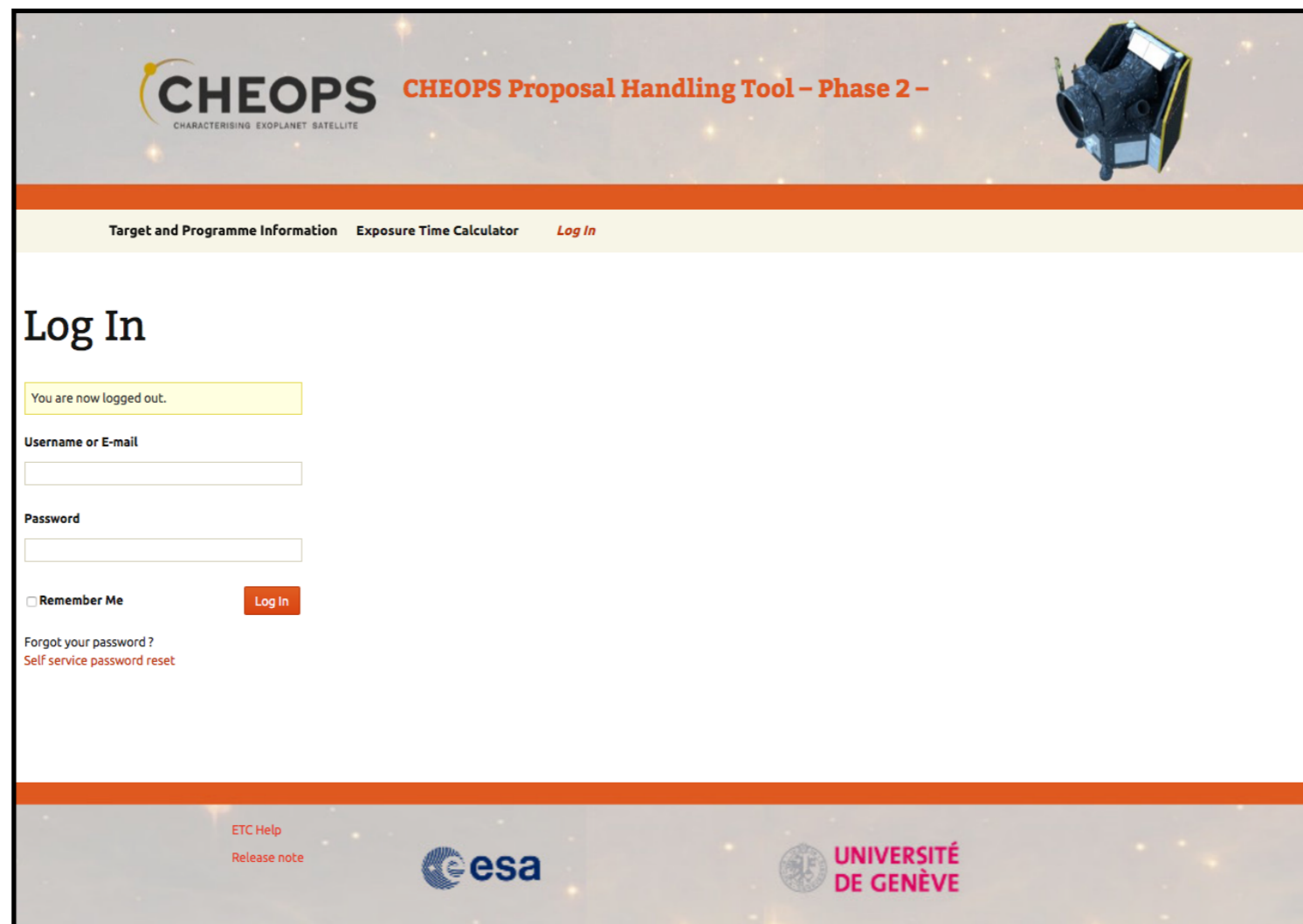


CHEOPS Proposal Handling Tool - Phase 2 - (PHT-2) Guidelines

(v_1.6, March 2025)

Proposal Handling Tool - Phase 2 - PHT-2 Guidelines

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



The screenshot shows the login page of the CHEOPS Proposal Handling Tool - Phase 2. The page features the CHEOPS logo (Characterising Exoplanet Satellite) and a navigation bar with links for 'Target and Programme Information', 'Exposure Time Calculator', and 'Log In'. The main content area is titled 'Log In' and includes a message 'You are now logged out.' Below this are input fields for 'Username or E-mail' and 'Password', a 'Remember Me' checkbox, and a 'Log In' button. There are also links for 'Forgot your password?' and 'Self service password reset'. The footer contains links for 'ETC Help' and 'Release note', along with logos for ESA and the University of Geneva.

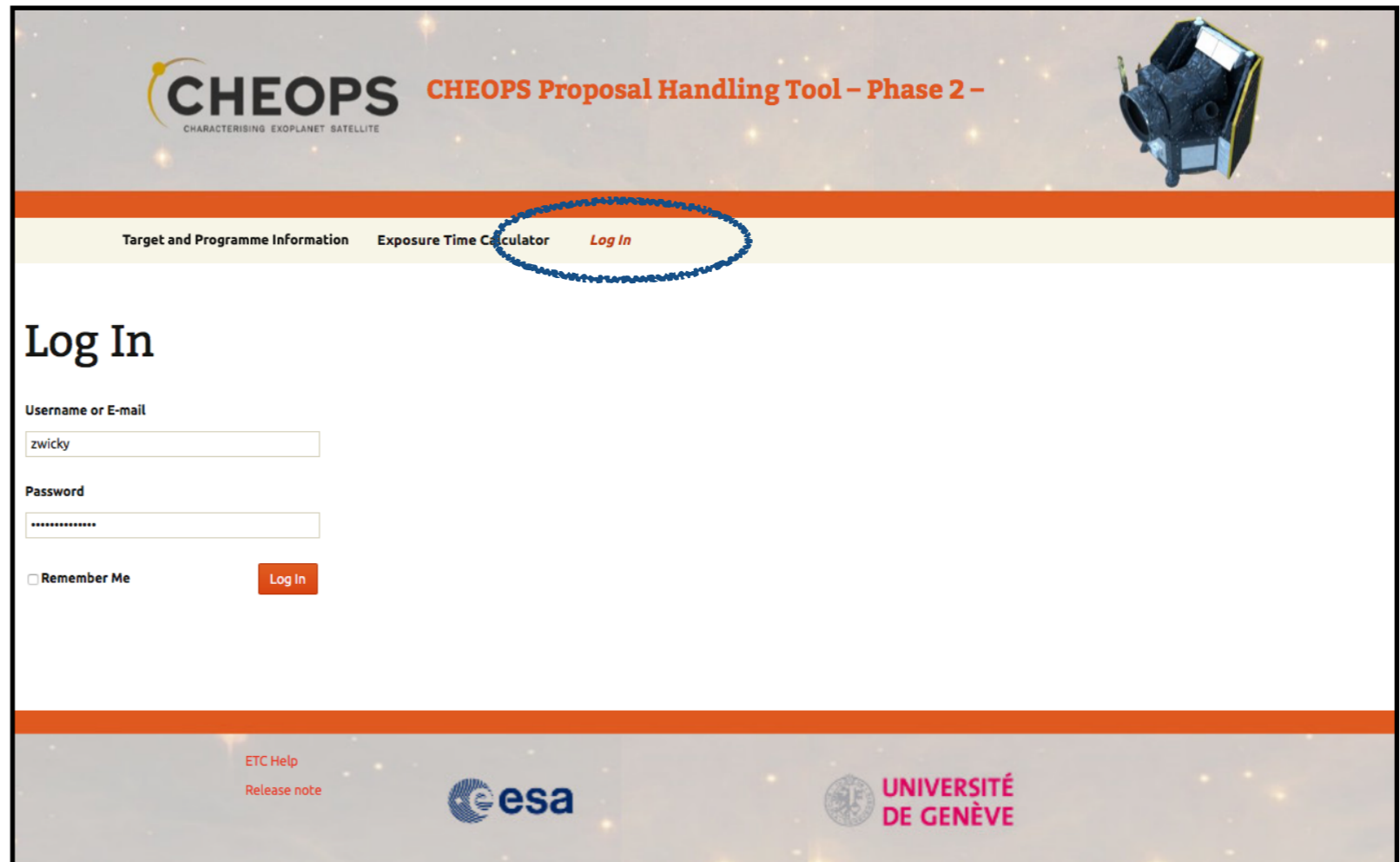
Note: PHT2 was tested on Chrome, Safari and Firefox web browsers.

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

Proposal Handling Tool - Phase 2 - PHT-2 Guidelines

Please login

with username and password
received from SOC



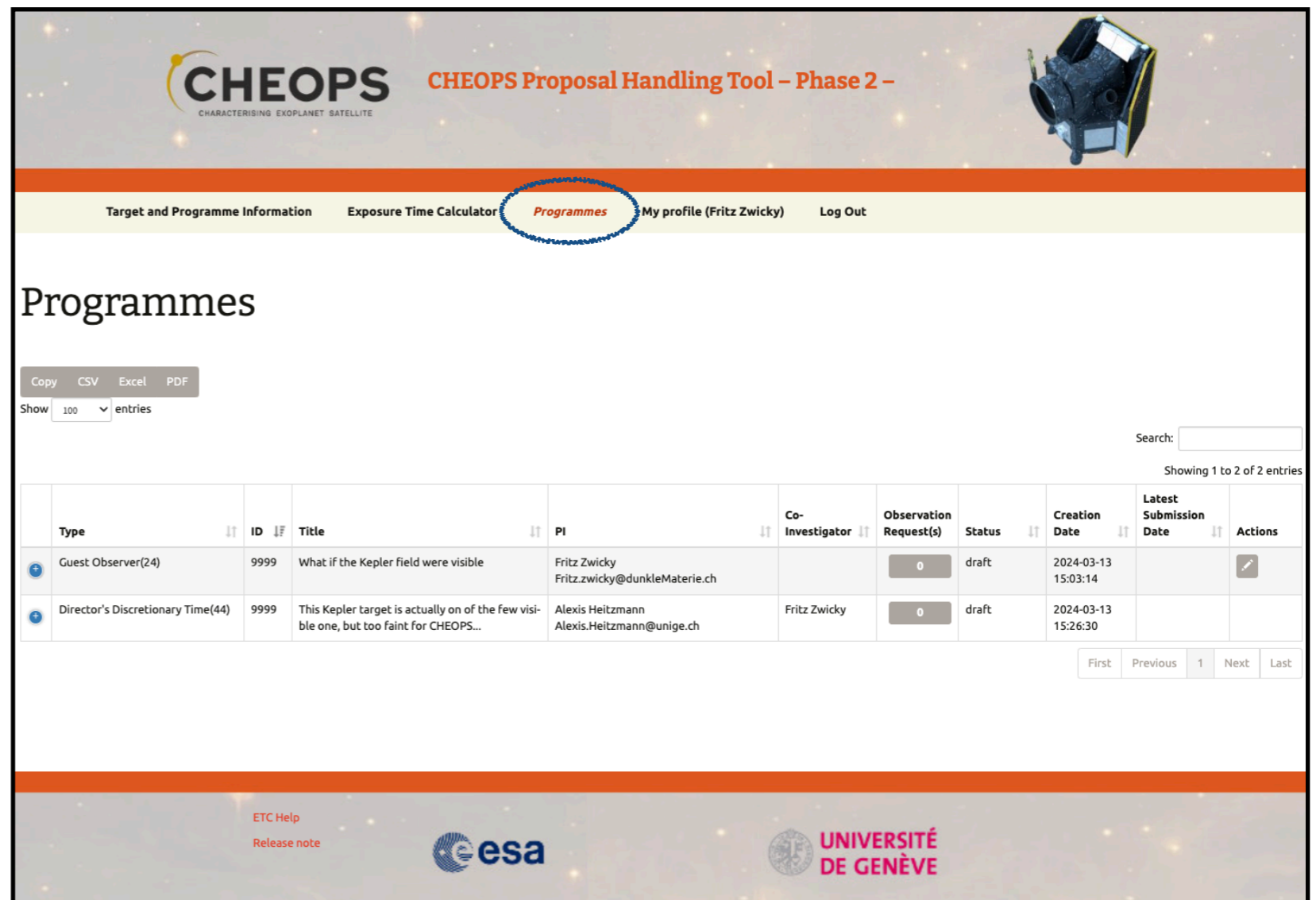
Your accepted “Programmes”

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



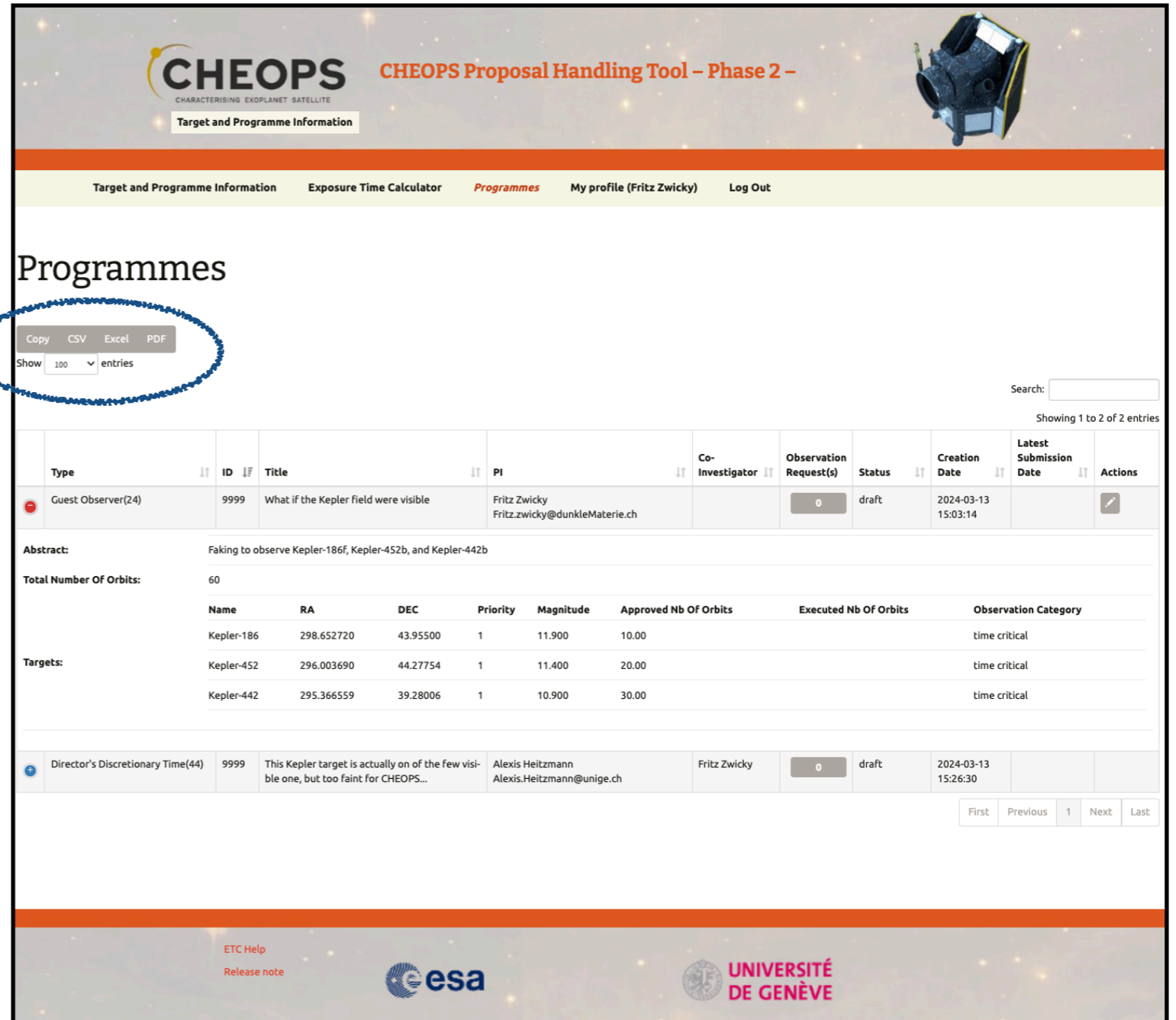
The screenshot shows the 'Programmes' section of the CHEOPS Proposal Handling Tool. The navigation bar includes 'Target and Programme Information', 'Exposure Time Calculator', 'Programmes' (highlighted), 'My profile (Fritz Zwicky)', and 'Log Out'. Below the navigation bar, there are options to 'Copy', 'CSV', 'Excel', and 'PDF', and a 'Show 100 entries' dropdown. A search bar is present on the right. The main content is a table with the following data:

Type	ID	Title	PI	Co-Investigator	Observation Request(s)	Status	Creation Date	Latest Submission Date	Actions
Guest Observer(24)	9999	What if the Kepler field were visible	Fritz Zwicky Fritz.zwicky@dunkleMaterie.ch		0	draft	2024-03-13 15:03:14		
Director's Discretionary Time(44)	9999	This Kepler target is actually on of the few visible one, but too faint for CHEOPS...	Alexis Heitzmann Alexis.Heitzmann@unige.ch	Fritz Zwicky	0	draft	2024-03-13 15:26:30		

At the bottom of the page, there are links for 'ETC Help' and 'Release note', and logos for 'esa' and 'UNIVERSITÉ DE GENÈVE'.

Your accepted “Programmes”

Programmes list can be exported in various formats for convenience.



Programmes

Copy CSV Excel PDF

Show 100 entries

Search:

Showing 1 to 2 of 2 entries

Type	ID	Title	PI	Co-Investigator	Observation Request(s)	Status	Creation Date	Latest Submission Date	Actions																																
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Abstract:		Faking to observe Kepler-186f, Kepler-452b, and Kepler-442b																																							
Total Number Of Orbits:		60																																							
Targets:		<table border="1"> <thead> <tr> <th>Name</th> <th>RA</th> <th>DEC</th> <th>Priority</th> <th>Magnitude</th> <th>Approved Nb Of Orbits</th> <th>Executed Nb OF Orbits</th> <th>Observation Category</th> </tr> </thead> <tbody> <tr> <td>Kepler-186</td> <td>298.652720</td> <td>43.95500</td> <td>1</td> <td>11.900</td> <td>10.00</td> <td></td> <td>time critical</td> </tr> <tr> <td>Kepler-452</td> <td>296.003690</td> <td>44.27754</td> <td>1</td> <td>11.400</td> <td>20.00</td> <td></td> <td>time critical</td> </tr> <tr> <td>Kepler-442</td> <td>295.366559</td> <td>39.28006</td> <td>1</td> <td>10.900</td> <td>30.00</td> <td></td> <td>time critical</td> </tr> </tbody> </table>								Name	RA	DEC	Priority	Magnitude	Approved Nb Of Orbits	Executed Nb OF Orbits	Observation Category	Kepler-186	298.652720	43.95500	1	11.900	10.00		time critical	Kepler-452	296.003690	44.27754	1	11.400	20.00		time critical	Kepler-442	295.366559	39.28006	1	10.900	30.00		time critical
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First Previous 1 Next Last


ETC Help
Release note

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Your accepted “Programmes”

Explore Programme summary
 Accepted targets
 Accepted telescope time
 ESA-assigned Science priority

Programme-level information cannot be edited, except for *Title, Abstract, and Description of observations* using the  icon

Programmes

Copy CSV Excel PDF
 Show 100 entries

Search:

Showing 1 to 2 of 2 entries

Type	ID	Title	PI	Co-Investigator	Observation Request(s)	Status	Creation Date	Latest Submission Date	Actions
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Abstract: Faking to observe Kepler-186f, Kepler-452b, and Kepler-442b

Total Number Of Orbits: 60

Name	RA	DEC	Priority	Magnitude	Approved Nb Of Orbits	Executed Nb OF Orbits	Observation Category
Kepler-186	298.652720	43.95500	1	11.900	10.00		time critical
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First Previous 1 Next Last

ETC Help
 Release note

esa UNIVERSITÉ DE GENÈVE

Proposal Handling Tool - Phase 2 - PHT-2 Guidelines

Your accepted “Programmes”

Please fill the field *Description of observations*. This helps all aspiring observers to gauge what is already done and where there might be potential for collaboration on given targets.

Please do not modify the *Title* and *Abstract* fields.

Edit Programme : Type 24 (Guest Observer), ID 9999

Title*

What if the Kepler field were visible

Abstract*

Faking to observe Kepler-186f, Kepler-452b, and Kepler-442b

Description of Observations

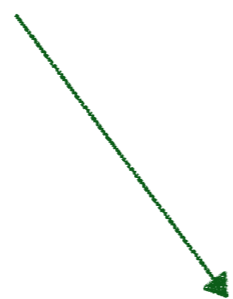
A high-level summary of the observations of the programme.

e.g. “The structure and composition of planets in the radius valley is badly known, with several compositional makeups matching the currently-existing data, notably ... The goal of this program is to provide better bulk densities enabling more informed structure models...”

Cancel Clear Reset Save

Your accepted “Programmes”

Your *Description of observations* now appears below the *Abstract*



CHEOPS CHEOPS Proposal Handling Tool – Phase 2 –

Target and Programme Information Exposure Time Calculator Programmes My profile () Log Out

Programmes

Copy CSV Excel PDF

Show 100 entries

Search:

Showing 1 to 2 of 2 entries

Type	ID	Title	PI	Co-Investigator	Observation Request(s)	Status	Creation Date	Latest Submission Date	Actions																																
Guest Observer(24)	9999	What if the Kepler field were visible	observer11@mtmco.net		0/4	submitted	2024-03-13 15:03:14	2024-03-13 17:35:03																																	
<p>Abstract: Faking to observe Kepler-186f, Kepler-452b, and Kepler-442b</p> <p>Description Of Observations: high-level summary of the observations of the programme. e.g. "The structure and composition of planets in the radius valley is badly known, with several compositional makeups matching the currently-existing data, notably ... The goal of this program is to provide better bulk densities enabling more informed structure models..."</p> <p>Total Number Of Orbits: 60</p> <table border="1"> <thead> <tr> <th>Name</th> <th>RA</th> <th>DEC</th> <th>Priority</th> <th>Magnitude</th> <th>Approved Nb Of Orbits</th> <th>Executed Nb Of Orbits</th> <th>Observation Category</th> </tr> </thead> <tbody> <tr> <td>Kepler-186</td> <td>298.652720</td> <td>43.95500</td> <td>1</td> <td>11.900</td> <td>10.00</td> <td>0.00</td> <td>time critical</td> </tr> <tr> <td>Kepler-452</td> <td>296.003690</td> <td>44.27754</td> <td>1</td> <td>11.400</td> <td>20.00</td> <td>0.00</td> <td>time critical</td> </tr> <tr> <td>Kepler-442</td> <td>295.366559</td> <td>39.28006</td> <td>1</td> <td>10.900</td> <td>30.00</td> <td>0.00</td> <td>time critical</td> </tr> </tbody> </table>										Name	RA	DEC	Priority	Magnitude	Approved Nb Of Orbits	Executed Nb Of Orbits	Observation Category	Kepler-186	298.652720	43.95500	1	11.900	10.00	0.00	time critical	Kepler-452	296.003690	44.27754	1	11.400	20.00	0.00	time critical	Kepler-442	295.366559	39.28006	1	10.900	30.00	0.00	time critical
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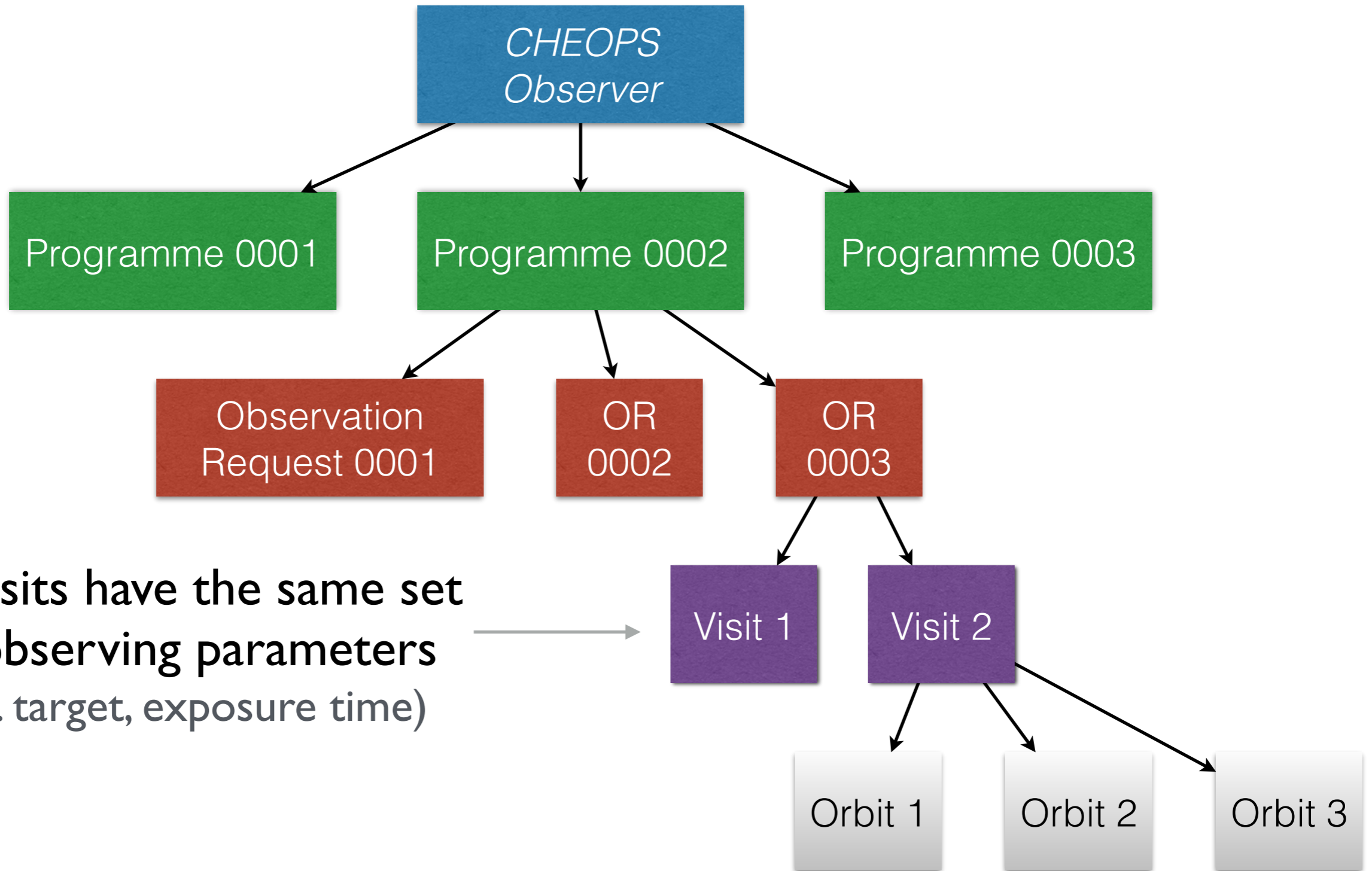
First Previous 1 Next Last

ETC Help
Release note

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Recap on observations hierarchy



All visits have the same set of observing parameters (e.g. target, exposure time)

Create an Observation Request

Take the following example of 3 targets, with respectively 10, 20 and 30 accepted orbits.

Type	ID	Title	PI	Co-Investigator	Observation Request(s)	Status	Creation Date	Latest Submission Date	Actions
Guest Observer(24)	9999	What if the Kepler field were visible	Fritz Zwicky Fritz.zwicky@dunkleMaterie.ch		0	draft	2024-03-13 15:03:14		
Abstract: Faking to observe Kepler-186f, Kepler-452b, and Kepler-442b									
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Director's Discretionary Time(44)	9999	This Kepler target is actually on of the few visible one, but too faint for CHEOPS...	Alexis Heitzmann Alexis.Heitzmann@unige.ch	Fritz Zwicky	0	draft	2024-03-13 15:26:30		

Click the observation request icon to create one.

Target and Programme Information | Exposure Time Calculator | Programmes | My profile (Fritz Zwicky) | Log Out

Programmes

Copy CSV Excel PDF

Show 100 entries

Search:

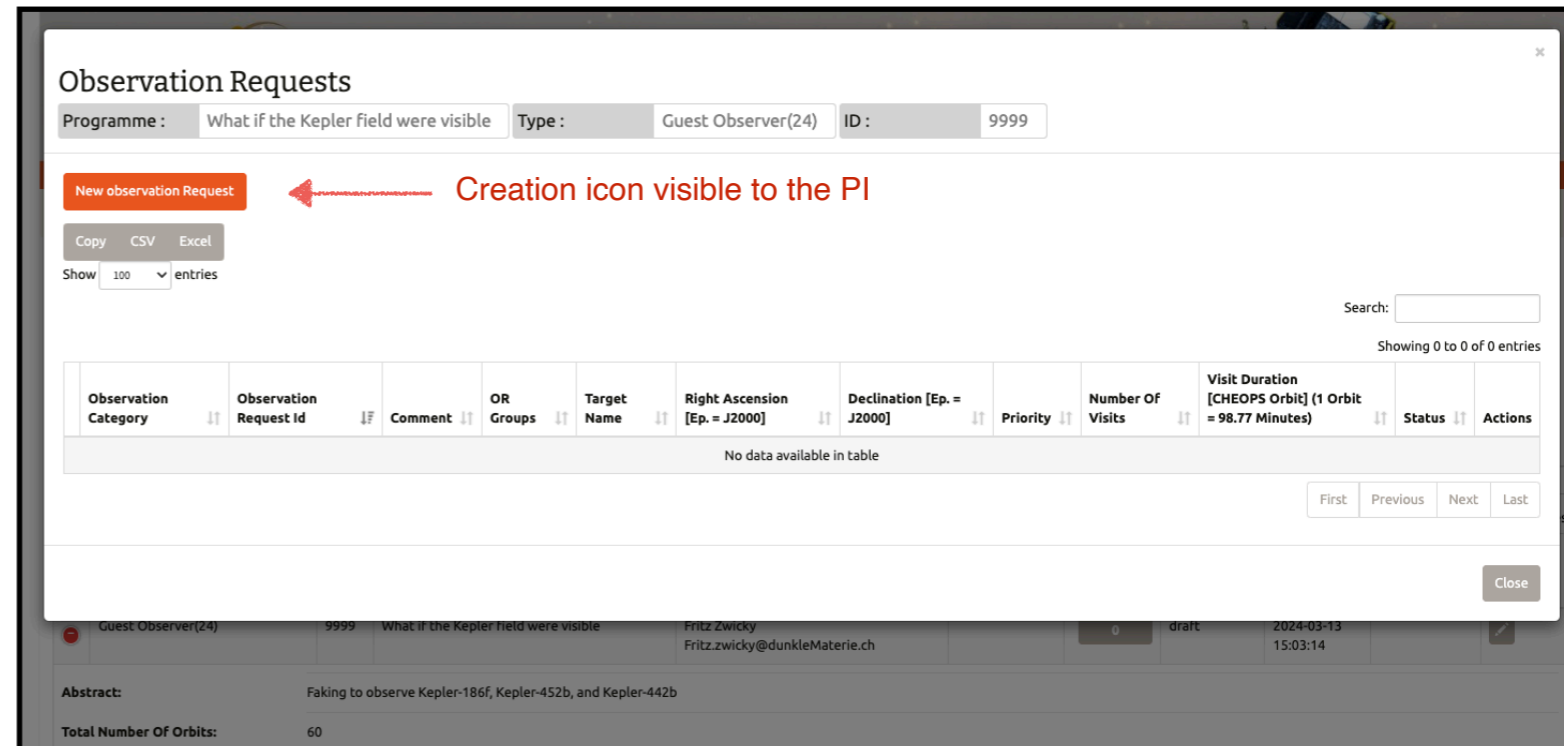
Showing 1 to 2 of 2 entries

Type	ID	Title	PI	Co-Investigator	Observation Request(s)	Status	Creation Date	Latest Submission Date	Actions
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First Previous 1 Next Last

Create an Observation Request

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



Observation Requests

Programme : What if the Kepler field were visible Type : Guest Observer(24) ID : 9999

New observation Request ← Creation icon visible to the PI

Copy CSV Excel

Show 100 entries

Search:

Showing 0 to 0 of 0 entries

Observation Category	Observation Request Id	Comment	OR Groups	Target Name	Right Ascension [Ep. = J2000]	Declination [Ep. = J2000]	Priority	Number Of Visits	Visit Duration [CHEOPS Orbit] (1 Orbit = 98.77 Minutes)	Status	Actions
No data available in table											

First Previous Next Last

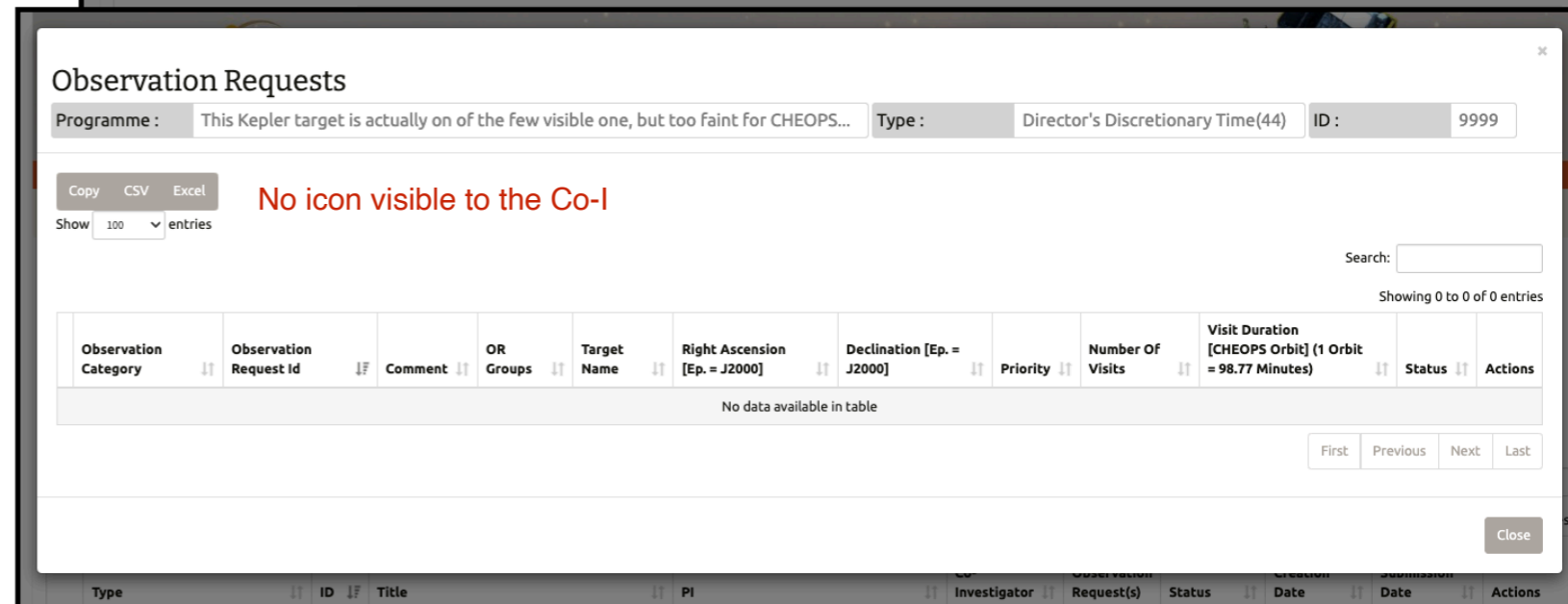
Close

Guest Observer(24) 9999 What if the Kepler field were visible Fritz Zwicky Fritz.zwicky@dunkleMaterie.ch draft 2024-03-13 15:03:14

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

Total Number Of Orbits: 60

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



Observation Requests

Programme : This Kepler target is actually on of the few visible one, but too faint for CHEOPS... Type : Director's Discretionary Time(44) ID : 9999

Copy CSV Excel

Show 100 entries

Search:

Showing 0 to 0 of 0 entries

Observation Category	Observation Request Id	Comment	OR Groups	Target Name	Right Ascension [Ep. = J2000]	Declination [Ep. = J2000]	Priority	Number Of Visits	Visit Duration [CHEOPS Orbit] (1 Orbit = 98.77 Minutes)	Status	Actions
No data available in table											

First Previous Next Last

Close

Type ID Title PI Investigator Request(s) Status Date Date Actions

Create an Observation Request

Click on 'New observation Request' to create your first observation request (OR)

List of Observation Request is empty at this stage

The screenshot shows the 'Observation Requests' interface. At the top, there are filters for 'Programme' (What if the Kepler field were visible), 'Type' (Guest Observer(24)), and 'ID' (9999). A red button labeled 'New observation Request' is circled in blue. Below it, there are options for 'Copy' and 'Excel', and a 'Show 100 entries' dropdown. A search bar is on the right. The main table is empty, with the text 'No data available in table' circled in blue. Below the table, there are navigation buttons: 'First', 'Previous', 'Next', 'Last', and 'Close'. The bottom part of the screenshot shows a detailed view of an observation request with the following data:

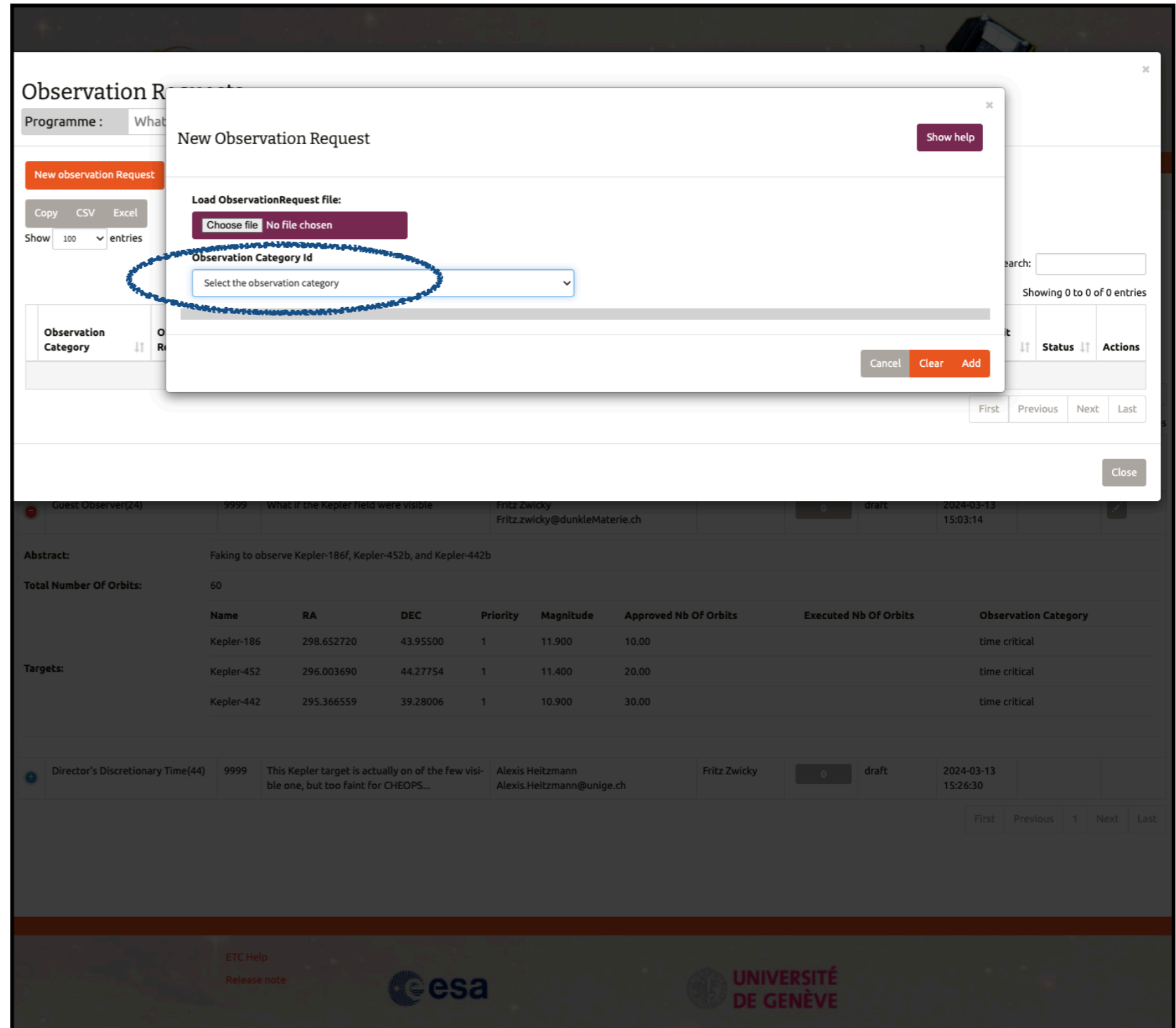
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At the bottom of the interface, there are links for 'ETC Help' and 'Release note', and logos for 'esa' and 'UNIVERSITÉ DE GENÈVE'.

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



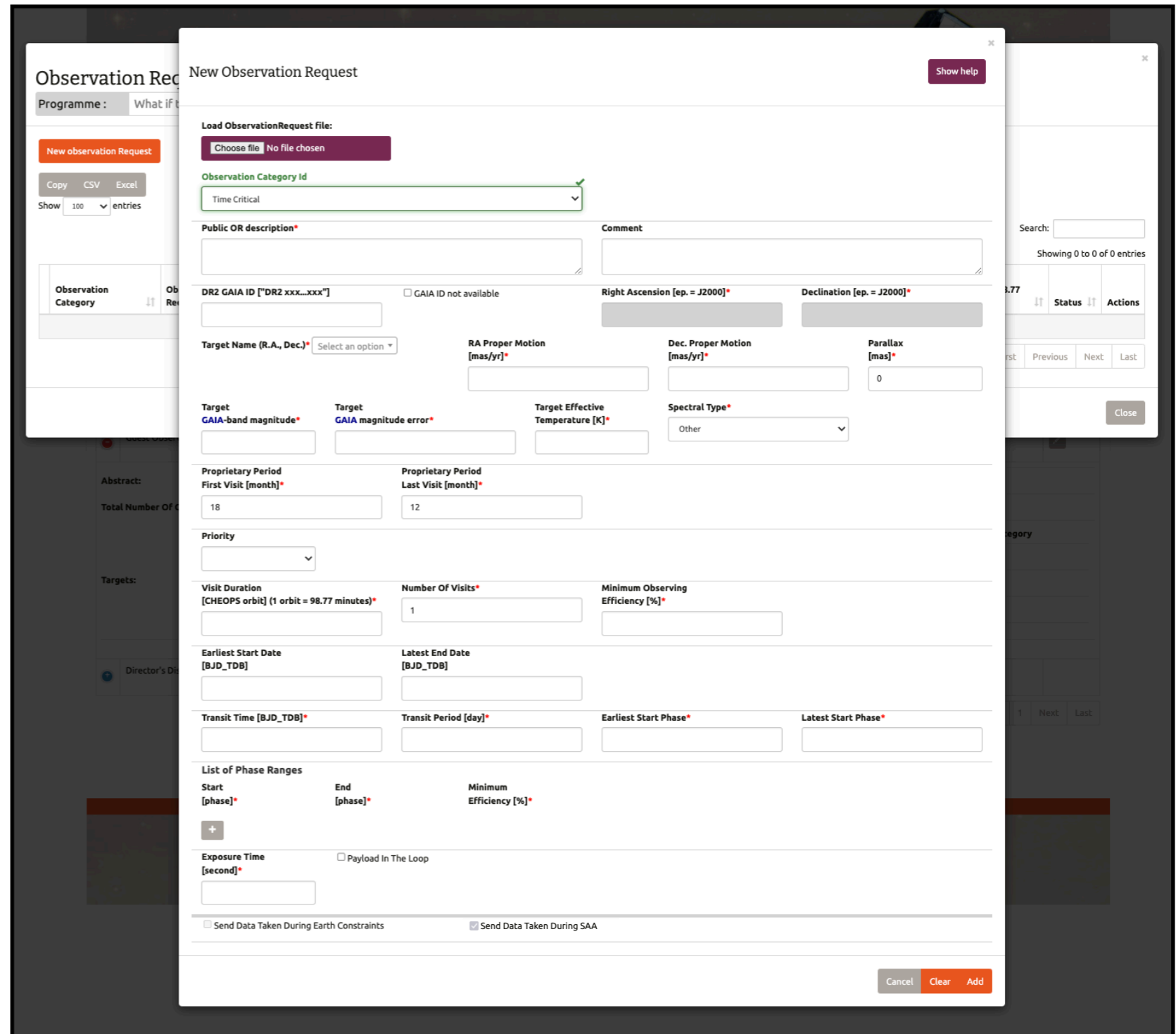
The screenshot displays the 'New Observation Request' modal form. The 'Observation Category Id' dropdown menu is highlighted with a blue dashed circle. The background shows a list of observation requests with columns for Name, RA, DEC, Priority, Magnitude, Approved Nb Of Orbits, Executed Nb Of Orbits, and Observation Category.

Name	RA	DEC	Priority	Magnitude	Approved Nb Of Orbits	Executed Nb Of Orbits	Observation Category
Kepler-186	298.652720	43.95500	1	11.900	10.00		time critical
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Fill in the Observation Request

Define the parameters of your observation

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



New Observation Request Show help

Load ObservationRequest file:
 No file chosen

Observation Category Id
 Time Critical

Public OR description*

Comment

DR2 GAIA ID ["DR2 xxx...xxx"] GAIA ID not available

Right Ascension [ep. = J2000]*

Declination [ep. = J2000]*

Target Name (R.A., Dec.)* Select an option

RA Proper Motion [mas/yr]*

Dec. Proper Motion [mas/yr]*

Parallax [mas]*

Target GAIA-band magnitude*

Target GAIA magnitude error*

Target Effective Temperature [K]*

Spectral Type*

Proprietary Period First Visit [month]*

Proprietary Period Last Visit [month]*

Priority

Visit Duration [CHEOPS orbit] (1 orbit = 98.77 minutes)*

Number Of Visits*

Minimum Observing Efficiency [%]*

Earliest Start Date [BJD_TDB]

Latest End Date [BJD_TDB]

Transit Time [BJD_TDB]*

Transit Period [day]*

Earliest Start Phase*

Latest Start Phase*

List of Phase Ranges

Start [phase]*	End [phase]*	Minimum Efficiency [%]*
+		

Exposure Time [second]*

Payload In The Loop

Send Data Taken During Earth Constraints Send Data Taken During SAA

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)

The screenshot shows the 'New Observation Request' form. The 'Target Name (R.A., Dec.)' dropdown menu is open, displaying a list of target stars with their RA and Dec coordinates. The list includes:

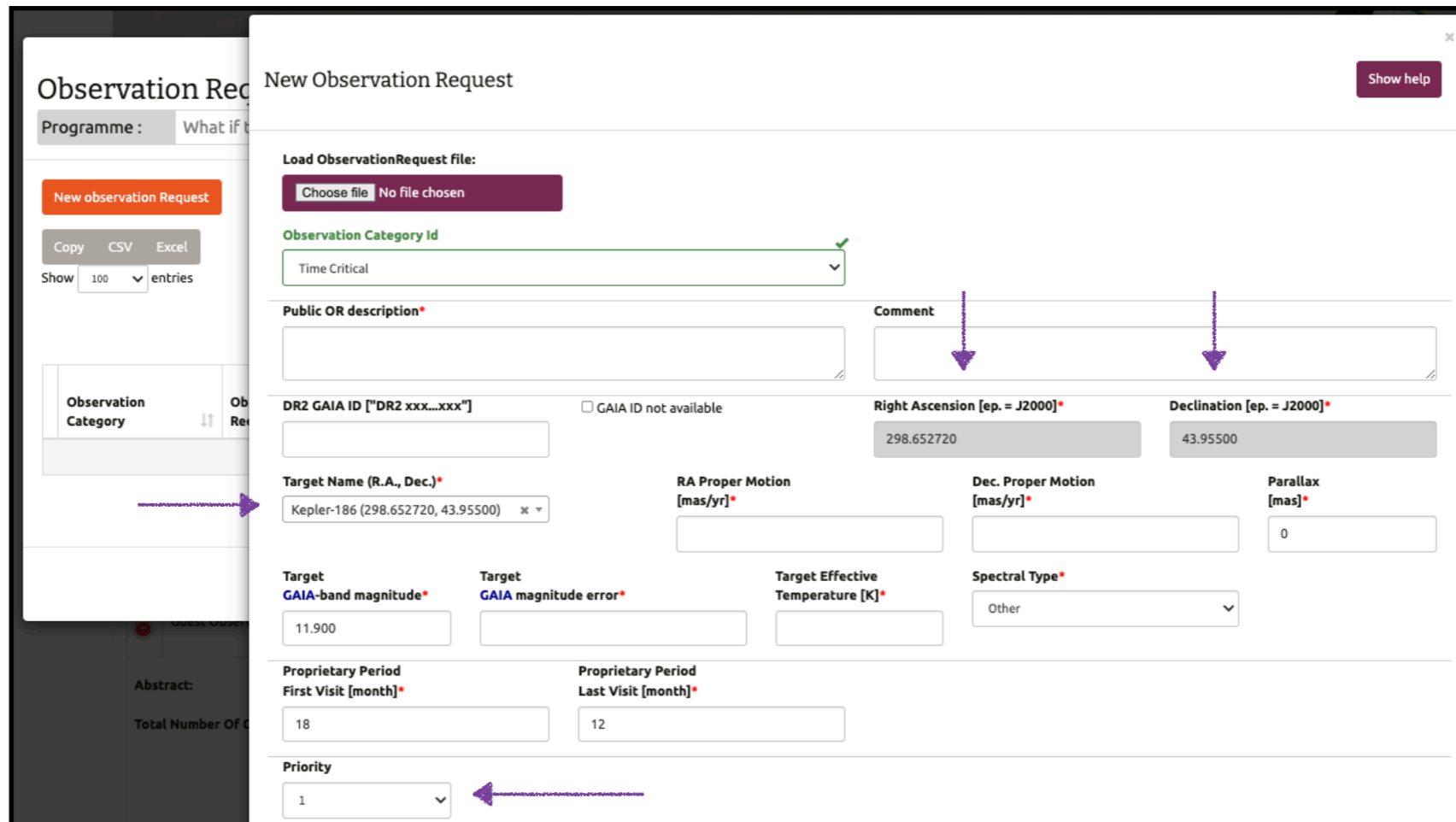
- Kepler-186 (298.652720, 43.95500)
- Kepler-452 (296.003690, 44.27754)
- Kepler-442 (295.366559, ...)

The form also includes fields for 'Observation Category Id' (set to 'Time Critical'), 'Public OR description', 'Comment', 'DR2 GAIA ID', 'Right Ascension', 'Declination', 'RA Proper Motion', 'Dec. Proper Motion', 'Parallax', 'Target Effective Temperature', 'Spectral Type', 'Proprietary Period', 'Priority', 'Visit Duration', 'Number Of Visits', 'Minimum Observing Efficiency', 'Earliest Start Date', 'Latest End Date', 'Transit Time', 'Transit Period', 'Earliest Start Phase', 'Latest Start Phase', 'List of Phase Ranges', 'Exposure Time', and 'Send Data Taken During Earth Constraints'.

Fill in the Observation Request

Target coordinates (*RA/Dec*) are pre-filled with user-defined values from PHT-1

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



New Observation Request Show help

Load ObservationRequest file: No file chosen

Observation Category id:

Public OR description*

Comment

DR2 GAIA ID ["DR2 xxx...xxx"] GAIA ID not available

Right Ascension [ep. = J2000]*

Declination [ep. = J2000]*

Target Name (R.A., Dec.)*

Dec. Proper Motion [mas/yr]*

Parallax [mas]*

Target GAIA-band magnitude*

Target GAIA magnitude error*

Target Effective Temperature [K]*

Spectral Type*

Proprietary Period First Visit [month]*

Proprietary Period Last Visit [month]*

Priority

Fill in the Observation Request

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

Hide help

New Observation Request

Load ObservationRequest file:
 No file chosen

Observation Category Id

Public OR description*

Very brief description of the observation, which will be publicly accessible with the data. For example: "Transit of planet c", "Phase curve of planet b", "Occultation of planet b", "Transit search", "Stellar".

Comment

Complementary information for bookkeeping purposes or to raise the scheduler's attention, e.g. "Testing alias at 100-day period", "Only visible transit this season" or "This OR is more urgent than its companion OR#xx".

DR2 GAIA ID ["DR2 xxx...xxx"]

GAIA ID of the target, as retrieved from the GAIA archive (https://gea.esac.esa.int/archive/). If the target has a GAIA counterpart in DR2, then this parameter is crucial to identify the target among field stars.

GAIA ID not available
If the GAIA_ID field is empty, you have to actively tick this box to confirm that your target has no GAIA counterpart in the DR2 archive.

Right Ascension [ep. = J2000]*

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

Declination [ep. = J2000]*

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

Target Name (R.A., Dec.)*

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

RA Proper Motion [mas/yr]*

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

Dec. Proper Motion [mas/yr]*

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

Parallax [mas]*

Parallax of the target star (in milli-arcseconds)

Target GAIA-band magnitude*

Brightness of the target star in GAIA-band (in mag). The GAIA-band magnitude is used to identify the target among field stars, so please enter an accurate value here.

Target GAIA magnitude error*

Error of the brightness of the target star in the GAIA-band (in mag)

Target Effective Temperature [K]*

Effective temperature of the target star (in Kelvin)

Spectral Type*

Spectral type of the target star

Proprietary Period First Visit [month]*

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

Proprietary Period Last Visit [month]*

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

Priority

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

Visit Duration [CHEOPS orbit] (1 orbit = 98.77 minutes)*

Time interval to be considered for one visit

Number Of Visits*

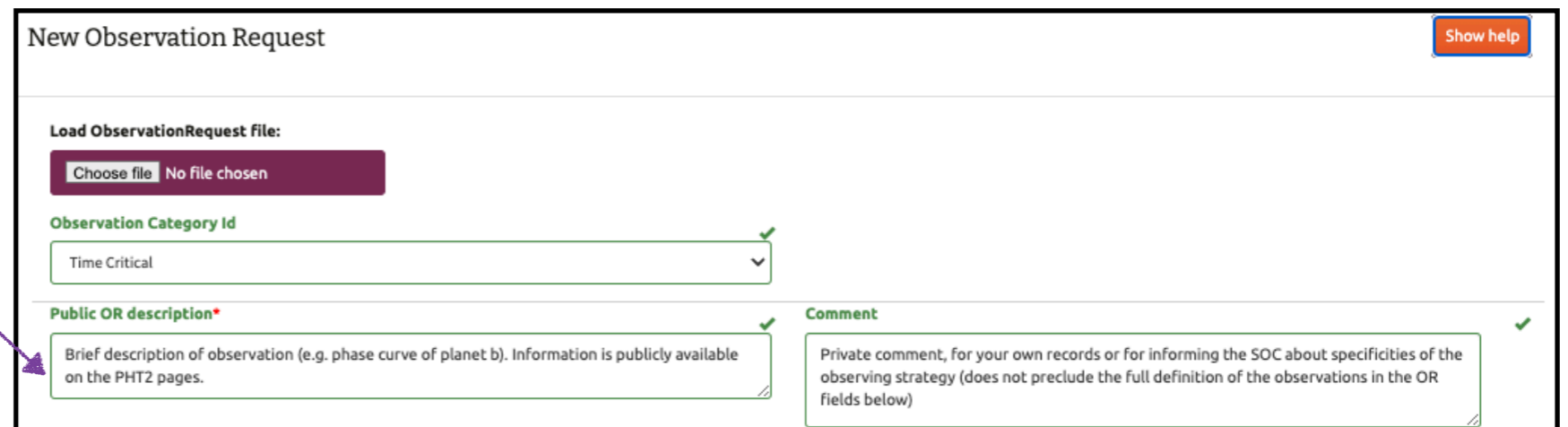
Number of visits to be scheduled for this observation request

Minimum Observing Efficiency [%]*

Minimum fraction of the visit duration to be spent on-source (excluding interruptions due to Earth occultations, high levels of straylight, and SAA crossings), in percent, [20, 100].

Fill in the Observation Request

- *Public OR description* is a mandatory field. Please add a very brief description of the observation, which will be publicly accessible with the data. For example: "Transit of planet c", "Phase curve of planet b", "Occultation of planet b", "Transit search", "Stellar"

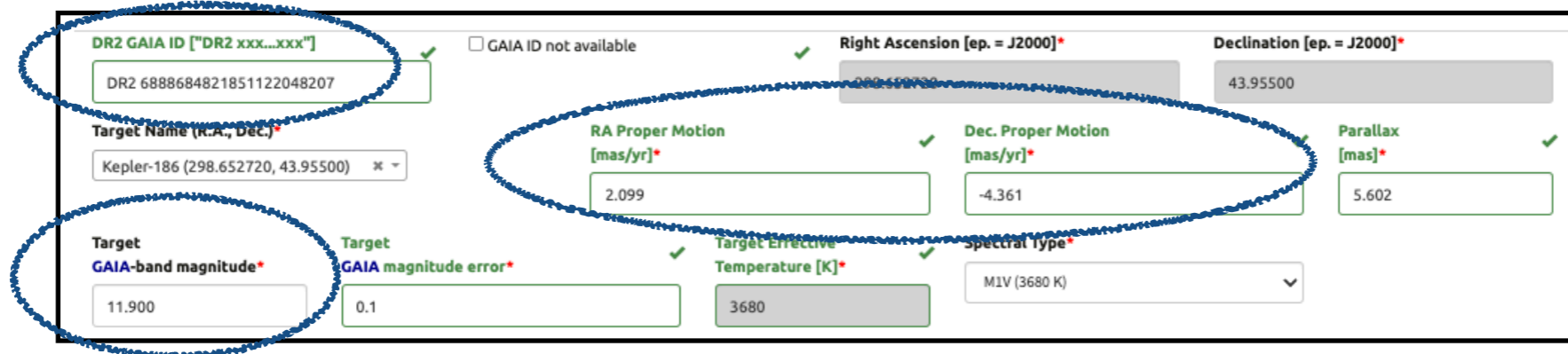


- *Comment* field may be useful for your own record, or for describing the observing strategy to the SOC / Mission planner.

Fill in the Observation Request

- Fill in the missing target information:

- **DR2 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](#)
- **GAIA-band magnitude** may also be critical for on-board target identification. Can be fetched from [SIMBAD](#)



The screenshot shows a form for entering target information. Several fields are highlighted with blue circles to indicate their importance:

- DR2 GAIA ID** ["DR2 xxx...xxx"] (Value: DR2 6888684821851122048207)
- RA Proper Motion** [mas/yr] (Value: 2.099)
- Dec. Proper Motion** [mas/yr] (Value: -4.361)
- GAIA-band magnitude** (Value: 11.900)

Other visible fields include: Target Name (Kepler-186), Right Ascension (298.652720), Declination (43.95500), Parallax (5.602), Target Effective Temperature (3680 K), and Spectral type (M1V).

Fill in the Observation Request

- **Minimum 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).

Visit Duration [CHEOPS orbit] (1 orbit = 98.77 minutes)* ✓ 10	Number Of Visits* ✓ 1	Minimum Observing Efficiency [%]* ✓ 50
Earliest Start Date [BJD_TDB] ✓ 2459053.845	Latest End Date [BJD_TDB] ✓ 2459083.845	
Transit Time [BJD_TDB]* ✓ 2454944.8450	Transit Period [day]* ✓ 129.9459	Earliest Start Phase* ✓ 0.991
		Latest Start Phase* ✓ 0.001

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)

Fill in the Observation Request

- Use **time bracketing** (*Earliest Start Date and Latest End Date*) to constrain the scheduling dates of your observations.

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

Visit Duration [CHEOPS orbit] (1 orbit = 98.77 minutes)* ✓ <input type="text" value="10"/>	Number Of Visits* ✓ <input type="text" value="1"/>	Minimum Observing Efficiency [%]* ✓ <input type="text" value="50"/>
Earliest Start Date [BJD_TDB] ✓ <input type="text" value="2459053.845"/>	Latest End Date [BJD_TDB] ✓ <input type="text" value="2459083.845"/>	
Transit Time [BJD_TDB]* ✓ <input type="text" value="2454944.8450"/>	Transit Period [day]* ✓ <input type="text" value="129.9459"/>	Earliest Start Phase* ✓ <input type="text" value="0.991"/>
		Latest Start Phase* ✓ <input type="text" value="0.001"/>

- Note that **the Transit Time is NOT the time of observation** but the mid-transit time from which the time of observation is computed (propagated using the given Transit Period).

Only the Earliest Start Date and Latest Start Date must be used to constrain a specific date/time of observation.

Fill in the Observation Request

Visit Duration [CHEOPS orbit] (1 orbit = 98.77 minutes)* ✓ <input type="text" value="10"/>	Number Of Visits* ✓ <input type="text" value="1"/>	Minimum Observing Efficiency [%]* ✓ <input type="text" value="50"/>
Earliest Start Date [BJD_TDB] ✓ <input type="text" value="2459053.845"/>	Latest End Date [BJD_TDB] ✓ <input type="text" value="2459083.845"/>	
Transit Time [BJD_TDB]* ✓ <input type="text" value="2454944.8450"/>	Transit Period [day]* ✓ <input type="text" value="129.9459"/>	Earliest Start Phase* ✓ <input type="text" value="0.991"/>
		Latest Start Phase* ✓ <input type="text" value="0.001"/>

- **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.

The Mission Planning System does not support cases where the visit duration is longer than the transit period

Fill in the Observation Request

Non-time-critical observations can be scheduled at any time between the Earliest Start Date and the Latest End Date if provided, any time if not.

One must note that the Mission Planning System can only schedule **one non-time critical visit per 48 hours for a given OR.**

Therefore, to get non-time critical observations scheduled at a **faster rate**, **one must create a few (typically 3) duplicate ORs with the exact same parameters.**

This way the Mission Planning System will be able to pick visits from these different ORs and schedule them within 48 hours.

Fill in the Observation Request

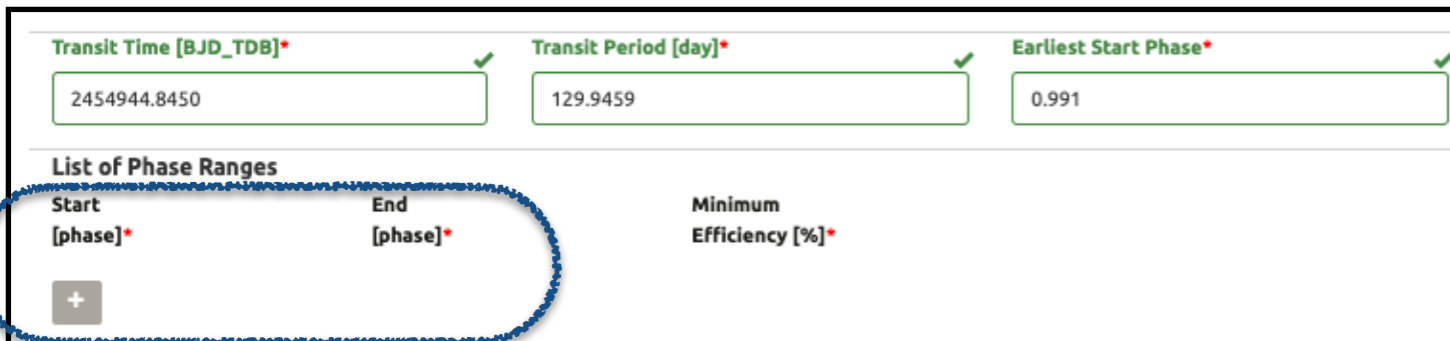
Valid and invalid entries are identified as such in the form.

Visit Duration [CHEOPS orbit] (1 orbit = 98.77 minutes)* <input type="text" value="10"/>	Number Of Visits* <input type="text" value="1"/>	Minimum Observing Efficiency [%]* <input type="text" value="50"/>
Earliest Start Date [BJD_TDB] <input type="text" value="2459053.845"/> <small>Earliest Start Date must be lower than Latest Start Date</small>	Latest End Date [BJD_TDB] <input type="text" value="5"/> <small>Latest Start Date must be higher than Earliest Start Date Please enter a value between 2458000 and 2462000</small>	



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.



The screenshot shows a form with three input fields at the top, each with a green checkmark: 'Transit Time [BJD_TDB]*' with value 2454944.8450, 'Transit Period [day]*' with value 129.9459, and 'Earliest Start Phase*' with value 0.991. Below these is a table titled 'List of Phase Ranges' with columns 'Start [phase]*', 'End [phase]*', and 'Minimum Efficiency [%]*'. A blue dashed circle highlights the 'Start' and 'End' columns, and a small '+' button is visible in the bottom left corner of the table area.

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):

```

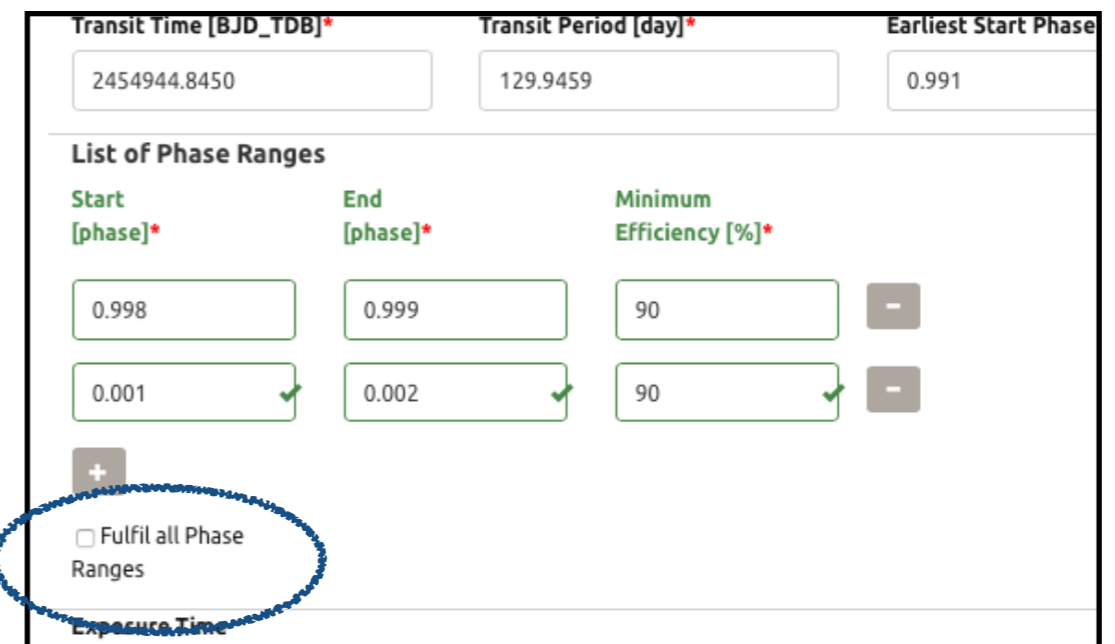
<!-- The set of parameters below is used to define specific (orbital) phase ranges -->
<!-- within which the observing efficiency may be increased to a specific value -->
<!-- Convention is that the transit is at phase=0 (or equivalently 1) -->
<!-- This can be seen as a local requirement on the observing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

```

Fill in the Observation Request

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.

This is done by ticking the *Fulfil all Phase Ranges* box



Transit Time [BJD_TDB]* 2454944.8450

Transit Period [day]* 129.9459

Earliest Start Phase 0.991

Start [phase]*	End [phase]*	Minimum Efficiency [%]*	
0.998	0.999	90	-
0.001 ✓	0.002 ✓	90 ✓	-

+
 Fulfil all Phase Ranges

Exposure Time

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 Constrai

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 f means that one image is recorded every f seconds. In ULTRABRIGHT read-out mode (shaded rows), the detector has to be read-out sequentially and not in parallel to the exposition, 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	$46.8 \leq f < 48.8$	$8.3 \leq d < 12$
$0.15 \leq t_{exp} < 0.2$	36	3	$45 \leq f < 46.8$	$12 \leq d < 15.4$
$0.2 \leq t_{exp} < 0.4$	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.

Exposure Time Calculator

Input Parameters

Target G Magnitude: 0.0

Target Effective Temperature: 0.0 [K]

Spectral type (stellar granulation): N/A

Exposure Time: 0.001 [s]

Right Ascension: 0.0 [hh:mm:ss / decimal deg]

Declination: 0.0 [dd:mm:ss / decimal deg]

Additional Parameters

Specify observation duration

Defined time interval: 0.0 [h]

Specify flux in CHEOPS passband

Flux: 0.0 [e-/s]

Specify visit/observation efficiency

Efficiency: 0.0 [%]

Exposure time guidelines

The user must specify the exposure time; that is, the time during which photons are collected to record an image (minimum allowed value is 0.001 s, maximum allowed value is 60 s).

The user should also verify that the percentage of the full well capacity (FWC) of a pixel filled by the highest peak of the PSF is below 100%.

The **suggested maximum exposure time** is the one where the PSF peak fills 85% of the full well capacity (to provide enough margin to clearly avoid pixel saturation). It is also recommended to select an exposure time close to this suggested maximum exposure time (or 60s if the 85% cannot be achieved), to keep the instrumental noise to a minimum.

On the other hand, the **suggested minimum exposure time** is the one corresponding to the PSF peak filling 10% of the full well capacity.

The user is responsible for selecting the correct exposure time and may have reasons not to follow the guidelines given above. For example, the user might be interested in shorter exposure times than recommended to have a faster cadence of images or imagettes (see Observers Manual, Table 2).

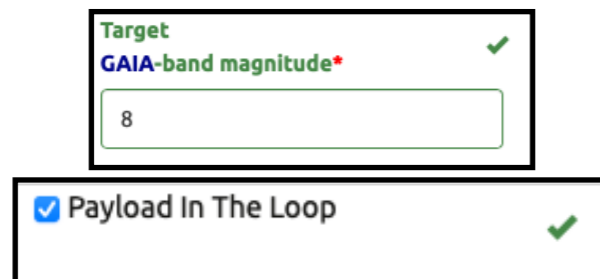
Fill in the Observation Request

Payload-In-The-Loop (PITL) configuration:

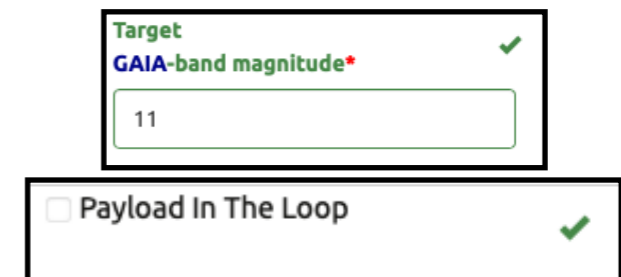
- PITL active: spacecraft pointing is locked on the science target
- PITL inactive: spacecraft pointing solely relying on star trackers
- See [CHEOPS Observers Manual](#) for more details

The PHT2 automatically sets the PITL configuration to:

Active, on targets brighter than $G_{mag}=11$

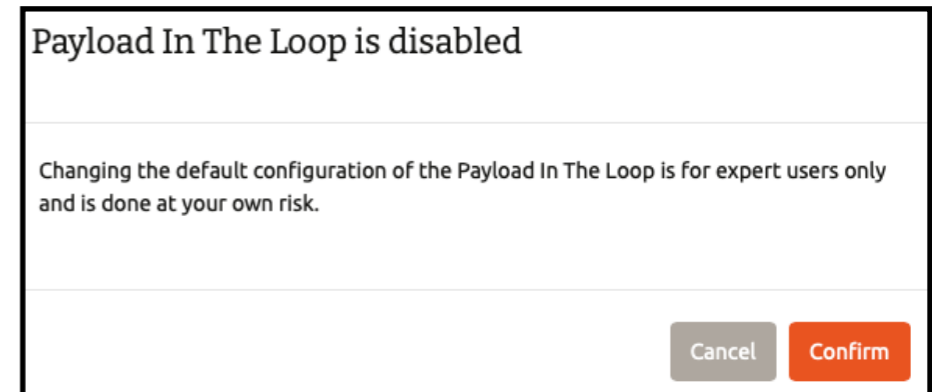


Inactive, on targets fainter than $G_{mag}=11$



The PI can request to disable the PITL for bright targets, typically in case of close and bright contaminants that could degrade the pointing performance if the PITL were active.

This setting is meant for experts and at the observer's own risk.



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 values for nominal science are:

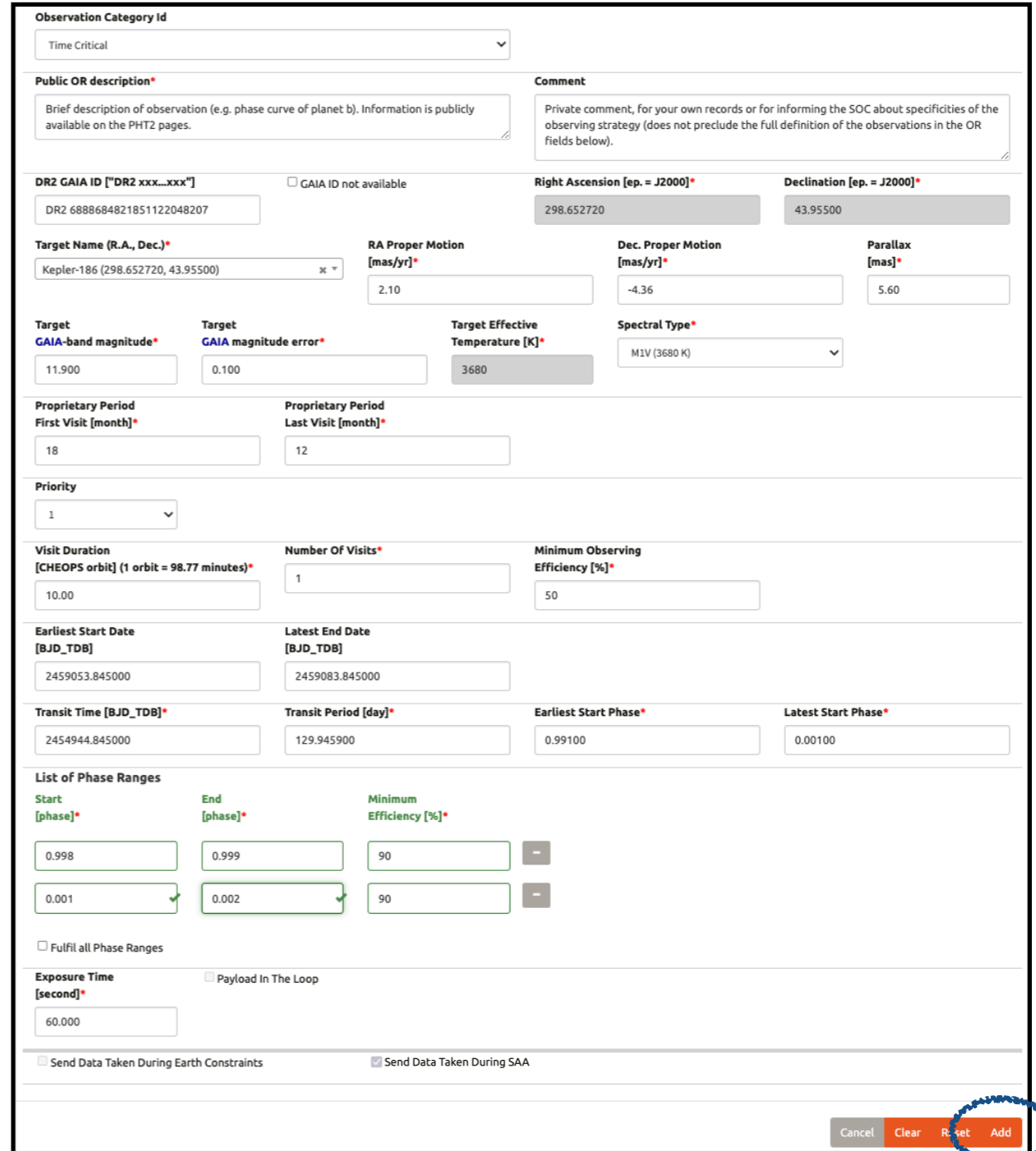
- False for Earth constraints, i.e. data not downlinked during Earth occultations,
- True for the SAA, i.e. data is downlinked (but flagged) during SAA crossings.

Exposure Time Payload In The Loop
[second]*

Send Data Taken During Earth Constraints Send Data Taken During SAA

Finalise the Observation Request

Once your observation request is complete, please click on “Add”



The screenshot shows the 'Finalise the Observation Request' form in the PHT-2 tool. The form is divided into several sections for data entry:

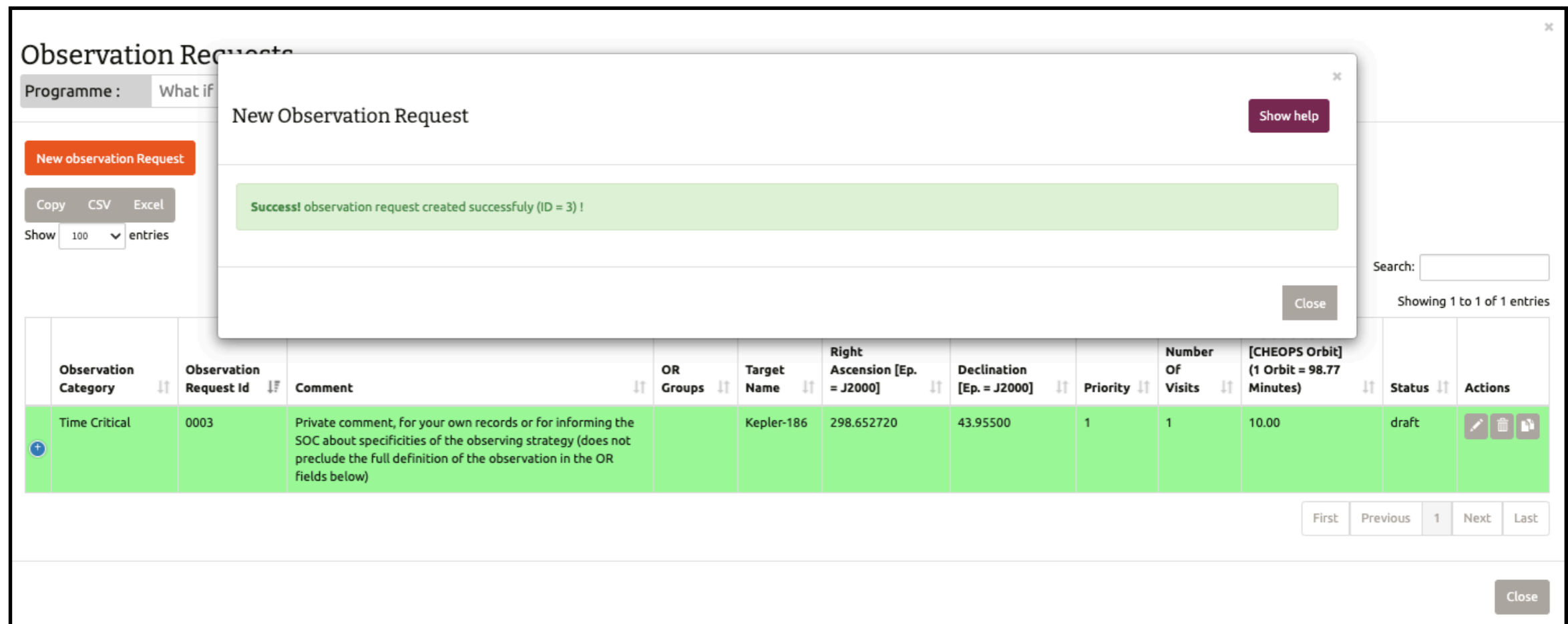
- Observation Category Id:** A dropdown menu set to 'Time Critical'.
- Public OR description*:** A text area for a brief description of the observation.
- Comment:** A text area for private notes.
- DR2 GAIA ID ["DR2 xxx...xxx"]:** A text input field containing 'DR2 6888684821851122048207'.
- GAIA ID not available:** An unchecked checkbox.
- Right Ascension [ep. = J2000]*:** A text input field containing '298.652720'.
- Declination [ep. = J2000]*:** A text input field containing '43.95500'.
- Target Name (R.A., Dec.):*** A dropdown menu showing 'Kepler-186 (298.652720, 43.95500)'.
- RA Proper Motion [mas/yr]*:** A text input field containing '2.10'.
- Dec. Proper Motion [mas/yr]*:** A text input field containing '-4.36'.
- Parallax [mas]*:** A text input field containing '5.60'.
- Target GAIA-band magnitude*:** A text input field containing '11.900'.
- Target GAIA magnitude error*:** A text input field containing '0.100'.
- Target Effective Temperature [K]*:** A text input field containing '3680'.
- Spectral Type*:** A dropdown menu set to 'M1V (3680 K)'.
- Proprietary Period First Visit [month]*:** A text input field containing '18'.
- Proprietary Period Last Visit [month]*:** A text input field containing '12'.
- Priority:** A dropdown menu set to '1'.
- Visit Duration [CHEOPS orbit] (1 orbit = 98.77 minutes)*:** A text input field containing '10.00'.
- Number Of Visits*:** A text input field containing '1'.
- Minimum Observing Efficiency [%]*:** A text input field containing '50'.
- Earliest Start Date [BJD_TDB]:** A text input field containing '2459053.845000'.
- Latest End Date [BJD_TDB]:** A text input field containing '2459083.845000'.
- Transit Time [BJD_TDB]*:** A text input field containing '2454944.845000'.
- Transit Period [day]*:** A text input field containing '129.945900'.
- Earliest Start Phase*:** A text input field containing '0.99100'.
- Latest Start Phase*:** A text input field containing '0.00100'.
- List of Phase Ranges:** A table with columns for Start [phase]*, End [phase]*, and Minimum Efficiency [%]*. It contains two rows:

Start [phase]*	End [phase]*	Minimum Efficiency [%]*
0.998	0.999	90
0.001	0.002	90
- Fulfil all Phase Ranges:** An unchecked checkbox.
- Exposure Time [second]*:** A text input field containing '60.000'.
- Payload In The Loop:** An unchecked checkbox.
- Send Data Taken During Earth Constraints:** An unchecked checkbox.
- Send Data Taken During SAA:** A checked checkbox.




At the bottom right of the form, there are four buttons: 'Cancel', 'Clear', 'Reset', and 'Add'. The 'Add' button is circled in blue, indicating the final step to submit the request.

Finalise the Observation Request

The new Observation Request now appears in the list



The screenshot shows the 'Observation Requests' interface. A modal window titled 'New Observation Request' is open, displaying a green success message: 'Success! observation request created successfully (ID = 3) !'. Below the message is a 'Close' button. In the background, a table lists the observation requests. A blue arrow points to the first entry in the table.

Observation Category	Observation Request Id	Comment	OR Groups	Target Name	Right Ascension [Ep. = J2000]	Declination [Ep. = J2000]	Priority	Number Of Visits	[CHEOPS Orbit] (1 Orbit = 98.77 Minutes)	Status	Actions
Time Critical	0003	Private comment, for your own records or for informing the SOC about specificities of the observing strategy (does not preclude the full definition of the observation in the OR fields below)		Kepler-186	298.652720	43.95500	1	1	10.00	draft	  



Complete your programme

Your newly created Observation Request now appears in the list




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

New observation Request

Copy CSV Excel

Show entries

Showing 1 to 1 of 1 entries

+	Observation Category	Observation Request Id	Comment	OR Groups	Target Name	Right Ascension [Ep. = J2000]	Declination [Ep. = J2000]	Priority	Number Of Visits	Visit Duration [CHEOPS Orbit] (1 Orbit = 98.77 Minutes)	Status	Actions
	Time Critical	0003	Private comment, for your own records or for informing the SOC about specificities of the observing strategy (does not preclude the full definition of the observation in the OR fields below)		Kepler-186	298.652720	43.95500	1	1	10.00	draft	  

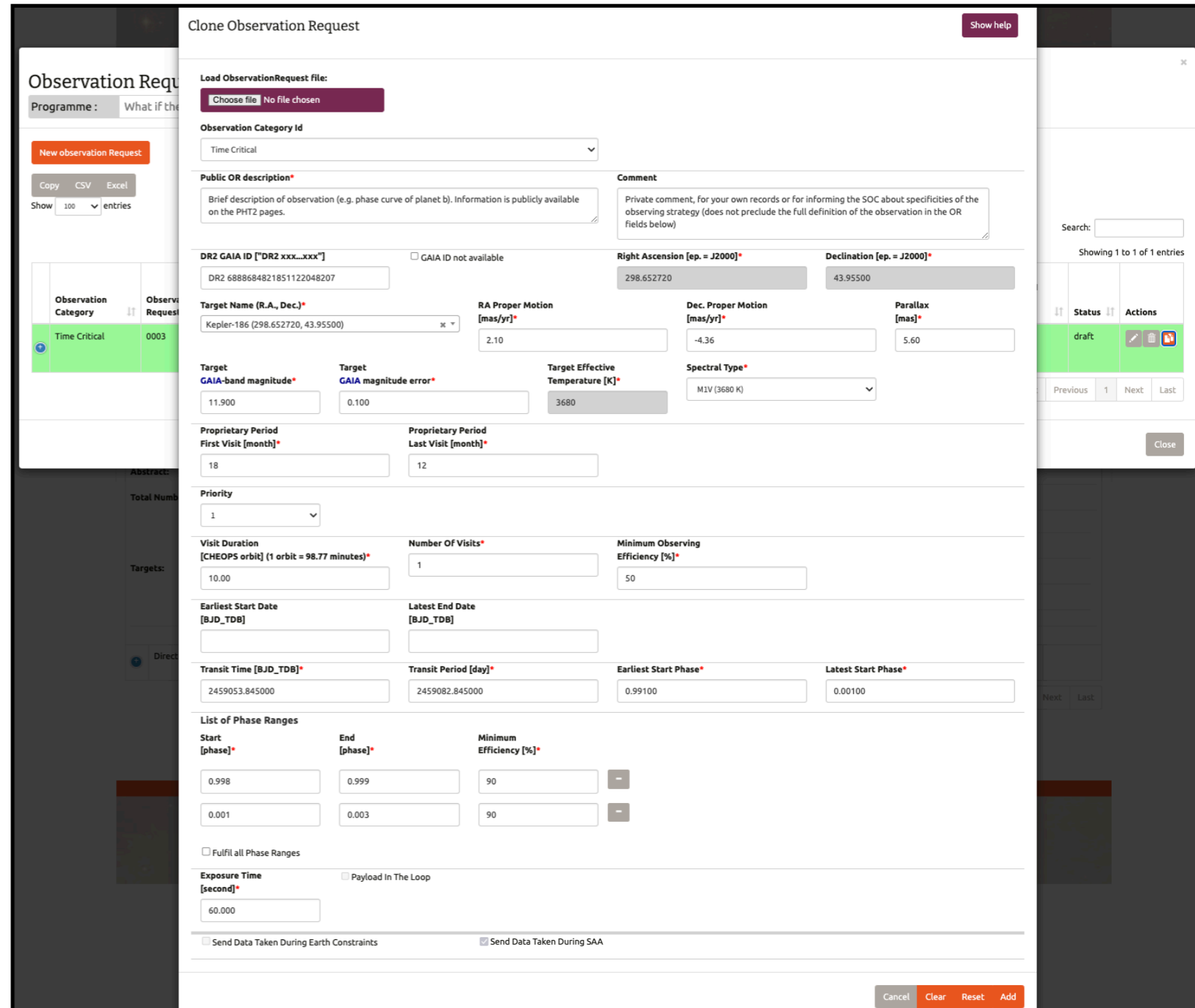
Complete your programme



Cloning an observation request

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

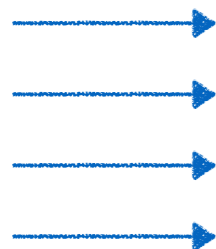
This may be used to speed up the creation of observation requests if only a few parameters change with respect to existing requests.



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 : Type : ID :

[New observation Request](#)

Copy CSV Excel

Show entries

Search:

Showing 1 to 4 of 4 entries

Observation Category	Observation Request Id	Comment	OR Groups	Target Name	Right Ascension [Ep. = J2000]	Declination [Ep. = J2000]	Priority	Number OF Visits	Visit Duration [CHEOPS Orbit] (1 Orbit = 98.77 Minutes)	Status	Actions
Time Critical	0006	Private comment, for your own records or for informing the SOC about specificities of the observing strategy (does not preclude the full definition of the observation in the OR fields below)	(PR249999_TG0004)	Kepler-452	296.003690	44.27754	1	1	5.50	draft	
Time Critical	0005	Private comment, for your own records or for informing the SOC about specificities of the observing strategy (does not preclude the full definition of the observation in the OR fields below)		Kepler-442	295.366559	39.28006	1	1	10.00	draft	
Time Critical	0004	Private comment, for your own records or for informing the SOC about specificities of the observing strategy (does not preclude the full definition of the observation in the OR fields below)	(PR249999_TG0006)	Kepler-452	296.003690	44.27754	1	1	10.00	draft	
Time Critical	0003	Private comment, for your own records or for informing the SOC about specificities of the observing strategy (does not preclude the full definition of the observation in the OR fields below)		Kepler-186	298.652720	43.95500	1	1	10.00	draft	

First Previous 1 Next Last

[Close](#)

ETC Help

Proposal Handling Tool - Phase 2 - PHT-2 Guidelines

Complete your programme

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

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

Visit Duration [CHEOPS orbit] (1 orbit = 98.77 minutes)* ✓ <input type="text" value="10"/>	Number Of Visits* ✓ <input type="text" value="1"/>
---	--

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

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

Visit Duration [CHEOPS orbit] (1 orbit = 98.77 minutes)* ✓ <input type="text" value="3"/>	Number Of Visits* ✓ <input type="text" value="3"/>
--	--



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

Visit Duration [CHEOPS orbit] (1 orbit = 98.77 minutes)* ✓ <input type="text" value="3"/>	Number Of Visits* ✗ <input type="text" value="4"/> <p>Approved number of orbits for the target Kepler-186 exceeded (10 = 10 + 0) ! Reduce the visit duration or the number of visits (<=3).</p>
--	--


Submit your programme

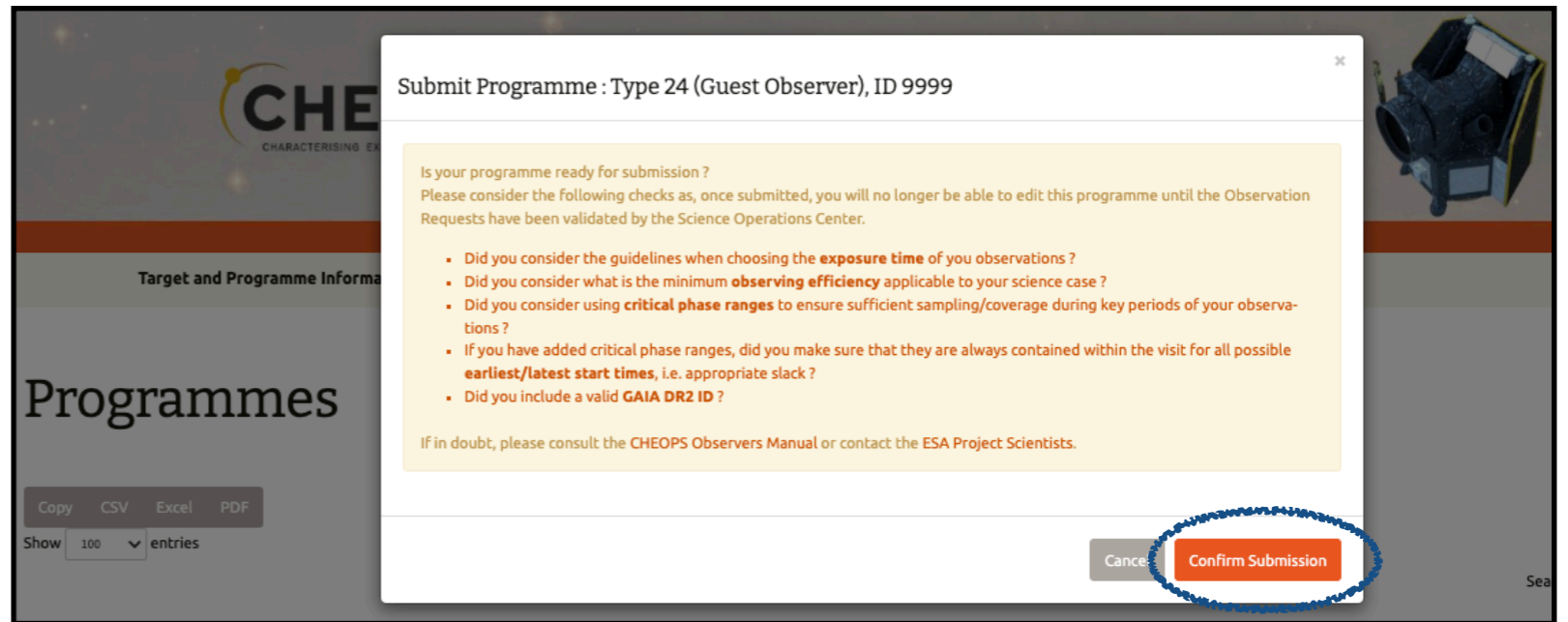
Programmes that you own can be submitted with the  icon.

The screenshot shows the 'Programmes' section of the CHEOPS Proposal Handling Tool. It includes a navigation bar with 'Programmes' highlighted, a search bar, and a table of two programmes. The first programme, 'What if the Kepler field were visible', has a submit icon circled in blue in the 'Actions' column.

Type	ID	Title	PI	Co-Investigator	Observation Request(s)	Status	Creation Date	Latest Submission Date	Actions
Guest Observer(24)	9999	What if the Kepler field were visible	Fritz Zwicky Fritz.zwicky@dunkleMaterie.ch		0/4	draft	2024-03-13 15:03:14		 
Director's Discretionary Time(44)	9999	This Kepler target is actually on of the few visible one, but too faint for CHEOPS...	Alexis Heitzmann Alexis.Heitzmann@unige.ch	Fritz Zwicky	0	draft	2024-03-13 15:26:30		

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".

Type	ID	Title	PI	Co-Investigator	Observation Request(s)	Status	Creation Date	Latest Submission Date	Actions
Guest Observer(24)	9999	What if the Kepler field were visible	Fritz Zwicky Fritz.zwicky@dunkleMaterie.ch		0/4	submitted	2024-03-13 15:03:14	2024-03-13 17:35:03	
Director's Discretionary Time(44)	9999	This Kepler target is actually on of the few visible one, but too faint for CHEOPS...	Alexis Heitzmann Alexis.Heitzmann@unige.ch	Fritz Zwicky	0	draft	2024-03-13 15:26:30		

Note: The  icon allows you to modify only the Title, Abstract and Description of Observations

Submit your programme

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

Observation Requests

Programme : Type : ID :

Copy CSV Excel

Show entries

Search:

Showing 1 to 4 of 4 entries

	Observation Category	Observation Request Id	Comment	OR Groups	Target Name	Right Ascension [Ep. = J2000]	Declination [Ep. = J2000]	Priority	Number Of Visits	Visit Duration [CHEOPS Orbit] (1 Orbit = 98.77 Minutes)	Status	Actions
	Time Critical	0006	Private comment, for your own records or for informing the SOC about specificities of the observing strategy (does not preclude the full definition of the observation in the OR fields below)	(PR249999_TG0004)	Kepler-452	296.003690	44.27754	1	1	5.50	submitted	
	Time Critical	0005	Private comment, for your own records or for informing the SOC about specificities of the observing strategy (does not preclude the full definition of the observation in the OR fields below)		Kepler-442	295.366559	39.28006	1	1	10.00	submitted	
	Time Critical	0004	Private comment, for your own records or for informing the SOC about specificities of the observing strategy (does not preclude the full definition of the observation in the OR fields below)	(PR249999_TG0006)	Kepler-452	296.003690	44.27754	1	1	10.00	submitted	
	Time Critical	0003	Private comment, for your own records or for informing the SOC about specificities of the observing strategy (does not preclude the full definition of the observation in the OR fields below)		Kepler-186	298.652720	43.95500	1	1	10.00	submitted	

Proposal Handling Tool - Phase 2 - PHT-2 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.