

MW-Gaia: Revealing the Milky Way with Gaia



WG1/4 Hybrid Workshop "Gaia – Beyond the Milky Way", Athens, Greece

CLOSING REMARKS

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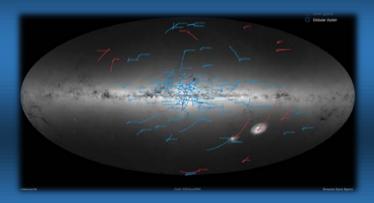


COST MW-Gaia WG1/WG4 Workshop

Gaia - Beyond the Milky Way



Athens, 27-28-29 September 2022



- A. Bombrun, European Space Astronomy Centre, Spain.
- C. Ducourant, Univ. de Bordeaux, France.
- X. Luri, University of Barcelona, Spain.
- N. Martin, Observatoire Astronomique de Strasbourg, France.
- F. Mignard, Observatoire de la Cote d'Azur, CNRS, France.
- V. Ripepi, INAF, Osservatorio Astronomico di Capodimonte, Italy,
- **G. Thomas**, Instituto de Astrofísica de Canarias, Spain.
- A. Vallenari, INAF, Padova Astronomical Observatory, Italy.
- E. Vasiliev, Institute of Astronomy, Cambridge, UK.

Venue

Historic Building of the National and Kapodistrian University of Athens (NKUA)













D. Hatzidimitriou, NKUA, Greece S. Anton, University of Coimbra, Portugal C.A.L. Bailer-Jones, MPIA, Heidelberg, Germany G. Clementini, INAF, Bologna, Italy L. Dechambre, University of Liège, Belgium

N. Walton, IoA, University of Cambridge, UK



D. Hatzidimitriou, NKUA, Greece I. Bellas-Velidis. NOA. Greece E. Livanou, NKUA, Greece A. Strantzalis, NKUA, Greece E. Chrysafeli, NKUA, Greece Ch. Tsakonas, NKUA, Greece



Gaia – Beyond the Milky Way! Slides will be placed online at https://gaia2022.ia.forth.gr

COST MW-Gaia WG1/WG4 Workshop

Gaia - Beyond the Milky Way

Athens September 27, 28 and 29, 2022



Home

This is a hybrid workshop that will be held in Athens, Greece, on the 27th, 28th and 29th of September 2022. It will provide the opportunity to discuss the impact of the Gaia mission, and especially of Gaia Data Release 3 (DR3), on extragalactic science. This is particularly timely, as DR3 (released on 13th of June 2022) includes results on galaxies and quasars, for the first time.

The workshop covers three aspects of extragalactic science with Gaia, starting with the expected improvement of the distance scale. DR3 includes light curves of thousands of variables, customarily used for distance determinations and is expected to have a major impact on the field. The second aspect is the study of resolved nearby galaxies (in the Local Group), including the Magellanic Clouds, MW dwarf satellites and the M31 group. Our understanding of the kinematics and dynamics of our local galaxy environment has been revolutionized by the wealth and accuracy of Gaia data. The third aspect is novel in DR3, which includes, for the first time, over 100 thousand low resolution, flux-calibrated spectra of quasars and unresolved galaxies. There will also be a hands-on training session for young scientists to familiarize themselves with accessing and utilizing Gaia DR3 data, particularly the new products.

Conference Poster









- Important 'extra galactic' science from Gaia covered in the meeting: distance scales and H₀, Local Group parallaxes, MW-MC (chemo) dynamics, lensed QSOs, reference frames, etc
 - Flagging even more 'extra galactic' Gaia focused product release data in 2023
- Thanks to Despina and her local team for organising a great meeting
- Thanks to all the speakers and attendees for making the meeting



News from Gaia

https://www.cosmos.esa.int/web/gaia/newsletter/contents

Focused Product Release for 2023

GATA NEWSLETTER #23

Compilation of news and updates from the Gaia mission since late June 2022.

GATA FUTURE RELEASES

The Gaia Data Release 3 (Gaia DR3) released 13 June 2022 covered 34 months of data. Already before this milestone, the processing for future releases had been proceeding. Gaia Data Release 4 (Gaia DR4) will cover 66 months of observations including all data from the nominal mission. In the current schedule the Gaia DR4 is anticipated to take place not before end of 2025. Unlike for Gaia EDR3/DR3, there are no plans to split Gaia DR4. However, some early tasters of very specific products will be provided in 2023.

This Focused Product Release (FPR) is planned to contain six different flavours of data:

- 1. Updated astrometry for Solar System objects,
- 2. Astrometry and photometry from engineering images taken in selected regions of high source density (only Omega Cen for this FPR),
- 3. The first results of quasars' environment analysis for gravitational lenses search,
- 4. Extended radial velocity epoch data for Long Period Variables,
- 5. Pre-main sequence accretion parameters, and
- 6. Diffuse Interstellar Bands from aggregated RVS spectra.

Quasar environment analysis

All these products will be expanded in Gaia DR4. The schedule for Gaia Data Release 5 (Gaia DR5), containing the nominal and extension periods of the mission fully, will be decided after the long term planning has been approved by ESA and the member states funding the Gaia Data Processing and Analysis Consortium (DPAC).









MW-Gaia: http://www.mw-gaia.org



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Welcome to MW-Gaia

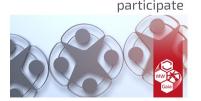
MW-GAIA will provide European leadership in understanding the Galaxy, its stars and planets, enhance the potential of the community in its scientific exploitation of the observations of more than a billion stars with the European Space Agency's Gaia satellite, and enhance the development of the next steps in astrometry and space astrometry missions.

The Action brings together key stakeholders from across Europe, to leverage expertise, and develop new techniques to fully maximise the scientific returns from Gaia's rich and complex data

Five key challenges are addressed: The Milky Way as a Galaxy, The Life and Death of Stars; Planetary Systems Near and Far; Gaia Fundamentals: Space and Time; and Astrometry Innovation Challenge - towards sub-uas astrometry. COST enables the vital Action activities, supporting exchanges, training and meetings.

The Action will have a significant legacy, creating a dynamic and vibrant network of researchers with expertise in the study of the Milky Way, its constituents and the art of Astrometry. Participation is inclusive, with researchers accessing the Network from across Europe, irrespective of their gender or location.

This COST Action commenced 14 Mar 2019 and will complete 13 Mar 2023 (although with the possibility of an extension)



WG4-WG2 Workshop: Transient Sky with Gaia 3

17.08.2022 Filed in: Participate

The WG4-WG2 workshop will be in-person in Coimbra, PT, and will be held Oct 13 - 14, 2022

Deadline for abstracts: 31 August 2022

Deadline for on-site participation registration: 9 September 2022

Social Media



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- WG5
- Workshops

- The MW-Gaia COST Action will continue to 13 Sep 2023
- Activities for 2023 now being defined ... likely including a workshop focused on the Local Group
- Check the website for details of network activities
- Workshops at https://www.mw- gaia.org/participate/workshops/









MW-Gaia: Exchange Visits Short Term Science Missions (STSM) in "COST speak"

- STSMs provide funding for (primarily) early career investigators to visit another institution to carry out collaborative research
- Details of the procedure available at: https://www.mw-gaia.org/participate/stsm-visits/
 - All exchange visits for MW-Gaia Year 4 to complete by 30 Aug 2023
 - Applications now accepted at any time and reviewed at end of each month:
- Exchange visit idea originating at MW-Gaia workshops (such as this one!) will be viewed positively at the application evaluation stage.

ITC Conference grants provide support to those from ITC countries to attend conferences – see https://www.mw-gaia.org/participate/itc-grants/ for details





29 Sep 2022

Gaia – Beyond the Milky Way https://gaia2022.ia.forth.gr

