. The maximum duration is 18 months.

Proprietary Period [MJD]

Period during which the data remains private after the first visit has been observed. The maximum duration is 12 months.

Priority

Priority Level for this observation request. Ranges from 1 to 3, with 1 being the highest priority.

V-band magnitude [mag]

Brightness of the target star in the V band (in mag)

Number of Visits

Number of visits to be scheduled for this observation request

Minimum Observing Efficiency [%]

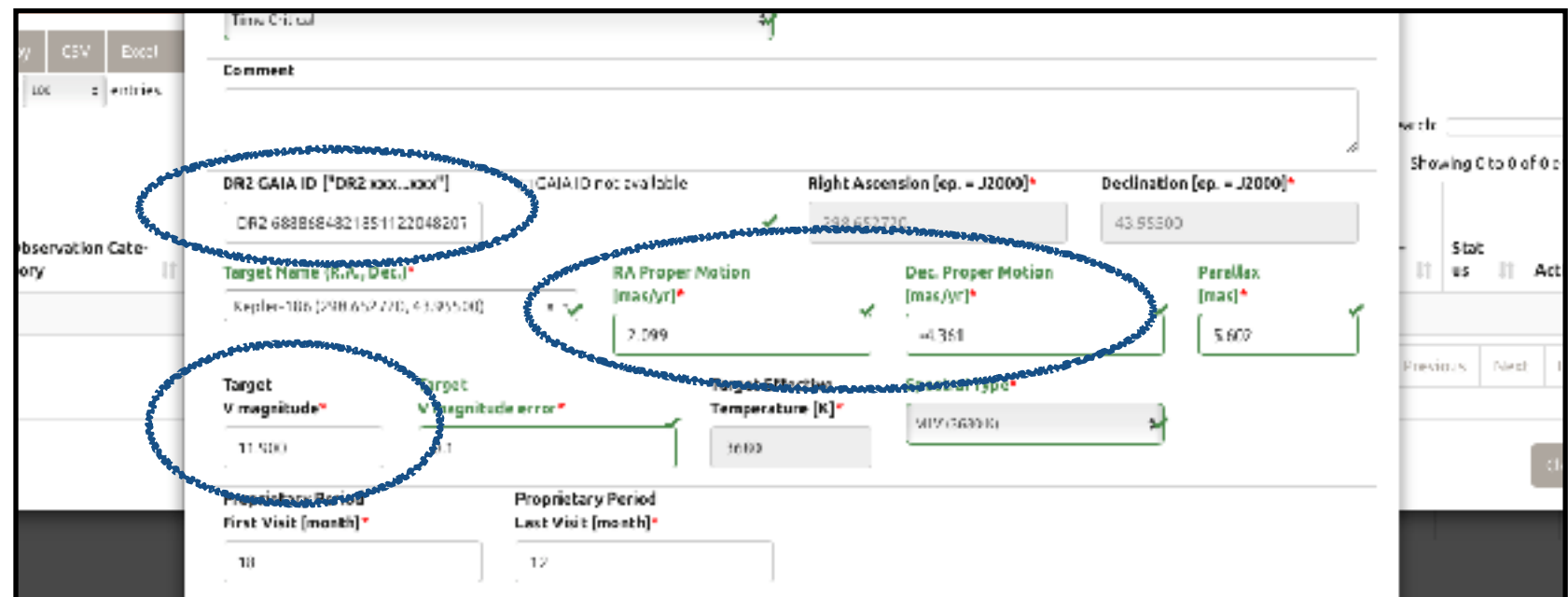
Minimum efficiency of the observation

Proposal Handling Tool Phase II

PHT2 Guidelines

Fill in the Observation Request

- *Comment* field may be useful for your own record, or for describing the observing strategy to the SOC / Mission planner
- Fill in the missing target information:
 - **GAIA ID** is critical for on-board target identification. Field must start with **"DR2 xxxxxxxx"**. GAIA ID can be fetched from the [GAIA Archive](#)
 - **Proper motion** may be critical for on-board target identification. Can be fetched from [SIMBAD](#)
 - **Magnitude** may also be critical for on-board target identification. Can be fetched from [SIMBAD](#)



The screenshot shows the PHT2 observation request form. Key fields are highlighted with blue circles:

- DR2 GAIA ID**: A text field containing "DR2 6888684821851122048201".
- RA Proper Motion**: A text field containing "2.099".
- Dec. Proper Motion**: A text field containing "-0.361".
- Parallax**: A text field containing "5.600".
- Target V magnitude**: A text field containing "11.5100".

Other visible fields include:

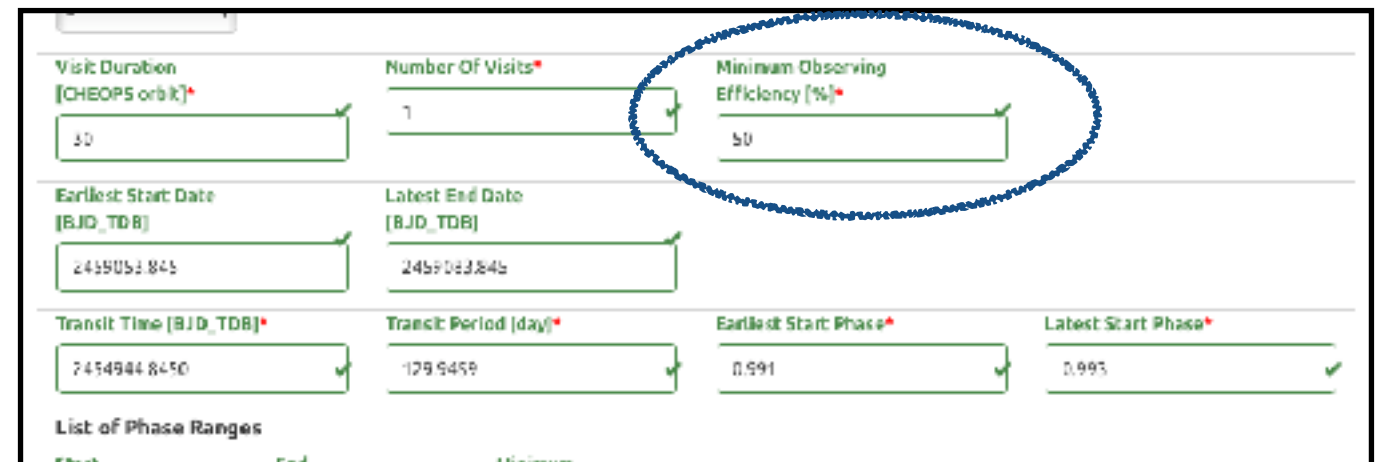
- Comment**: A large text area at the top.
- Right Ascension [ep. = J2000]**: A text field containing "288.652730".
- Declination [ep. = J2000]**: A text field containing "43.95300".
- Target Name [R.A., Dec.]**: A text field containing "Kepler-106 [298.652730, 43.953000]".
- Target Effective Temperature [K]**: A text field containing "5600".
- Proprietary Period First Visit [month]**: A text field containing "10".
- Proprietary Period Last Visit [month]**: A text field containing "12".

Proposal Handling Tool Phase II

PHT2 Guidelines

Fill in the Observation Request

- **Observing efficiency** is a critical element for the schedulability of your observation. Expected observing efficiency can be checked with the Science Feasibility Checker (Phase-1).



The screenshot shows the 'Observation Request' form with the following fields and values:

Visit Duration [CHEOPS orbit]* 30	Number Of Visits* 1	Minimum Observing Efficiency [%]* 50
Earliest Start Date [BJD_TDB] 2459053.845	Latest End Date [BJD_TDB] 2459053.845	
Transit Time [BJD_TDB]* 2454944.8450	Transit Period [day]* 129.5459	Earliest Start Phase* 0.991
		Latest Start Phase* 0.995

The 'Minimum Observing Efficiency [%]*' field is circled in blue.

Notes from the template observationRequest file that you have used for preparing the Phase-1 (feasibility check):

```
<!-- This parameter defines the minimum on-source time relative to the visit duration -->
<!-- (excluding interruptions due to the SAA, Earth Occultations, and straylight constraints) -->
<!-- NOTE: For visits with scheduling flexibility, especially those shorter than 3 orbits, the effective -->
<!-- observing efficiency may end up to be lower than the requested value by up to ~ 15%. -->
<!-- This may happen under special circumstances, typically when the scheduleSolver algorithm adjusts -->
<!-- the visit start time to optimise the overall schedule, which may result in a visit being shifted -->
<!-- toward the SAA, Earth occultations or straylight regions. -->
```

As the observing efficiency is mainly driven by the target location in the sky, it is highly **recommended** to set the requested observing efficiency to a rather low value, **typically 50%**, for all targets, except if the science case requires very high observing efficiency (assuming this efficiency is reachable for at least one visit)

Proposal Handling Tool Phase II

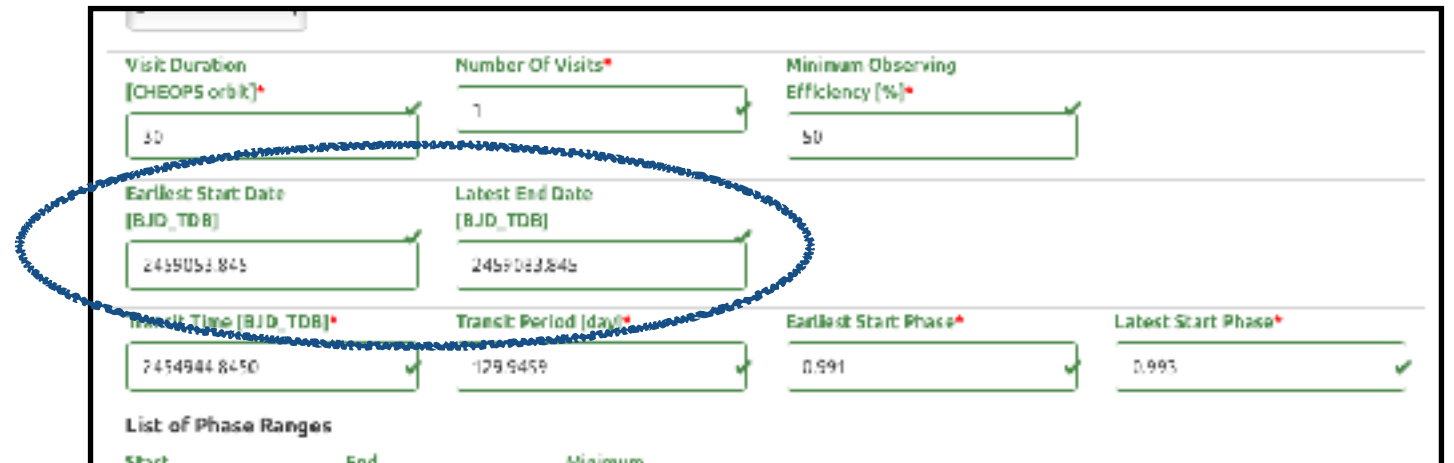
PHT2 Guidelines

Fill in the Observation Request

- Use **time bracketing** to constrain the scheduling dates of your observations.

This might be useful for “catching” specific transits, typically for TTVs.

This parameter is optional.



The screenshot shows the 'Observation Request' form in the PHT2 tool. A blue oval highlights the 'Earliest Start Date [BJD_TDB]' and 'Latest End Date [BJD_TDB]' fields, which are used for time bracketing. The form includes the following fields and values:

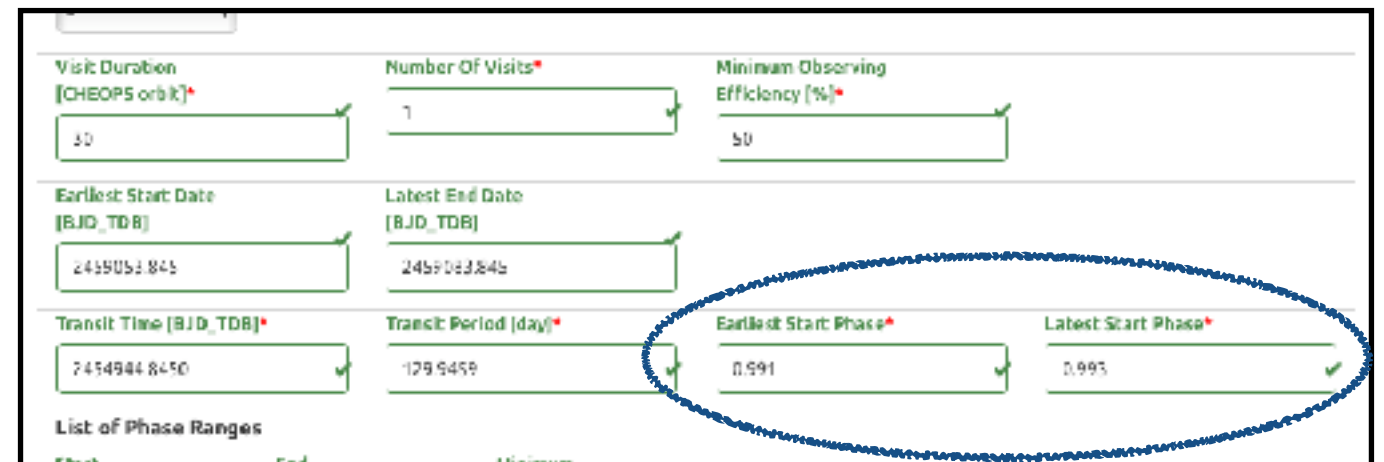
Field	Value	Status
Visit Duration [CHEOPS orbit]	30	✓
Number Of Visits	1	✓
Minimum Observing Efficiency [%]	50	✓
Earliest Start Date [BJD_TDB]	2459053.845	✓
Latest End Date [BJD_TDB]	2459063.845	✓
Transit Time [BJD_TDB]	2454944.8450	✓
Transit Period [day]	129.9459	✓
Earliest Start Phase	0.991	✓
Latest Start Phase	0.995	✓

Below the form, there is a section titled 'List of Phase Ranges' with columns for Start, End, and Minimum.

Proposal Handling Tool Phase II

PHT2 Guidelines

Fill in the Observation Request



Visit Duration (CHEOPS orbit)* 30	Number Of Visits* 7	Minimum Observing Efficiency [%]* 50
Earliest Start Date (BJD_TDB) 2459053.845	Latest End Date (BJD_TDB) 2459063.845	
Transit Time (BJD_TDB)* 2454944.8450	Transit Period (day)* 129.5459	Earliest Start Phase* 0.591
		Latest Start Phase* 0.995

List of Phase Ranges

Start	End	Minimum

- **Earliest/Latest_start_phase** parameters are used to define the allowed start time of *time-critical* visits.

Notes from the template observationRequest file that you have used for preparing the Phase-1 (feasibility check):

```

<!-- This parameter defines the flexibility of a visit start time in units of planetary orbital phase. -->
<!-- Two values are defined to bound the allowed start time of the visit. -->
<!-- NOTE: Leaving no slack for the observation start time reduces the chance of being scheduled -->
<!-- NOTE: Requesting flexibility on the start time implies that the effective observing efficiency may in some rare cases -->
<!-- be lower than the requested value (see comment above in <Minimum_Effective_Duration>) -->
  
```

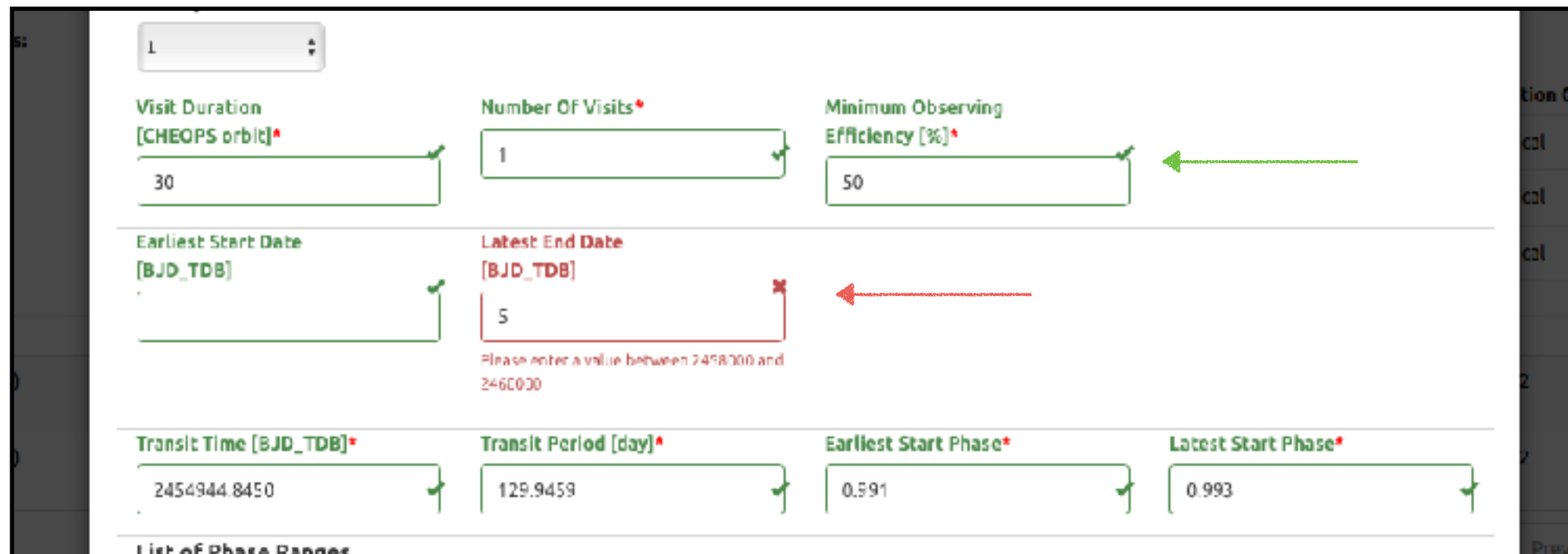
The start_phase slack allows for some scheduling flexibility. Be careful however that the slack is commensurate with the visit duration, i.e. that the visit covers the intended time period, typically the transit, for any start time during the start_phase slack.

Proposal Handling Tool Phase II

PHT2 Guidelines

Fill in the Observation Request

Valid and invalid entries are identified as such in the form.



The screenshot shows the PHT2 Observation Request form with the following fields and their values:

- Visit Duration [CHEOPS orbit]***: 30 (Valid, green checkmark)
- Number OF Visits***: 1 (Valid, green checkmark)
- Minimum Observing Efficiency [%]***: 50 (Valid, green checkmark)
- Earliest Start Date [BJD_TDB]**: (Valid, green checkmark)
- Latest End Date [BJD_TDB]**: 5 (Invalid, red X, error message: "Please enter a value between 2458000 and 2460000")
- Transit Time [BJD_TDB]***: 2454944.8450 (Valid, green checkmark)
- Transit Period [day]***: 129.9459 (Valid, green checkmark)
- Earliest Start Phase***: 0.991 (Valid, green checkmark)
- Latest Start Phase***: 0.993 (Valid, green checkmark)

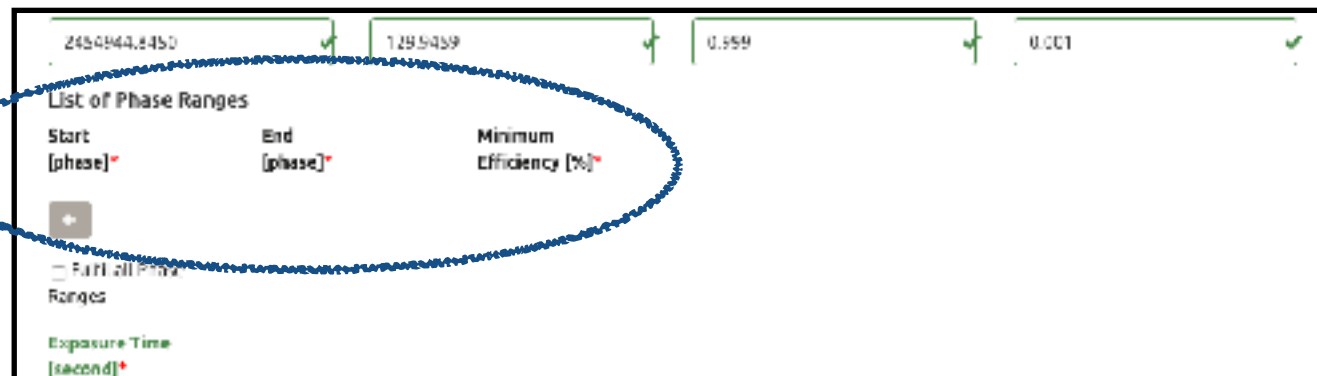
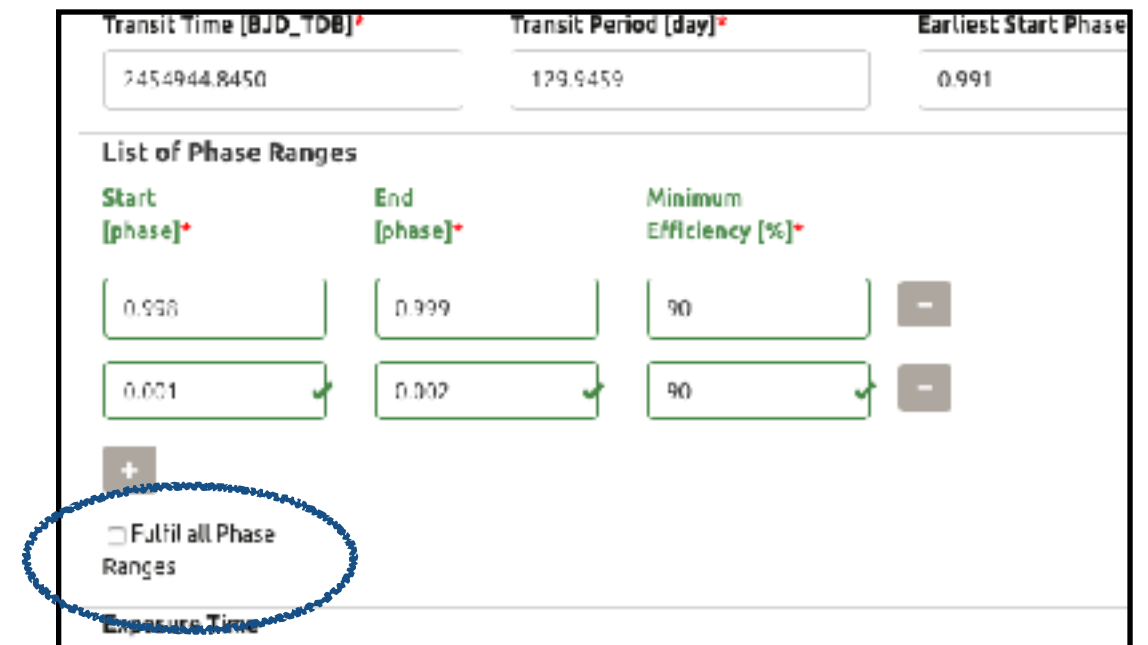
Green arrows point to the valid fields, and a red arrow points to the invalid field.

Proposal Handling Tool Phase II

PHT2 Guidelines

Fill in the Observation Request

For *time-critical* observations only, you may define **critical phase ranges**, i.e. specific time periods within the visit with an increased requested observing efficiency.

As those put stringent constraints on the schedulability of your observations, **they should be used *only* if justified by the science case.**

Please make sure that the **requested critical phase ranges are always contained within the visit**, for all possible start times defined by the earliest_/latest_start_phase parameters.

Notes from the template observationRequest file that you have used for preparing the Phase-1 (feasibility check):

```
<!-- The set of parameters below is used to define specific (orbital) phase ranges -->
<!-- within which the observing efficiency may be increased to a specific value -->
<!-- Convention is that the transit is at phase=0 (or equivalently 1) -->
<!-- This can be seen as a local requirement on the observing efficiency (e.g. egresses) -->
<!-- NOTE: Requiring critical phase ranges is an additional constraint that will result in lower chances of being scheduled -->
```

When two phase ranges are specified, you may decide to request that both, or only one, phase ranges are observed. This is equivalent to the logical AND / OR, respectively.

Proposal Handling Tool Phase II

PHT2 Guidelines

Fill in the Observation Request

- **Exposure Time is critical** for the technical validity of your observations.

Ranges

Exposure Time
[second] *

60

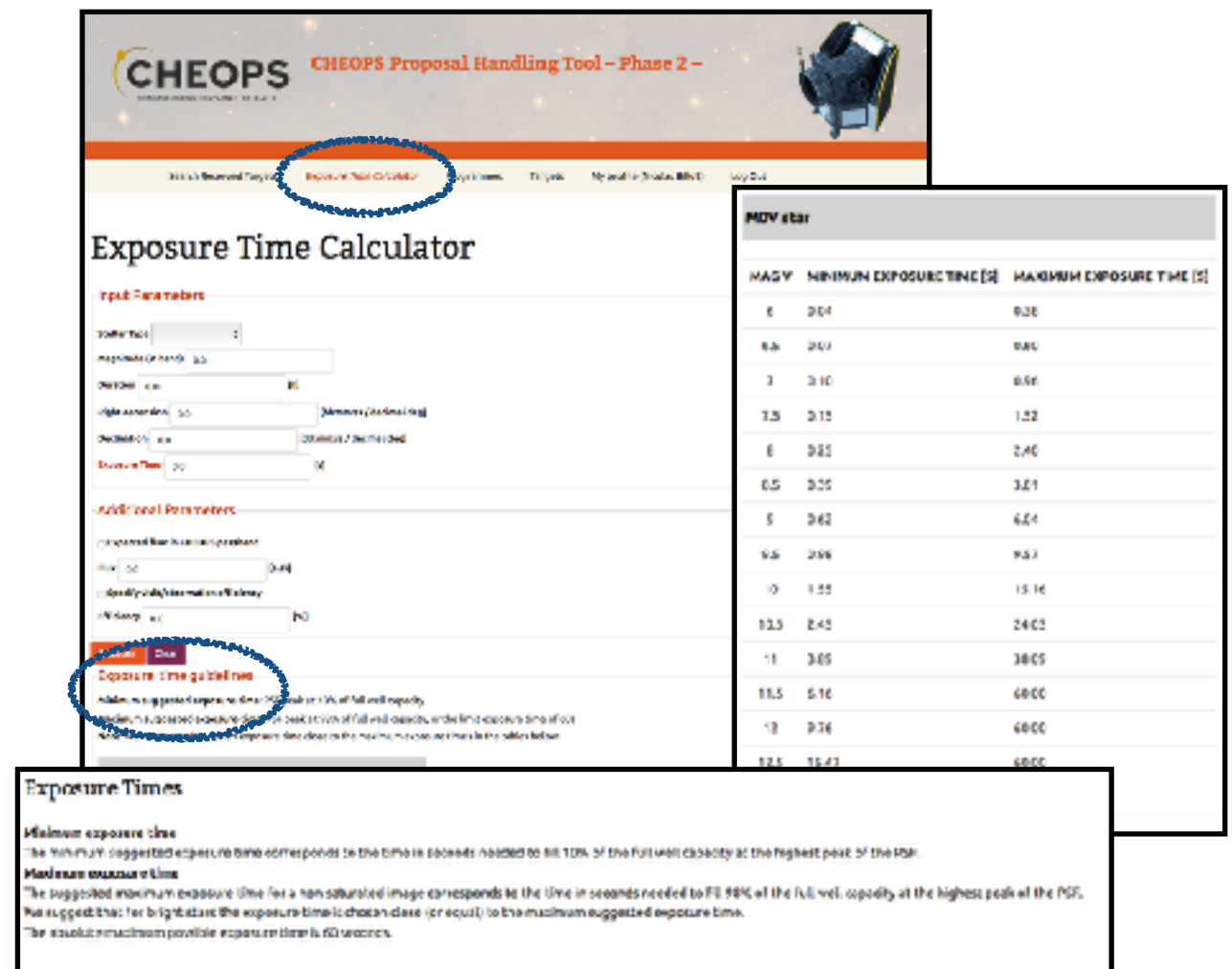
☐ Send Data Taken During Earth Constraints

Please consult the [CHEOPS Observers Manual](#) to understand the impact of the exposure time on the on-board image stacking strategy.

Table 2: Image and imagette stacking order, image cadence and duty cycle as a function of the exposure time. An image cadence of 1 means that one image is recorded every 1 seconds. In ULTRAFRONT read-out mode (shaded rows), the detector has to be read-out sequentially and not in parallel to the exposure, introducing a significant decrease of the duty cycle, calculated as $d = t_{exp} / (t_{exp} + 1.1 \text{ s})$. See Table 1 for details. Mind the gap in duty cycle between exposure times of 1 s and 1.05 s!

Exposure time (s)	Image stacking order	Imagette stacking order	Stacked image cadence (s)	Duty cycle (%)
$t_{exp} < 0.1$	40	4	$f < 48$	$d < 8.3$
$0.1 \leq t_{exp} < 0.15$	39	3	$48.8 \leq f < 48.9$	$8.3 \leq d < 12$
$0.15 \leq t_{exp} < 0.2$	30	3	$45 \leq f < 40.8$	$12 \leq d < 15.4$
$0.2 \leq t_{exp} < 0.4$	33	3	$42.9 \leq f < 49.5$	$15.4 \leq d < 26.7$

Please follow the guidelines from the Exposure Time Calculator to set up the exposure time.



CHEOPS Proposal Handling Tool - Phase 2 -

Exposure Time Calculator

Input Parameters

Target RA: []
 Magnitude (V-band): []
 Declination: []
 Right Ascension: [] (Degrees (J2000.0))
 Declination: [] (Degrees (J2000.0))
 Exposure Time: [] (s)

Additional Parameters

Proposed Read-Out Mode: []
 Read-Out Mode: [] (Quick)
 Read-Out Mode: [] (Standard)
 Read-Out Mode: [] (Full)

Exposure time guidelines

The minimum suggested exposure time corresponds to the time in seconds needed to fill 10% of the full well capacity at the highest peak of the PSF.
 The suggested maximum exposure time for a non-saturated image corresponds to the time in seconds needed to fill 90% of the full well capacity at the highest peak of the PSF.
 The suggested maximum exposure time for a saturated image corresponds to the time in seconds needed to fill 90% of the full well capacity at the highest peak of the PSF.
 The suggested maximum exposure time for a saturated image corresponds to the time in seconds needed to fill 90% of the full well capacity at the highest peak of the PSF.

Exposure Times

Minimum exposure time
 The minimum suggested exposure time corresponds to the time in seconds needed to fill 10% of the full well capacity at the highest peak of the PSF.

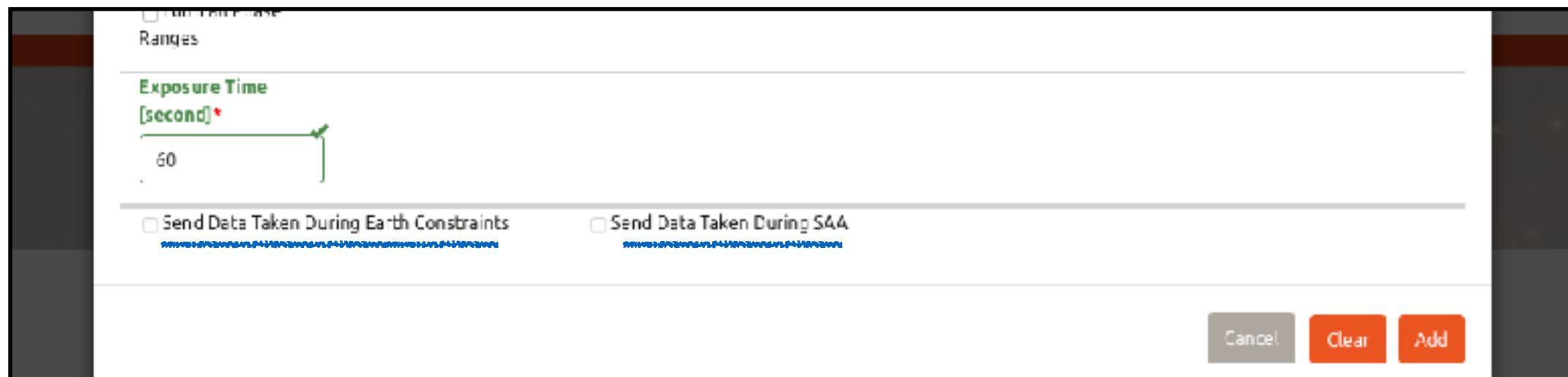
Maximum exposure time
 The suggested maximum exposure time for a non-saturated image corresponds to the time in seconds needed to fill 90% of the full well capacity at the highest peak of the PSF.
 The suggested maximum exposure time for a saturated image corresponds to the time in seconds needed to fill 90% of the full well capacity at the highest peak of the PSF.

Fill in the Observation Request

Options on *data downlink* are not editable for nominal science users.

Radio buttons indicate whether data recorded on-board during SAA crossings or during Earth constraints (hard occultation and high-levels of straylight) will be downlinked.

Their current default value for nominal science is False, i.e. data taken during SAA and Earth constraints will NOT be downlinked.



The screenshot shows a web form for creating an observation request. At the top, there is a checkbox labeled "Full Time Phase" which is unchecked. Below this is a section titled "Ranges". Inside this section, there is a label "Exposure Time" in green, followed by "[second]" in red and a red asterisk. A green horizontal line with a checkmark at the end is positioned above a text input field containing the number "60". Below the "Ranges" section, there are two radio buttons. The first is labeled "Send Data Taken During Earth Constraints" and is currently selected. The second is labeled "Send Data Taken During SAA". Both labels have a blue wavy line underneath them. At the bottom right of the form, there are three buttons: "Cancel" (grey), "Clear" (orange), and "Add" (orange).

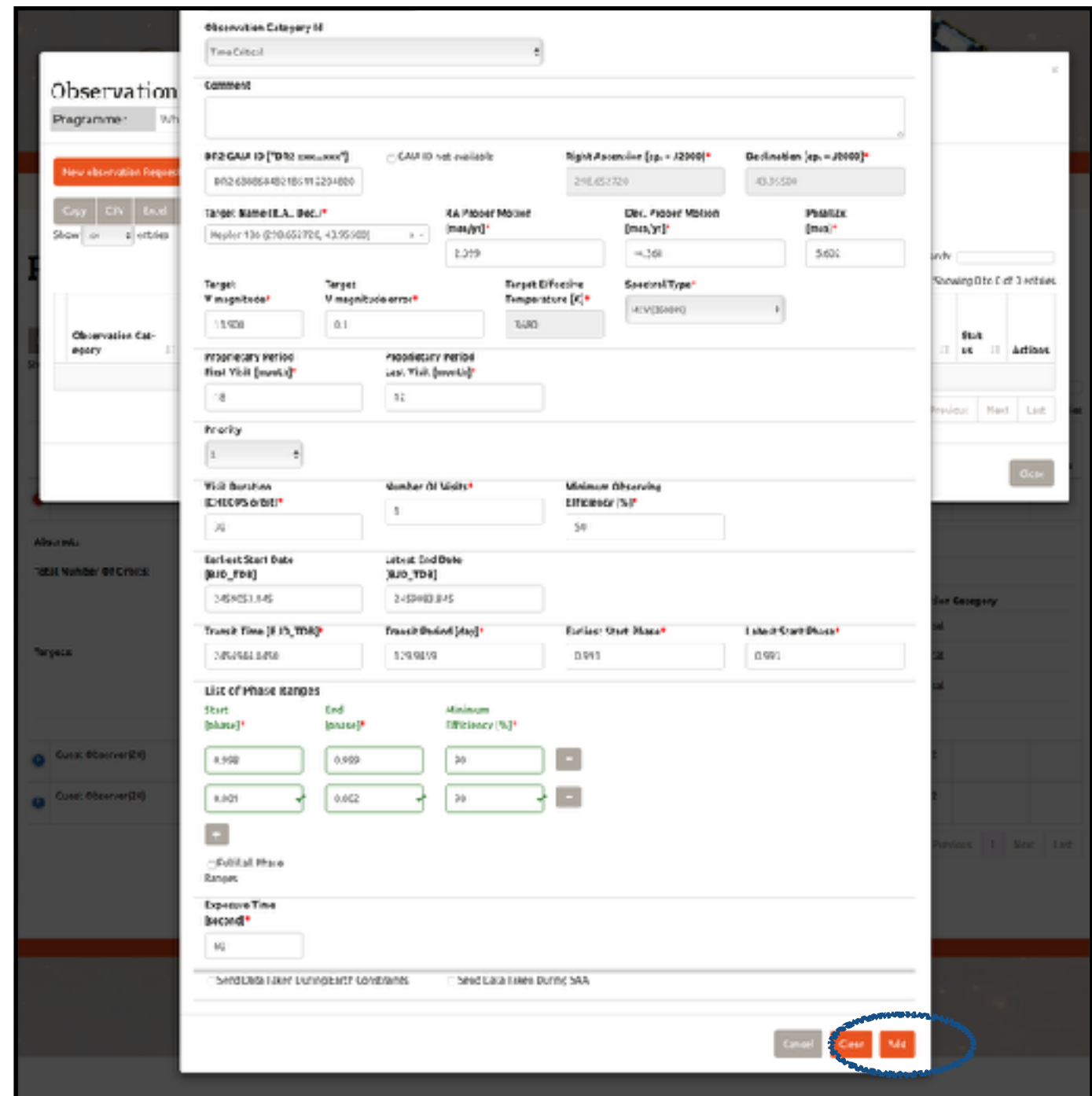
Proposal Handling Tool Phase II

PHT2 Guidelines

Finalise the Observation Request

Once your observation request is complete, please:

Click “Add”



The screenshot shows the 'Observation' form in the PHT2 tool. The form is divided into several sections:

- Observation Category:** A dropdown menu set to 'Time Critical'.
- Comment:** A text area for additional information.
- Target Information:**
 - RA/Dec ID:** A text field with the value '002.630054482185 11.1204800'.
 - RA/Dec:** A text field with the value '002.630054482185 11.1204800'.
 - Target Name (I.A. Dec.):** A text field with the value 'Kepler 130 (270.651724, 43.955400)'.
 - RA/Dec Motion (mas/yr):** A text field with the value '2.219'.
 - Dec. Proper Motion (mas/yr):** A text field with the value '4.168'.
 - PARALLAX (mas):** A text field with the value '5.600'.
- Target Properties:**
 - Target W magnitude:** A text field with the value '11.908'.
 - Target V magnitude error:** A text field with the value '0.1'.
 - Target Effective Temperature (K):** A text field with the value '5400'.
 - Special Type:** A dropdown menu set to 'ACV(36000)'.
- Observation Period:**
 - Proprietary Period First Visit (months):** A text field with the value '18'.
 - Proprietary Period Last Visit (months):** A text field with the value '12'.
- Priority:** A dropdown menu set to '1'.
- Visit Duration:**
 - CHEOPS orbit:** A text field with the value '20'.
 - Number of Visits:** A text field with the value '1'.
 - Minimum Observing Efficiency (%):** A text field with the value '50'.
- Earliest Start Date (BJD_TDB):** A text field with the value '2454051.845'.
- Latest End Date (BJD_TDB):** A text field with the value '2454053.845'.
- Transit Time (BJD_TDB):** A text field with the value '2454051.845'.
- Transit Duration (day):** A text field with the value '1.798119'.
- Earliest Start Phase:** A text field with the value '0.991'.
- Latest Start Phase:** A text field with the value '0.991'.

At the bottom of the form, there is a section for 'List of Phase Ranges' with columns for 'Start (phase)', 'End (phase)', and 'Minimum Efficiency (%)'. There are two rows of data:

Start (phase)	End (phase)	Minimum Efficiency (%)
0.998	0.999	20
0.901	0.902	20

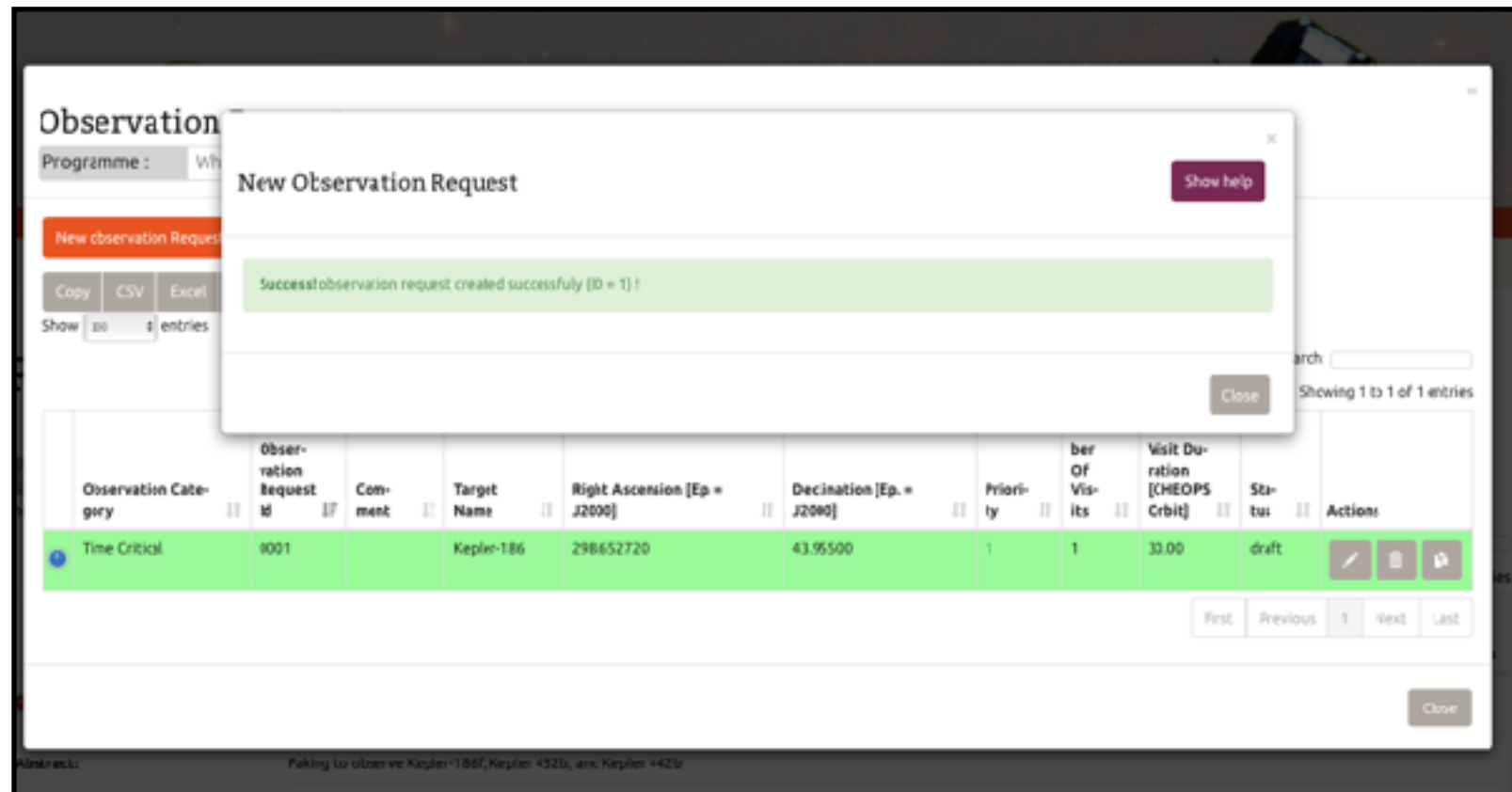
Below this table, there is a checkbox for 'Send Lick data during SAA' and a checkbox for 'Send Lick data during SAA'. At the bottom right, there are three buttons: 'Cancel', 'Clear', and 'Add'. The 'Add' button is circled in blue.

Proposal Handling Tool Phase II

PHT2 Guidelines

Finalise the Observation Request

The new Observation Request now appears in the list

The screenshot shows the 'Observation' tool interface. A modal window titled 'New Observation Request' is open, displaying a green success message: 'Success! observation request created successfully (ID = 1) !'. Below the modal, a table lists the observation requests. The first entry is highlighted in green, indicating it is the newly created request.

Observation Category	Observation Request ID	Comment	Target Name	Right Ascension [Ep. = J2000]	Declination [Ep. = J2000]	Priority	Number of Visits	Visit Duration [CHEOPS Crbit]	Status	Actions
Time Critical	9001		Kepler-186	298.652720	43.95500	1	1	30.00	draft	[Edit] [Delete] [Share]




At the bottom of the table, there are pagination controls: 'First', 'Previous', '1', 'Next', 'Last'. A 'Close' button is located at the bottom right of the modal window.

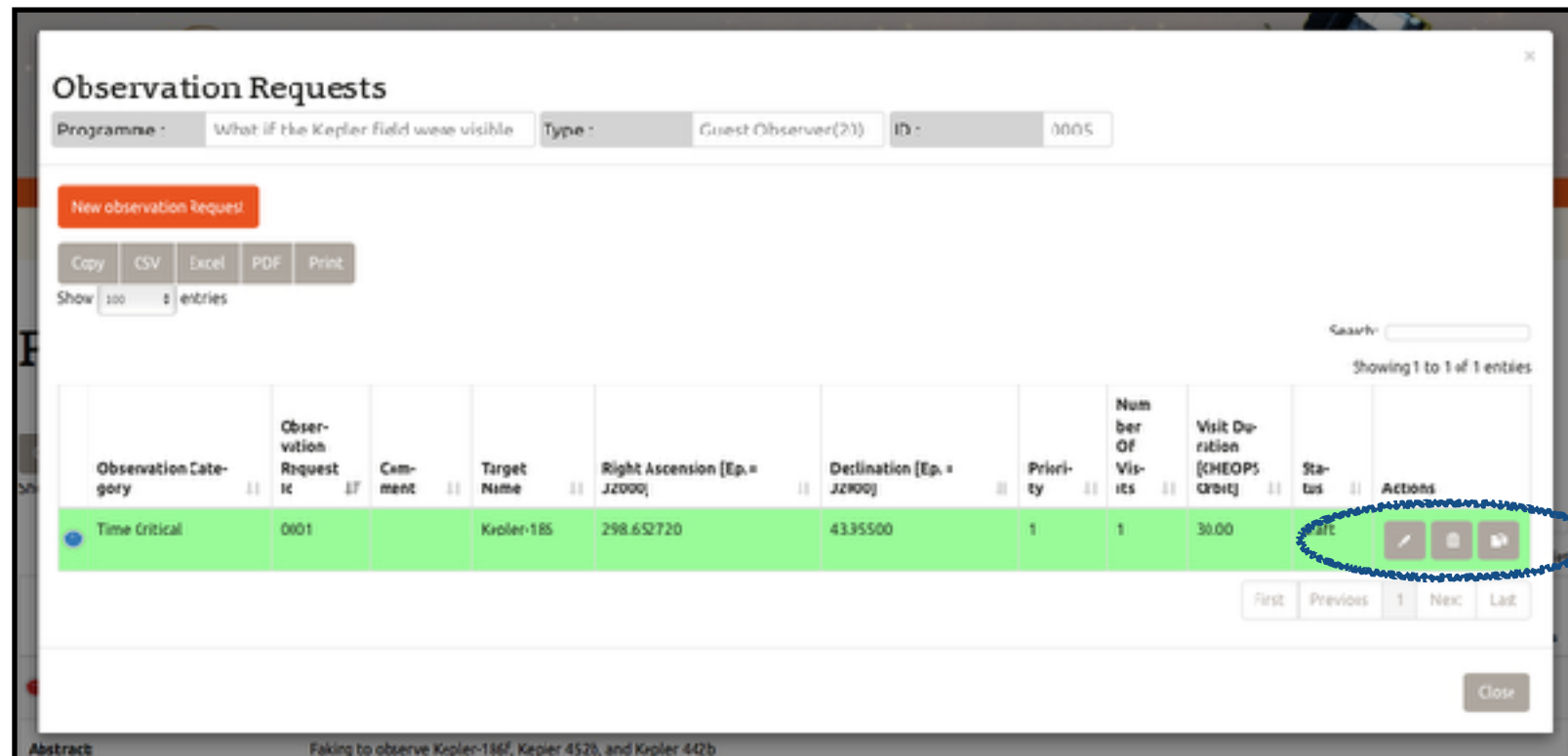
Proposal Handling Tool Phase II

PHT2 Guidelines

Complete your programme

Your newly created Observation Request now appears in the list

You can **Edit** , **Delete** ,
or **Clone**  your observation requests



Observation Requests




Programme : What if the Kepler field were visible Type : Guest Observer(21) ID : 0005

New observation Request

Copy CSV Excel PDF Print

Show 100 1 entries

Search: Showing 1 to 1 of 1 entries

Observation Category	Observation Request ID	Comment	Target Name	Right Ascension [Ep. = J2000]	Declination [Ep. = J2000]	Priority	Number of Visits	Visit Duration [CHEOPS Orbit]	Status	Actions
Time Critical	0001		Kepler-185	298.652720	43.355500	1	1	30.00	PFT	  

First Previous 1 Next Last

Close

Abstract Faking to observe Kepler-185f, Kepler 452b, and Kepler 402b

Proposal Handling Tool Phase II

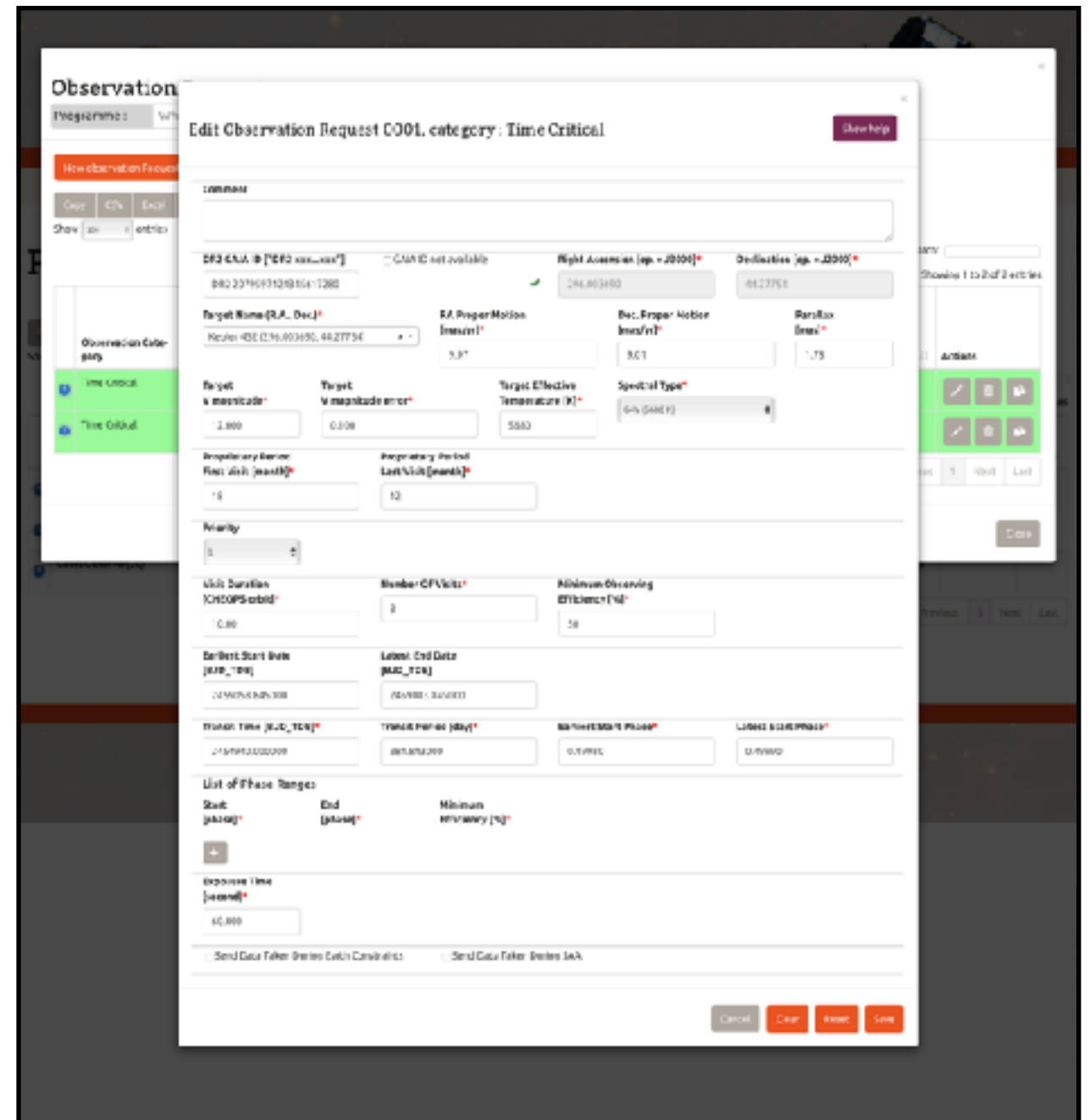
PHT2 Guidelines

Complete your programme



Cloning an observation request creates a new observation request (new ID) with fields pre-filled with values from the parent request.

This may be used to speed up the creation of observation requests if only a few parameters change with respect to existing requests.



The screenshot shows the 'Edit Observation Request' form in the PHT2 tool. The form is titled 'Edit Observation Request 0001, category: Time Critical'. It contains various fields for observation parameters, including target name, RA, Dec, magnitude, and exposure time. The form is divided into sections for 'Observation' and 'Programme'.

Observation Section:

- Comment:** A text area for additional notes.
- Target Name (RA, Dec):** Fields for Right Ascension (RA) and Declination (Dec).
- RA Proper Motion (mas/yr):** A field for the proper motion in Right Ascension.
- Dec Proper Motion (mas/yr):** A field for the proper motion in Declination.
- Parallax (mas):** A field for the parallax.
- Target magnitude:** A field for the target's magnitude.
- Target V magnitude error:** A field for the error in the V-band magnitude.
- Target Effective Temperature (K):** A field for the target's effective temperature.
- Spectral Type:** A field for the target's spectral type.
- Regularity Period (months):** A field for the regularity period.
- Regularity Period (months):** A field for the regularity period.
- Priority:** A dropdown menu for selecting the priority.
- Visit Duration (CHEOPS orbit):** A field for the visit duration.
- Number of Visits:** A field for the number of visits.
- Minimum Observing Efficiency (%):** A field for the minimum observing efficiency.
- Earliest Start Date (UTC, YYYY-MM-DD):** A field for the earliest start date.
- Latest End Date (UTC, YYYY-MM-DD):** A field for the latest end date.
- Transit Time (UTC, YYYY-MM-DD):** A field for the transit time.
- Transit Period (days):** A field for the transit period.
- Number of Phases:** A field for the number of phases.
- Logbook Start/End Dates:** Fields for the logbook start and end dates.
- List of Phase Ranges:** A table with columns for Start (phase), End (phase), and Minimum Efficiency (%).
- Exposure Time (seconds):** A field for the exposure time.
- Send Data Taken (before/after/both):** A dropdown menu for selecting when to send data.
- Send Data Taken (before/after/both):** A dropdown menu for selecting when to send data.

Programme Section:

- Observation Category:** A dropdown menu for selecting the observation category.
- Time Critical:** A checkbox for marking the request as time critical.

The form also includes buttons for 'Cancel', 'Clear', 'Reset', and 'Save' at the bottom right.

Complete your programme

Every new Observation Request appears in the list of observations in your programme.

The total time required to execute all observation requests in a given programme must remain within the time allocated by the ESA TAC

Observation Requests

Programme: What if the Kepler field were visible

Type: Guest Observer(20)

ID: 0005

New observation Request

Copy

CSV

Excel

PDF

Print

Show 20 entries

Search:

Showing 1 to 5 of 5 entries

Observation Category	Observation Request Id	Comment	Target Name	Right Ascension (J2000)	Declination (J2000)	Priority	Number of Visits	Wait time (CHEOPS Orbit)	Status	Actions
Time Critical	0001		Kepler 442	285.346559	39.28006	1	1	10.00	Draft	<div></div> <div></div> <div></div>
Time Critical	0004		Kepler 442	285.346559	39.28006	1	1	10.00	Draft	<div></div> <div></div> <div></div>
Time Critical	0001		Kepler 442	285.346559	39.28006	1	1	10.00	Draft	<div></div> <div></div> <div></div>
Time Critical	0001		Kepler 186	298.612729	41.95500	1	1	30.00	Draft	<div></div> <div></div> <div></div>
Time Critical	0001		Kepler 452	284.043499	44.37754	1	1	10.00	Draft	<div></div> <div></div> <div></div>

First

Previous

1

Next

Last

Close

Proposal Handling Tool Phase II

PHT2 Guidelines

Complete your programme

You cannot exceed the number of accepted orbits for a given target.

This example is for a target with only 10 orbits left to be allocated.

$$10 \times 1 = 10 \quad \text{— OK}$$

Visit Duration [CHEOPS orbit]*	Number OF Visits*
10	1
Earliest Start Date [BJD_TDB]	Latest End Date [BJD_TDB]

$$3 \times 3 \leq 10 \quad \text{— OK}$$

1	Visit Duration [CHEOPS orbit]*	Number OF Visits*	Minimum Observing Efficiency [%]*
	3	3	50
	Earliest Start Date [BJD_TDB]	Latest End Date [BJD_TDB]	

$$3 \times 4 = 12 > 10 \quad \text{— Not OK}$$

Visit Duration [CHEOPS orbit]*	Number OF Visits*
3	4
Earliest Start Date [BJD_TDB]	Latest End Date [BJD_TDB]

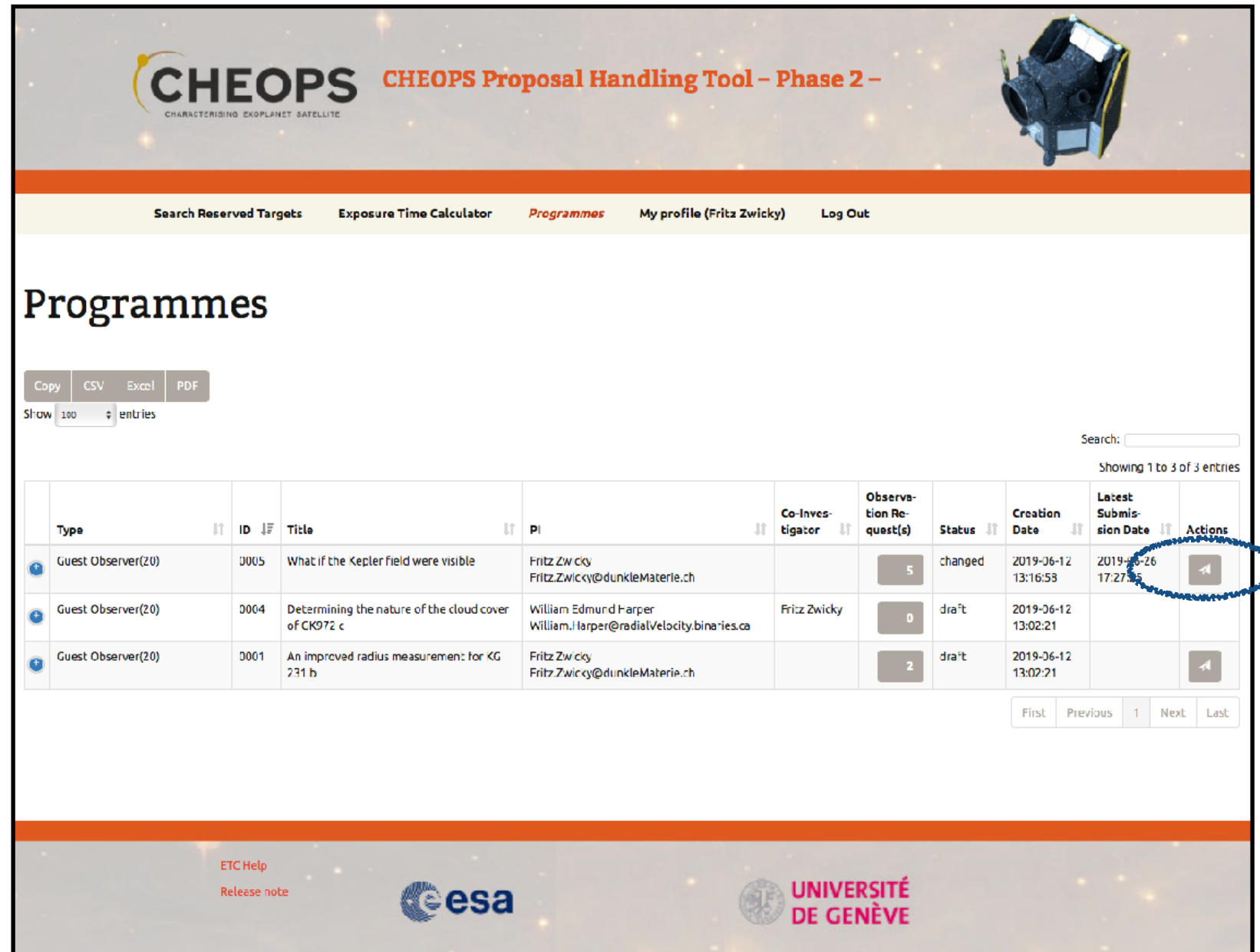
Approved number of orbits for the target Kepler 442 exceeded (30) !
Reduce the visit duration or the number of visits(=3).

Proposal Handling Tool Phase II



PHT2 Guidelines

Submit your programme

Programmes that you own can be submitted with the  icon.




The screenshot shows the 'Programmes' section of the CHEOPS Proposal Handling Tool - Phase 2. The interface includes a header with the CHEOPS logo and a navigation bar with links: Search Reserved Targets, Exposure Time Calculator, Programmes (active), My profile (Fritz Zwicky), and Log Out. Below the header, there are buttons for Copy, CSV, Excel, and PDF, and a 'Show 100 entries' dropdown. A search bar is located on the right. The main content is a table with 11 columns: Type, ID, Title, PI, Co-Investigator, Observation Request(s), Status, Creation Date, Latest Submission Date, and Actions. Three entries are listed, all of Type 'Guest Observer(20)'. The first entry has a 'submit' icon in the Actions column, which is circled in blue. The footer contains links for ETC Help and Release note, and logos for ESA and the University of Geneva.

Type	ID	Title	PI	Co-Investigator	Observation Request(s)	Status	Creation Date	Latest Submission Date	Actions
Guest Observer(20)	0005	What if the Kepler field were visible	Fritz Zwicky Fritz.Zwicky@dunkleMaterie.ch		5	changed	2019-06-12 13:16:58	2019-06-26 17:27:55	
Guest Observer(20)	0004	Determining the nature of the cloud cover of CK972 c	William Edmund Harper William.Harper@radialVelocityBinaries.ca	Fritz Zwicky	0	draft	2019-06-12 13:02:21		
Guest Observer(20)	0001	An improved radius measurement for KG 231 b	Fritz Zwicky Fritz.Zwicky@dunkleMaterie.ch		2	draft	2019-06-12 13:02:21		

Proposal Handling Tool Phase II

PHT2 Guidelines

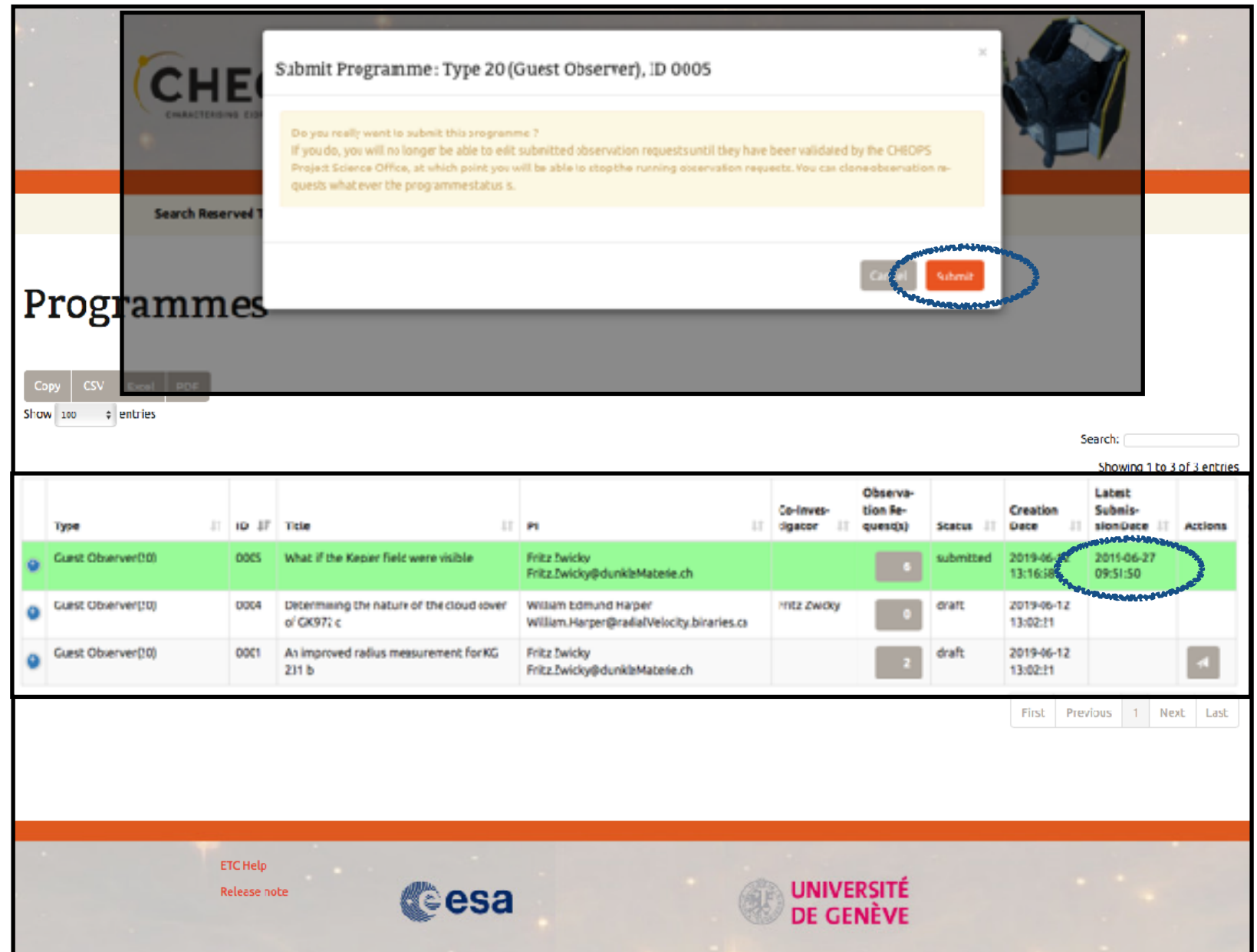
Submit your programme

Programmes that you own can be submitted with the  icon.

Only submit your programme if it is complete.

You cannot modify your programme or observation requests after it is submitted!

Date of submission is recorded.
Status changes to “Submitted”.



Submit Programme: Type 20 (Guest Observer), ID 0005

Do you really want to submit this programme?
If you do, you will no longer be able to edit submitted observation requests until they have been validated by the CHEOPS Project Science Office, at which point you will be able to stop the running observation requests whatever the programme status.

Search Reserved To:

Programmes

Copy CSV Cancel PDF

Show 100 entries



Search:

Showing 1 to 3 of 3 entries

Type	ID	Title	PI	Co-Investigator	Observation Requests	Status	Creation Date	Latest Submission Date	Actions
Guest Observer(10)	0005	What if the Kepler Field were visible	Fritz Zwicky Fritz.Zwicky@dunkleMaterie.ch		6	submitted	2019-06-12 13:16:18	2019-06-27 09:51:50	
Guest Observer(10)	0004	Determining the nature of the cloud cover of GK972 c	William Edmund Harper William.Harper@radialVelocity.binaries.ch	Fritz Zwicky	0	draft	2019-06-12 13:02:11		
Guest Observer(10)	0001	An improved radius measurement for KIC 211 b	Fritz Zwicky Fritz.Zwicky@dunkleMaterie.ch		2	draft	2019-06-12 13:02:11		

First Previous 1 Next Last

ETC Help
Release note

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Proposal Handling Tool Phase II

PHT2 Guidelines

Submit your programme

Observation requests are in status “submitted”. They cannot be edited anymore.

Observation Requests







Programme: what if the kepler field were visible Type: Guest Observer(20) ID: 0005

Copy CSV Excel PDF Print

Show 101 1 entries

Search:

Showing 1 to 1 of 6 entries

Observation Category	Observation Request Id	Comment	Target Name	Right Ascension [Ep. = J2000]	Declination [Ep. = J2000]	Priority	Number Of Visits	Visit Duration [CHEOPS Orbit]	Status	Actions
Time Critical	0000		Kepler 452	295.003690	-44.27754	1	1	5.00	submitted	
Time Critical	0005		Kepler 442	285.366559	-39.18006	1	1	10.00	submitted	
Time Critical	0004		Kepler 442	285.366559	-39.18006	1	1	10.00	submitted	
Time Critical	0003		Kepler 442	285.366559	-39.18006	1	1	10.00	submitted	
Time Critical	0002		Kepler 180	235.012320	-43.53300	1	1	30.00	submitted	
Time Critical	0001		Kepler 452	295.003690	-44.27754	1	3	10.00	submitted	

First Previous Next Last

Close

ETC Help
Release note

esa

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Proposal Handling Tool Phase II

PHT2 Guidelines

You will be notified by email if/when your targets are scheduled for observations, typically a few days before the actual observations are executed.

You will receive another email when your data are available on the CHEOPS archive for you to download.