Emma Dodd

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Education

PhD - Kapteyn Institute, University of Groningen 2020–Current
Assembly history of the Milky Way using Gaia and spectroscopic surveys
Supervisor: Prof. Dr. Amina Helmi

MPhys, Lancaster University 2016–2020
Can we observe young globular clusters forming at high redshift?
Supervisor: Dr. David Sobral

Publications

[1] E. Balbinot, A. Helmi, T. Callingham, T. Matsuno, **E. Dodd**, and T. Ruiz-Lara, "Ed-2: A cold but not so narrow stellar stream crossing the solar neighbourhood", *arXiv preprint arXiv:2306.02756*, 2023.

[2] **E. Dodd**, T. M. Callingham, A. Helmi, T. Matsuno, T. Ruiz-Lara, E. Balbinot, and S. Lövdal, "The Gaia DR3 view of dynamical substructure in the stellar halo near the Sun", *arXiv e-prints*, arXiv:2206.11248, arXiv:2206.11248, Jun. 2022. arXiv: 2206.11248 [astro-ph.GA].

[3] **E. Dodd**, A. Helmi, and H. H. Koppelman, "Substructures, resonances, and debris streams. A new constraint on the inner shape of the Galactic dark halo",, vol. 659, A61, A61, Mar. 2022. arXiv: 2105.09957 [astro-ph.GA].

[4] S. S. Lövdal, T. Ruiz-Lara, H. H. Koppelman, T. Matsuno, **E. Dodd**, and A. Helmi, "Substructure in the stellar halo near the Sun. I. Data-driven clustering in integrals-of-motion space", *Astronomy & Astrophysics*, vol. 665, A57, A57, Sep. 2022. arXiv: 2201.02404 [astro-ph.GA].

[5] T. Matsuno, **E. Dodd**, H. H. Koppelman, A. Helmi, M. N. Ishigaki, W. Aoki, J. Zhao, Z. Yuan, and K. Hattori, "High-precision chemical abundances of Galactic building blocks. II. Revisiting the chemical distinctness of the Helmi streams",, vol. 665, A46, A46, Sep. 2022. arXiv: 2203.11808 [astro-ph.GA].

[6] T. Ruiz-Lara, T. Matsuno, S. S. Lövdal, A. Helmi, **E. Dodd**, and H. H. Koppelman, "Substructure in the stellar halo near the Sun. II. Characterisation of independent structures", *Astronomy & Astrophysics*, vol. 665, A58, A58, Sep. 2022. arXiv: 2201.02405 [astro-ph.GA].

[7] **Dodd, Emma**, H. Baker, H. Child, T. Harrison, M. Hodge, A. Hackett-Evans, and D. Sobral, "On the nature of globular and open clusters (goc): A study of m16, m67, m3 & m71", *Notices of Lancaster Astrophysics (NLUAstro)*, vol. 1, pp. 1–20, 2019.

Teaching

- **Teaching Assistant** at Kapteyn Institute, University of Groningen Spring 2021
  Numerical Methods
- **Teaching Assistant** at Kapteyn Institute, University of Groningen Spring 2022, 2023
  Physics of Galaxies

  Including assistance in the design of a computational project using galaxy data

Awards

- Ogden Trust Year 12 Physicist of the Year 2015
- Ogden Trust Undergraduate Science Scholarship 2016-2020
- Ogden Trust Intern of the Year 2017
- Research Academy Prize for Masters Thesis 2020
- DEX XVI Best Talk 2020
- MW-GAIA COST Action Grant 2023

Talks

- **Contributed talk** at University of Granada March 2023
- **Contributed lunch talk** at Kapteyn March 2023
- IIAUS 377: Early Disk-Galaxy Formation from JWST to the Milky Way **contributed talk** February 2023
- Kapteyn science day 2022 **contributed talk** December 2022
- Nova NW1 meeting 2022 **contributed talk** September 2022
- Towards Real-Time Galactic Dynamics, Lorentz Centre Leiden, **invited talk** July 2022
- EAS 2022, **contributed two posters** June 2022
- **Invited seminar** at Istanbul University March 2022
- Nova NW1 meeting 2021 **contributed talk** October 2021
- **Contributed lunch talk** at Kapteyn September 2021
- EAS 2021, **contributed poster** June 2021
- Galaxy cookies, informal **contributed talk** at Kapteyn November 2020
- DEX XVI **contributed talk** January 2020
- LEAPS **contributed talk** August 2018

Other Academic Activities

- **Chair and organisation of weekly lunch talks at the department** 2022 –Current
- **Young Minds Groningen:** secretary, now vice president, organise scientific and outreach events 2021 –Current
- **PI of ESO proposal** (0111.D-0263(A)) "Nature of accreted streams populating the local halo" UVES/VLT
- **Previous observing:** Joint PI of small survey with INT, 2 nights experience observing with INT 2018 –2022
- **Outreach:** Heavily involved with the XGAL outreach team during my undergraduate degree 2017 –2020

Languages and SOftware

- **Python** (including numpy, agama, vaex) : High level
- **Gadget Nbody:** Good level of experience

References

Available upon request.