

# Access to CHEOPS

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# Observing with CHEOPS

- 3.5 years nominal operations (5 years goal).
- Time available:
  - 5% allocated to centralised monitoring & characterisation programme, 5% to safe mode/engineering contingency.
  - ~27 600 hrs/ ~16 600 orbits (~100 mins) (rounded) available to science (includes slew time).
- Split between Core Programme ( Guaranteed Time Observations – GTO ) and Guest Observers' Programme (GO/Open Time)
  - 80%: 20% split.
  - 22 100: 5 500 [hrs] or 13 260: 3 310 [orbits].
- Up to 25% of Open Time (eg. 5% total observing time) available through Director's Discretionary Time (DDT).

## CHEOPS Targets

**Ground-based  
transit surveys**

eg. NGTS

**TESS**

**Ground-based RV surveys**

Eg. HARPS, HARPS-N, HIRES, SOPHIE  
(on-going) ESPRESSO (2017)

**(Kepler) /K2 survey**

**Open-time proposals (20%)**

3.5 yrs baseline (5 yrs goal)

Adapted from CHEOPS Consortium slide

# Guaranteed Time Observers' Programme

- 80% of available observing time.
- Programme definition, including target list, under the responsibility of the CHEOPS Science Team (CST).
- See talk by D. Queloz.



# Guest Observers' Programme

- Managed by ESA.
- Covers 20% of the available observing time.
- Annual Announcements of Opportunity (AOs)
  - First 6 months before launch.
- No restrictions on who can apply.
- Anything within the advertised capabilities of CHEOPS can be proposed.
- Targets on the Reserved Target List are blocked unless science case is substantially different.

# Proposal Submission and Evaluation

- Two-stage proposal submission process:
  - Phase I: science case, technical justification, target list justification/request for time, reserved target list check:
    - Phase I Proposal Handling Tool (see talk by K. Isaak).
  - Phase II – submission of detailed observation requests by PIs of successful proposals:
    - Phase II Proposal Handling Tool (see talk by D. Ehrenreich).
- Proposal evaluation:
  - Peer-reviewed by Time Allocation Committee, appointed by ESA in consultation with the CHEOPS PI.
  - Proposals to be observed by CHEOPS will be selected on scientific merit.

# Director's Discretionary Time (DDT)

- Up to 25% of GO Programme Time will be available as DDT
  - Way for Science Community to inject newly discovered targets between AOs.
- Overseen by ESA, in consultation with TAC Chair and CHEOPS PI.
- Same submission process as annual AO (tools/inputs).
- Need to justify why proposal cannot wait until next AO:
  - Clear guidelines will be provided as to what constitutes a suitable target.
- Open to all, in the first instance.
- Detailed implementation eg. target prioritisation is under discussion

# Proprietary Period

- On a per-observation request basis:
  - 1 year after data from last visit has been declared complete and ingested into the archive.
  - Maximum of 1.5 years after first visit.
- Same for GTO and GO observations awarded time in the annual calls.
- Proprietary period for observations awarded time in the Director's Discretionary Programme up to that above.
- Beyond proprietary period, data is public - freely accessible through the CHEOPS data archive (see N. Billot's talk).

# CHEOPS Reserved Target List (RTL)

- First issue will comprise targets from the GTO programme
  - Covers 3.5 year period, announced 6 months before launch.
  - Oversubscription factor to reflect how well one can fill the schedule.
- List will not be published, however can be queried (see talk by D. Ehrenreich), and will be provided to ESA for transparency.
- Proof of query must be provided with all proposal submissions.
- Targets on the RTL cannot be requested through the GO Programme unless science case is substantially different.
  - Contact information of GTO theme leader(s) will be provided to the prospective GO PI
- Targets awarded time in the GO programme will be added to the RTL (same oversubscription factor).
- Details of targets not granted observing time will not be known to the CHEOPS Consortium.

# Update of CHEOPS RTL - I

Between AOs:

- Through the CHEOPS Science Team (GTO targets).
- Through Director's Discretionary Time:
  - Target added to RTL when accepted by ESA.
  - If on the GTO list also, will be removed from the GTO RTL if it can be demonstrated that the target was NOT on the GTO RTL on the date that the DDT proposal was submitted to ESA.

Important points:

- Essential to query the RTL on a regular basis when submitting/working on proposals.
- Targets proposed through DDT and rejected by ESA will not be known to the CHEOPS Consortium.

# Update of CHEOPS RTL - II

During period for which the GO AO is open:

- Detailed procedure under discussion.
- Objective to make the process fair to both the Consortium and to the Community.

# Lifetime of GO programmes

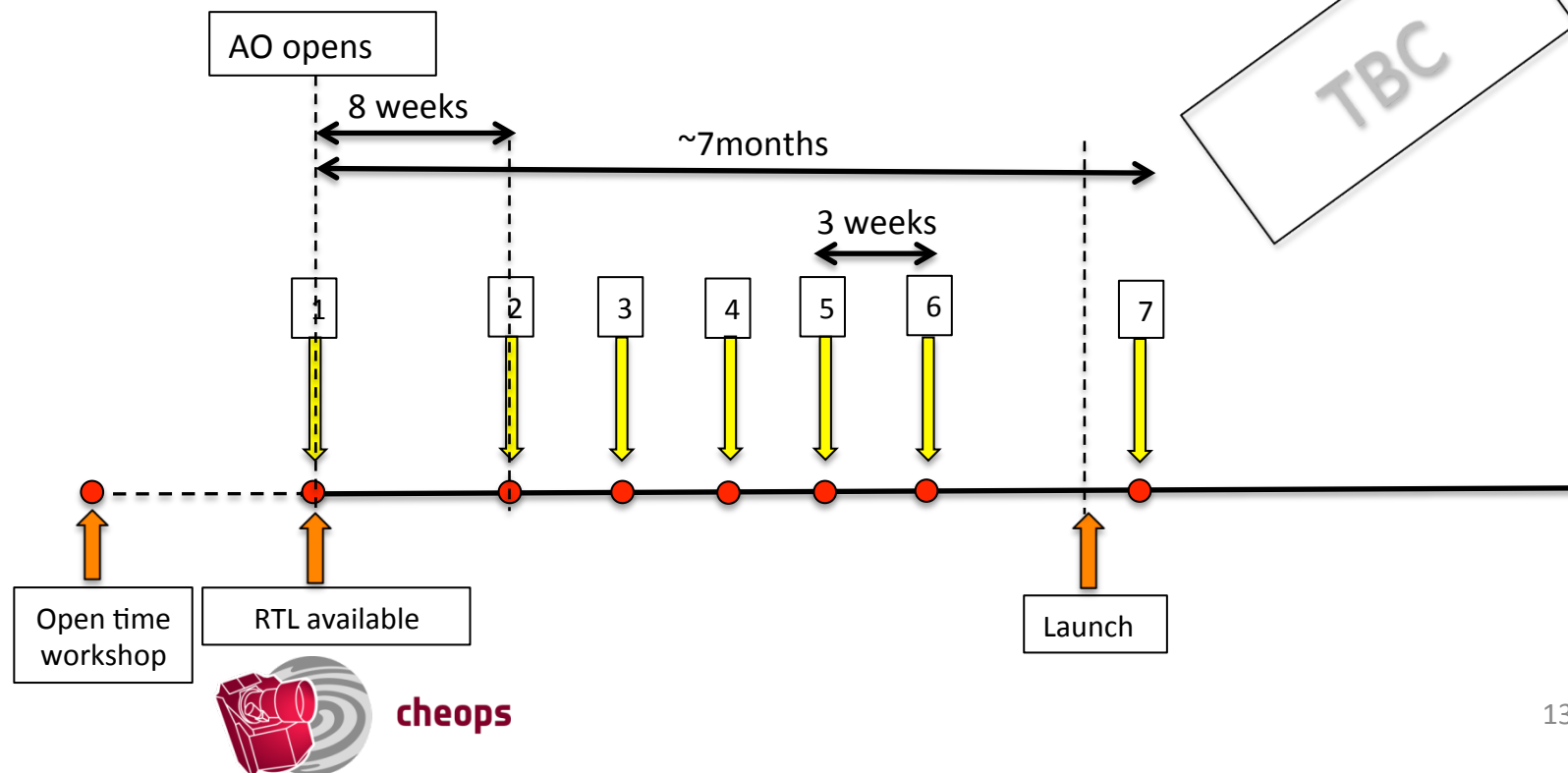
- GO programmes/observation requests remain in the queue/on the RTL until observed, or for up to one year (whichever comes first):
  - In exceptional cases, this period can be extended - justification for an extension needs to be requested in the submitted proposal, and will be approved (or not) by the TAC.

Note : best efforts will be made to schedule and complete observations for proposals that are awarded observing time, according to priorities assigned by the TAC. Nonetheless, due to the complexities of scheduling (in particular of many time-critical observations), the award of observing time does not guarantee that a observations will be scheduled nor observed.



# Current planning for the first AO

1. Announcement of Opportunity - call for observing proposals opens, Reserved Target List (RTL) available.
2. Call closes (after 8 weeks) - all targets in submitted proposals blocked to GTO (only visible to CST through query to ESA).
3. Proposal evaluation and ranking by the TAC.
4. Technical Evaluation of highly ranked proposals.
5. Announcement of Time Allocation: all GO targets added to RTL; RTL can be updated again by CST and DDT.
6. Submission of Phase II Observation Requests.
7. Long Term Plan available at SOC, to be used for planning observations immediately after Science Demonstration Phase (after In Orbit Commissioning).



# Support/Tools for Proposal Preparation

- General
  - AO data pack, inc. documentation, CHEOPS Observers/Instrument Users Manuals, Phase I Proposal Handling Tool.
- What sensitivity can I achieve with CHEOPS?
  - Exposure Time Calculators – see M.Lendl's talk.
- Is my target visible/observable with CHEOPS?
  - Sky visibility/coverage maps – see D. Ehrenreich's talk.
  - Feasibility checker - see N.Billot's talk.
- Is my target/science already proposed by others?
  - Reserved Target List checker – see D. Ehrenreich's talk on PHT2.
- Questions?
  - FAQ webpage on the ESA webpage.
  - No Helpdesk, questions answered by ESA Project Scientist.

# Support/Tools to Prepare to Observe

- Phase II Proposal Handling Tool
  - Preparation of detailed observation requests (see D. Ehrenreich's talk).
- Impact of CHEOPS orbit/environment/pointing constraints on observations
  - Interruptions due to passage through South Atlantic Anomaly (excess noise), Earth Occultations (line-of-sight to target blocked).
  - Check using feasibility checker.

# Accessing your data

- Observers will receive notification when their observations have been scheduled:
  - Will be informed if observations postponed due to eg. unscheduled platform/instrument activities, collision avoidance.
- PI will be informed when reduced data is successfully ingested in the archive, and is available for download.
- Data downloaded from the archive:
  - Access provided to the proposal PI and the contact co-I.
  - All level data products, calibration products and reports (see M. Beck's talk and S. Hoyer's talk).
- 4 weeks to request re-observation, via ESA.

Thank you.

Questions?



Integration of the CHEOPS Platform at ADS  
ECE, Spain

