



NEWSLETTER

OPTICON-
RADIONET PILOT



NEWSLETTER #13

Latest updates for the ORP Consortium

Dear colleagues,

We sincerely hope you had an excellent summer vacation. In the meantime, time is running out and this autumn will once again be very intense. First of all, we have a new report to submit to the European Commission in October. Our Project Managers will be of course in touch with the people in charge of the various WPs for this important step.

We're also about 1.5 years away from the end of ORP, and the Consortium Meeting to be held in Garching, Germany, at the end of November will be an important step in making a full review of our developments and validating our strategy for the future. This is a very important step, and everyone's opinion is important. So I'd like to take this opportunity to encourage you to attend in person, which is always more efficient than remotely. So don't forget to register (see "ORP Consortium meeting" section), especially as we've decided to hold it over 3 days to ensure that the working sessions are both dense and productive.

Until we see many of you in Garching, during the Consortium Meeting, we hope you enjoy reading this new newsletter,

Stéphane Basa, on behalf of the EMT

Current ORP TNA Opportunities Open

ORP Transnational Access opportunities presently open:

- [SRT call](#) - deadline **17 October 2023**, 12:00 UTC
- [European ARC Network](#): **No specific deadline**
- [Effelsberg](#) - deadline **28 September 2023**, 15:00 UT.

Results achieved with ORP TA Access

NOEMA reveals mm emission from a neutron star accreting from a massive star

Using ORP TA, observations with NOEMA have, for the first time, detected a neutron star high mass X-ray binary at mm wavelengths. This result paves the way for a new approach to understand the role of the stellar winds in regulating accretion regimes in a range of binary systems. Read more [here](#).

Record-breaking cold gas discovery in the early Universe

Using ORP TA, astronomers have detected cold molecular gas in the form of carbon monoxide in the host galaxy of a supermassive black hole at an early epoch in cosmic history, corresponding to when the Universe was only seven hundred million years old. The discovery was made by an international team led by researchers from the Italian National Institute for Astrophysics (INAF) using the NOEMA observatory in the French Alps. The results are published in the Astrophysical Journal Letters under the title [*First Constraints on Dense Molecular Gas at \$z = 7.5149\$ from the Quasar Pōniuā'ena*](#). Read [here](#) the IRAM news release.

14th Gaia Science Alerts and ORP Time-Domain Workshop

The members of the ORP Consortium and anyone interested in time-domain research and infrastructural activities within optical and radio domains are cordially invited to attend the next workshop in the series, the *14th Gaia Science Alerts and ORP Time-Domain Workshop*. The workshop will be held in the Embassy Hotel in Valletta, Malta, 2-5 October 2023. More details and the registration form are available [here](#).



11th VLTI Interferometry School

The [11th VLTI Interferometry School](#) was held on 12-17 June 2023 in Budapest with the co-sponsoring of ORP.

It was organised by the Hungarian VLTI Expertise Centre as part of the dissemination and training activities of the European Interferometry Initiative. It was aimed at postgraduate students and postdocs who wanted to learn about the theory and applications of infrared interferometry. The school was held in-person with 65 participants in total, of which 43 were students, mainly from European countries. The focus of the school was hands-on training in proposal preparation for the VLTI, and quality assessment, analysis and modelling of VLTI data with state-of-the-art tools. These sessions were complemented by science lectures on various topics that are utilising interferometry.

All lecture material is now available on the school's website. Participants and organisers were delighted with the overall course, and enjoyed the cultural experience of visiting the historical site of the Konkoly Observatory and participating at a traditional goulash party. The next VLTI interferometry school will be held next year, and more information will be available soon.

EAS2023

This year, the annual meeting of the European Astronomical Society (EAS) was held in Krakow, Poland. It welcomed over 1,500 scientists and visitors from all over the world, as well as almost 250 people online. One of the sessions, held on Monday 10 July 2023, was the "European Forum of Astronomical Communities", organised by Lukasz Wyrzykowski, where the ORP was strongly represented through various presentations. Find more information [here](#).





ORP Outreach - Twitter campaign started

This week the twitter ORP campaign has started. All infrastructures of the ORP will be presented, one optical and one radio infrastructure per week. Look for #ORPInfrastructure - you are very welcome to like and retweet to give ORP infrastructures more visibility.

ORP Consortium meeting - 21, 22, 23 November 2023

The next ORP Consortium meeting will be held in Garching, ESO (Germany) on 21, 22, 23 November 2023. It will aim to address questions about short-term ambitions (within ORP) and longer-term developments (beyond ORP).

The current schedule for this three-day meeting is as follows:

- **Day 1** will be dedicated to setting out the scope of the meeting and providing an overview of the last few months. The Executive Committee meeting will take place in the morning, followed by Parallel sessions for WP2 and WP17.

- **Day 2** will be devoted to reviews of WP activities and strategic discussion, including presentations from the other two pilots (NFFA and ATMO Access). Parallel sessions of WP15 (telescope directors' forum) and WP2.2b in combination with WP18 TDA will take place in the morning. A social dinner is planned in the evening.

- **Day 3** will start with the Board meeting, followed by review of WP activities, and conclude with discussions on strategic issues and networking.

The meeting [registration](#) is open until October 1, 2023.

We look forward to seeing as many of you as possible in person. For those if you are unable to travel, remote access will be available.

Press releases

- **Observations confirm unintended electromagnetic radiation emitting from large satellite constellations**

Members of the Opticon RadioNet Pilot (ORP) used the Low Frequency Array (LOFAR) telescope to observe Starlink satellites. They detected "unintended electromagnetic radiation" from onboard electronics, which could negatively impact astronomical research. Through this press release, ORP members encourage satellite operators and regulators to consider this impact on radio astronomy in spacecraft development and regulatory processes.

Read more [here](#).

- **Radio Waves Leaking from Large Satellite Constellations Jeopardize Astronomical Exploration**

The LOFAR radio telescope has shown that satellites can unintentionally emit radio waves that interfere with the telescope. If not addressed, their radio emission could close valuable windows into the Universe. ASTRON and ILT have prepared a press release outlining the impact of satellites on radio observatories around the world and stressing the importance of collaboration between astronomy and industry to overcome these problems and establish regulations to control emissions.

Read more [here](#).

Subscribe to the ORP External Newsletter

The external ORP newsletter is aimed at the international astronomical community to publicise the framework and activities of the project, and in particular draw attention to the benefits of bringing together the optical and radio astronomical ground-based communities. **Subscription for the newsletter is available [here](#).**

Please help us spread the update to reach out to as many people as possible!

Deliverables and Milestones

During the period 15 June - 15 September 2023 the following deliverables and milestones have been submitted:

- D4. 2 [UPORTO] : Pilot AO virtual access data + documentation (WP4.3)
- D4.3 [MPG] : Commissioned off-axis GRAVITY mode for 03/2023 ESO CfP (WP4.2)
- D4.5 [ULEI] : MATISSE correlated flux mode offer in the 03/2023 ESO CfP (WP4.2)
- D13.1 [ESO] : Providing access to 26 projects to the ARC Nodes infrastructure

ORP Activities

During the period 15 June - 15 September 2023 the following activities have been organised:

JA2 Seamless Performance Core Group - The group met on 16 June 2023 and on 1 September 2023 to update on the progress and future plans. There is good progress on the technical part of JA2 tasks and the group also discussed the set-up of a multi-facility call, which is part of the JA2 objectives - a pilot call with a limited amount of time per facility. Telescope directors have been informed about these plans and have been asked for agreement. The aim is to identify the directors willing and able to provide observation time and the concrete amount of time. The call is expected to be opened at the end of 2023, the proposal submission deadline is planned for the beginning of 2024. Observations should happen in spring 2024.

JA2.2 Seamless Performance: Time-Domain Multi-Facility & Multi-Frequency Access to Research Infrastructures - The group met on 29 June 2023 for the regular update meeting. Updates were given on:

BHTOM features, users: Intensive work on an improved version of BHTOM (BHTOM2) was done, consisting of updated procedures and bug fixes. The main difference between BHTOM versions 1 and 2 is the change in filters and a "matching radius" of 0.5 arcsecond was implemented to calibrate the data with the new Gaia Synthetic Photometry (Gaia SP), resulting in a noticeable improvement compared to previous catalogues used.

EVN TOM Toolkit plugin: work on connecting a user's TOM account to an EVN proposal in the EVN Northstar database using an OAuth2-based mechanism was started. The LCO developers were contacted and involved to make this feature available within the base TOM Toolkit.

Personnel: J. Davies will retire, D. Dicken takes over from now.

JA4 Radio Training: The group met on 22 June 2023 for an update on the progress. Among other things, the partners reported the planned schools within the running ORP project and they also very briefly reported the plans of their institutions for 2026-2030 – to collect which schools were considered necessary for the time after ORP.

All partners agreed that the optical part needs to be represented/involved in the ORP radio training events – and vice versa: Optical speakers/optical lectures at radio schools, radio speakers/radio lectures at optical schools.

Ideas for potential synergy schools were reported and talked about.

WP6-WP14 TA&VA Radio: The group met on 19 June 2023 and gave an update on the WP's progress.

Access submission: is on track and running smoothly, although most of the stations delivered the promised access, the TA will continue. SRT is expected to deliver the contracted hours – SRT call planned for Autumn/Winter 2023, observations would start in Feb/March of 2024.

Statistics: Efforts are being done to make radio and optical access statistics comparable – with the aim of drawing indicators for the TA access.

Upcoming ORP-related Activities & Events

02-05 October 2023 – Valletta on Malta/MT – [ORP workshop on Time-Domain, transients and Gaia Science Alerts](#)

21-23 November 2023 – Garching/DE – [ORP Consortium Meeting](#) - see above

10-14 September 2024 – Manchester/UK – [ALMA School for ALMA users](#)



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