Issue 33 – Dec 27, 2022

ExoClock Newsletter

Dear ExoClock participants,

Hope you are all doing well! This is the last newsletter for 2022 and we would like to wish everyone a Happy New Year, full of exciting moments and clear skies! Thank you all for being part of the ExoCkock family this past year!

We would like to welcome the new members!

We send out a newsletter like this at the beginning of every month, while you can read the past newsletters, watch the past meetings, and have access to other educational material at:

www.exoclock.space/users/material

***We also organise meetings dedicated to new ExoClock members**. These meetings are held just after our regular monthly meeting. The beginner's meeting is usually held on the Friday after our regular meeting or the week after. In these meetings, newcomers have the opportunity to ask questions of any level related to the operation of the website, observations of transits, data analysis etc. Note that these meetings are not recorded.*

Finally, we have a Slack channel for more direct communication and if you want to join, please send a request at exoclockproject@gmail.com.

In this newsletter, we discuss:

1. Announcements

1.1 2023 Publication (Data Release D) – deadline for submitting your data

Concerning the next publication and Data Release in 2023, we will follow the same plan as previous years. This means that all observations submitted by the **31st of December** will be included in the next publication and Data Release, and the observers will be co-authors in it. Please mark this date and make sure that you submit any past observations that you have not submitted yet.

Of course, note that any observations submitted after that day will be part of future publications.

1.2 Working groups – summary

This year, the efforts of the already existing working groups are continuing but we also want to initiate some further activities. The scopes of the working groups are beyond the main goal of the project, and we do our best to support them, while the main coordination is done by the ExoClock participants and partners. The main updates for all working groups are found below:

- CMOS WG: A dedicated workshop will be organised on **early 2023**

- Synchronous Observations WG: The target lists for **January 2023** are available here:

  North: https://docs.google.com/spreadsheets/d/1rkvcYP3-u8avfQAv9vERSaZIDxlINegsvg0btFpJs5g/edit#gid=1837822828

  South: https://docs.google.com/spreadsheets/d/1W3Nt3iKTym2mkuSbP5hQCLN0h2MKjyKkCPO9XLDgFww/edit#gid=1295765772

- Multi-colour Observations WG: Steve Futcher, the coordinator of the group, is preparing a script for analysing multi colour observations. He will share this through the slack channel

- Light-curve analysis WG: Members have started some efforts already to analyse more complicated datasets.

- Education WG: We will hold a dedicated seminar for teachers and educators in **January 2023,** we will send a separate email!

- Remote Observing WG: Activities have started – Members are kindly reminded to submit their proposals by the **10th of January 2023**.

For these last two working groups, registered participants will soon receive an email about the further steps. Separate meetings will be organised for these activities.

1.3 HOPS workshop recording available - v3.1

Recently we held a dedicated HOPS workshop where the software developer, Angelos Tsiaras, presented the latest version of HOPS. The recording of the workshop is available at the material page (exoclock.space) and new version available to download from the ExoworldsSpies website (www.exowroldsspies.com).

1.4 Public archives on ExoClock

Recently we noticed that some of you have been submitting data from public archives. Note that the submission of multiple analyses of the same observation can cause confusion and bias the final ephemerides. To handle this issue from now on, we decided to follow a special policy that includes the following points:

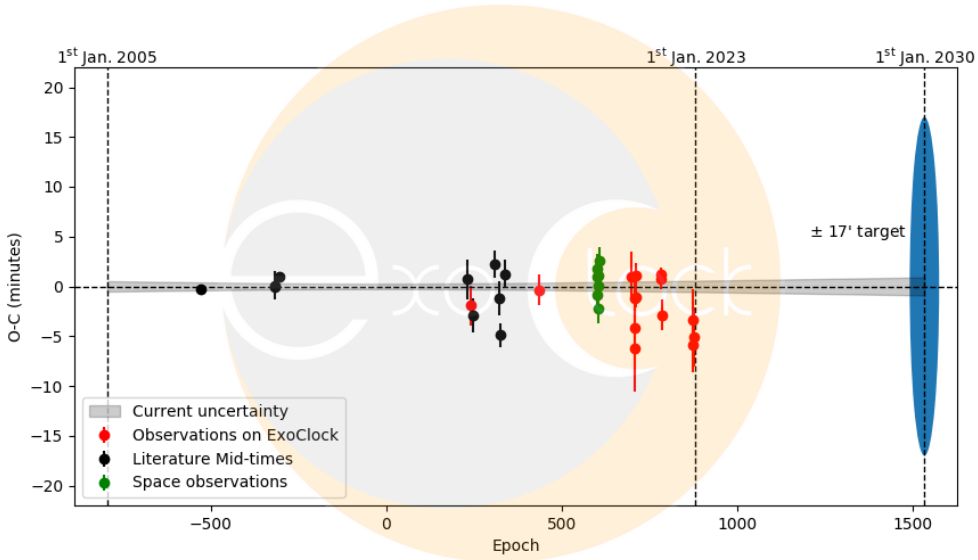
1) We will no longer accept observations from public archives (e.g., MicroObservatory) through the usual uploading page.
2) As some of you are already analysing data from the MicroObservatory, we will create a separate working group to further discuss how to analyse such data and organise the submission to the website. Members already familiar with MicroObservatory will be contacted soon to initiate this activity.

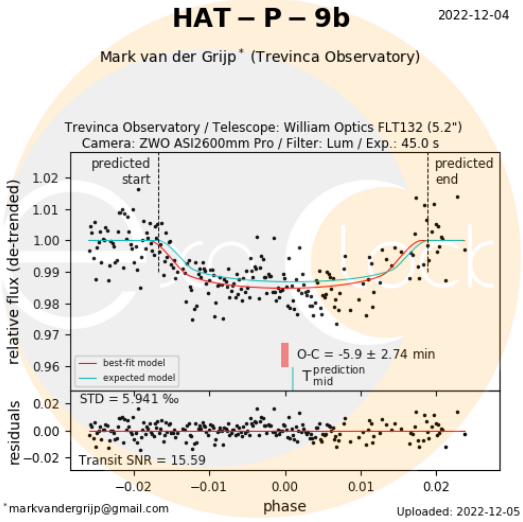
Note that multiple analysis of the same observation causes confusion and harm to the data and therefore this distorts the quality of the results!

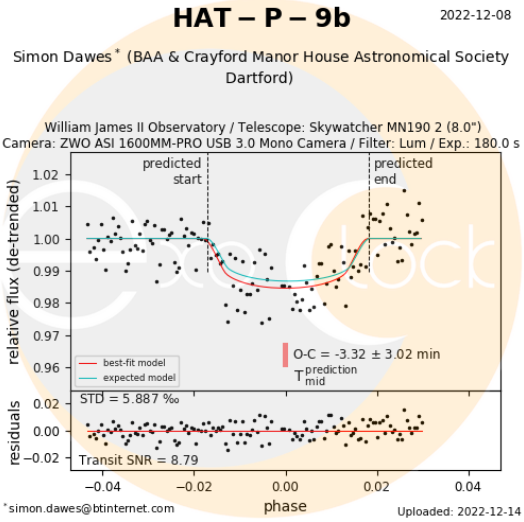
2. Highlighted Observations

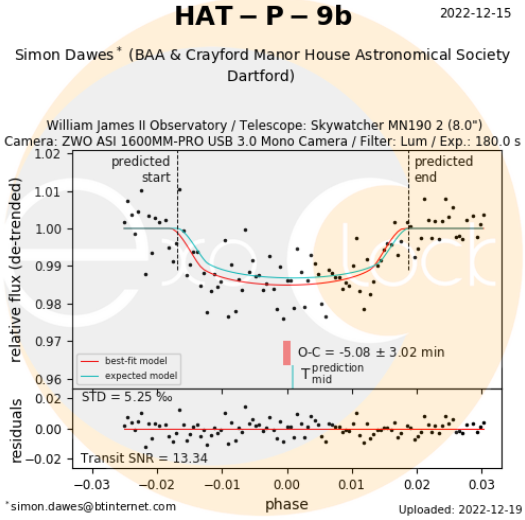
We would like to thank you all for the observations you contributed in the previous months!

We have selected **HAT-P-9b,** a target that has been observed in the past by both ExoClock observers and space telescopes. Literature mid-time data also are available. Three recent observations from Simon Dawes and Mark Van der Grijp showed a shift of -5 minutes. This may indicate changes in the orbit of the planet, and we may need to follow-up with more observations during 2023. For the following months (January- February) there are several transits (check your personal scheduler). If the target is observable from your location with your equipment, give it a try!









Many thanks to everyone for your efforts so far! We wish you a bright 2023, best wishes for health and prosperity!

Clear Skies,
the ExoClock team