



ExoClock Newsletter

Dear ExoClock participants,

Hope you are all doing well!

We are starting the academic year full of passion for continuing the efforts of the project and adding new ideas & activities to further develop the project and enrich the community's experience. We are very delighted with the outcome of the 2nd annual meeting, which was held very recently, and we would like to thank you all for embracing it so actively! Your participation was really important to make this meeting productive and fruitful! This meeting gave us more power to continue the efforts of ExoClock in the future years.

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 will no longer be fixed on the Friday after our regular meeting, because we would like to facilitate participants with different schedules. 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. Second ExoClock Annual Meeting – news

1.2. ExoClock activities at EPSC22 – Granada

1.3. 3rd ExoClock paper – press release!

1.4. Working groups and activities – registration page

1.5. Website updates

2. ALERTS

1. Announcements

1.1 Second ExoClock Annual Meeting – news

The 2nd ExoClock annual meeting took place at UCL in London, with around 25 participants attending in-person and around 60 attending virtually from more than 20 countries. Thank you all for attending either in-person or virtually this meeting! We hope that many more will follow in the future. The meeting included talks by ExoClock members, partners, and scientists from the Ariel mission consortium. The results after 3 years of operation, as well as future activities were presented. Among the highlights of the meeting were the:

- in-person presentation of the Ariel space mission by the PI **Giovanna Tinetti**
- variety of talks by Ariel scientists, ExoClock partners and active ExoClock members
- presentation of the results from the latest ExoClock paper
- presentation of the review process by the review team
- CMOS workshop by Roland Casali
- announcement of NEW upcoming activities for the academic year
- awards of contribution to the most active ExoClock observers

Of course, the most important highlight was the in-person meeting with ExoClock members that we had only met online!

The recordings of the meeting are now available at:

https://www.exoclock.space/annual_meetings

You can watch the videos and/or share the link with interested communities.

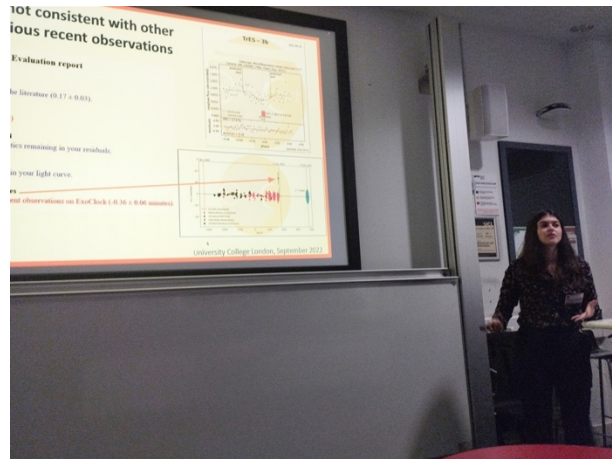
Please, give us your feedback for the meeting by filling in a short survey here:

<https://forms.gle/tNh3KMMKSZQJWx5T9>

Your opinion is very important for us!

Below you can see some photos from the meeting:





1.2 ExoClock activities at EPSC22

During EPSC22 at Granada, ExoClock was presented in several ways.

In total, six presentations were dedicated to activities related to ExoClock by:

- Anastasia Kokori (two talks at different sessions)
- Angelos Tsiaras
- Yves Yongen, amateur observer
- Florence Libotte, National contact for Spain
- Georgia Pantelidou, reviewer

ExoClock was also referred many times at presentations in the session of the pro-am collaborations and also in other other sessions, something which made us very happy! Moreover, ExoClock was highlighted at the open science session as an example of operating open science aspects to inspire further communities to follow the same philosophy in planetary science. Additionally, a separate splinter session was organised for presenting different ExoClock aspects, and you can find the recording here:

<https://www.youtube.com/watch?v=IDqEX8T15Jc>

Finally, we had the chance to meet in person with some ExoClock members too! Photos from the meeting:



1.3 3rd ExoClock paper – press realese!

The 3rd ExoClock paper has been accepted for publication by the ApJS!

Congratulations to everyone – the publication included 217 co-authors!!

This work has been highlighted through a dedicated press release by Europlanet, which was distributed during EPSC22 (Europlanet Congress 2022) at Granada in September.

You can read the press release here:

<https://www.europlanet-society.org/exoclock-counts-down-ariel-exoplanet-targets>

1.4 Working groups and new activities - registration page

During this year we plan to continue developing the efforts of the already existing working groups, but we would like also 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.

If you are interested in participating in one or more of these groups, please express your interest though this ExoClock page:

https://www.exoclock.space/working_groups

Current working groups continuing in 2022-2023:

- CMOS WG
- Synchronous Observations WG
- Multi-colour Observations WG

Working groups/ activities starting in 2022-2023:

- Remote observing WG
- Light-curve analysis WG
- Education WG

NOTE: If you interested in the remote observing, please submit your interest no later than the 15th of November, as we need to start planning observing with remote observatories!

1.5 Website updates

During the last month, the website backend has been updated, and some new functionalities are now available.

At first, all the observations that are part of the third data release (DRC) are open, including the space observations, which can be found here:

<https://www.exoclock.space/database/space>

An updated view of the ExoClock planets, including a summary of all available observations and the new ephemerides, can be found here:

<https://www.exoclock.space/database/planets>

The most important update for the observers is that we introduced an one-to-one link between observations and telescopes, meaning that we can calculate the efficiency of each of your telescopes individually.

In your scheduler, you can see the effective aperture of your telescope, as estimated from your past observations (1). You can also see the minimum telescope aperture needed for each transit, which can help you judge which transit is easier (2). The transits with lower minimum telescope aperture are easier!

| Holomon Astronomical Station - Celestron C11 - ATIK4000/11000 | | | | | | |
|--|------------------------------------|--|----------------|----------------|---------------|-----------------|
| Latitude: 49.4°, Longitude: 29.9°, Telescope aperture: 11.0" | | | | | | |
| Effective telescope aperture (based on 9 verified observations): 10.34" 1 | | | | | | |
| Planet & ExoClock status | Details | Observing times [UTC+3.0] and target position | | | | |
| | | 1h Before Ingress | Transit Start | Mid Transit | Transit End | 1h After Egress |
| 2 WASP-187b (HIGH) Min. aperture: 10.25" Total Observations (recent): 0 (0) O-C: - | RA: 01:09:53.9653 hours (J2000) | 2022/10/13 | 2022/10/13 | 2022/10/14 | 2022/10/14 | 2022/10/14 |
| | DEC: +25:40:54.103 degrees (J2000) | 22:22 | 23:22 | 02:20 | 05:19 | 06:19 |
| | MagR: 9.915 mag | Alt: 53° | Alt: 64° | Alt: 69° | Alt: 36° | Alt: 25° |
| | DepthR: 3.8 mmag | Azi: 101° (E) | Azi: 116° (SE) | Azi: 232° (SW) | Azi: 275° (W) | Azi: 284° (W) |
| | Duration: 5.94 hours | OBSERVATION HAS STARTED! Max counts increase during observation: R:2% V:4% Moon illumination: 82.7%, Moon distance: 44.7° | | | | |

Finally, you can now edit the details of your telescopes, and also delete them, if there are no observations linked to them, through the “My Telescopes” page:

https://www.exoclock.space/users/my_telescopes/

Including the details that you can change, now you will also find the time-zone. This may be convenient for you if you have telescope at multiple locations.

2. ALERTS

Thank you all for observing the alert targets! Please check your personalised alert schedule at:

www.exoclock.space/schedule/alerts

for the **ALERT** planets and if you get a clear sky and a long-enough night, you can try observing them! The following targets remain in the current **alert system**:

- NGTS-8b
- TOI-1130c
- WASP-33b

Please remember that many targets were not in the alert list, before an unexpected shift was identified by you, the ExoClock participants. This highlights the importance of observing targets that are also of low and medium priorities.

Clear Skies,
the ExoClock team