Binary Stars in the Space Era

Conference schedule

Locations

Registration	Dorothy Hodgkin building foyer
Conference sessions	Dorothy Hodgkin room DH 0.51
Conference posters	Dorothy Hodgkin room DH 0.63
Refreshments	Dorothy Hodgkin room DH 0.08
Observatory visit	Keele Observatory
Organ concert	Keele Chapel
Accommodation check-in	Chancellors Building reception
Accommodation	Barnes Hall
Breakfast	Chancellor's Building
Lunch	Dorothy Hodgkin room DH 0.08
Dinner	Keele Hall Salvin Room and Old Library
Welcome barbecue	Keele Hall Italian Gardens
Conference dinner	Keele Hall Salvin Room and Old Library

Monday 30th June 2025

13:00 onwards	Check-in open for accommodation
13:00 – 19:00	Registration desk open
19:00 – 20:00	**Welcome barbecue**

Tuesday 1st July 2025

07:30 – 09:00	Breakfast
08:00 – 14:00	Registration desk open
09:00 – 10:35	Session 1
10:35 – 11:15	Refreshments
11:15 – 12:50	Session 2
12:50 – 14:00	Lunch
14:00 – 15:35	Session 3
15:35 – 16:15	Refreshments
16:15 – 18:00	Session 4
19:00 – 20:30	Evening buffet
20:30 – 22:00	**Observatory visit**
21:00 on	Socialising

Wednesday 2nd July 2025

07:30 – 09:00	Breakfast
09:00 – 10:35	Session 5
10:35 – 11:15	Refreshments
11:15 – 12:50	Session 6
12:50 – 14:00	Lunch
14:00 – 15:35	Session 7
15:35 – 16:15	Refreshments
16:15 – 18:00	Session 8
19:00 – 20:30	Evening buffet
20:30 – 21:30	**Organ concert** Nigel Morris (St Chad's Cathedral, Birmingham)
21:30 on	Socialising

Thursday 3rd July 2025

07:30 – 09:00	Breakfast
09:00 – 10:35	Session 9
10:35 – 11:15	Refreshments
11:15 – 12:50	Session 10
12:50 – 14:00	Lunch
14:00 – 15:35	Session 11
15:35 – 16:15	Refreshments
16:15 – 18:00	Session 12
19:00 – 20:30	**Conference dinner**
20:30 on	Socialising

Friday 4th July 2025

07:30 – 09:00	Breakfast
09:00 – 10:35	Session 13
10:35 – 11:15	Refreshments
11:15 – 12:50	Session 14
12:50 – 14:00	Lunch

Session schedule

Invited talks are 30 minutes long plus 5 minutes for questions.
Contributed talks are 15 minutes long plus 5 minutes for questions

Session 1: Space photometry and modelling binary systems

Tuesday 09:00
Session chair: Conny Aerts

09:00	Anna Meredith	Formal welcome
09:05	John Southworth	Conference introduction
09:40	Andrej Prša	Modelling binary systems
10:15	Marcin Wrona	PHOEBAI: Solving Hundreds of Thousands of Eclipsing Binary Light Curves with Deep Neural Networks

Session 2: Benchmark stars (1)

Tuesday 11:15
Session chair: Don Kurtz

11:15	Nikki Miller	Benchmark eclipsing binary stars
11:50	Yasmin Davis	Understanding M Dwarf Radius Inflation – Insights from Low Mass Eclipsing Binaries
12:10	Adam Stevenson	Single to double-lined: absolute dynamical SB1 masses with HRCCS
12:30	JJ Hermes	High-precision masses and ages of white dwarfs in wide binaries

Session 3: Astrometric binaries / Gaia (1)

Tuesday 14:00
Session chair: Pierre Maxted

14:00	Pierre Kervella	Perspectives on astrometry of binary stars with Gaia DR4 (and a little bit of interferometry)
14:35	Kareem El-Badry	Population modeling with Gaia astrometric binaries
14:55	Johanna Müller-Horn	In Search of the Invisible: Hunting for Dormant Black Holes with Gaia DR3
15:15	Pranav Nagarajan	Realistic predictions for Gaia black hole discoveries: comparing isolated binary and dynamical formation models

Session 4: Astrometric binaries / Gaia (2)

Tuesday 16:15
Session chair: Dominic Bowman

16:15	Henri Boffin	Revisiting symbiotic stars with interferometry and Gaia
16:35	Natsuko Yamaguchi	A forward model of Gaia's astrometric WD + MS binaries
16:55	Yi Lu	Calibrating asteroseismology scaling relation by interferometric observation on Gaia binaries
17:15	Ingrid Pelisoli	Characterising the population of binary white dwarf stars with astrometry, photometry and spectroscopy
17:35	Na'ama Hallakoun	Intermediate-Separation White-Dwarf Binaries in the Gaia Era
17:55		Poster pop-ups: P1–P15

Session 5: Binary formation

Wednesday 09:00
Session chair: Don Kurtz

09:00	Paul Clark	The formation of multiple stellar systems
09:35	Alex Kemp	Binary birth distributions through evolution back-tracing
09:55	Matthias Fabry	The evolution of W UMa contact binaries
10:15	Cheyanne Shariat	A Census of Massive Eclipsing Binaries in a Milky Way-like Galaxy

Session 6: Binary populations

Wednesday 11:15
Session chair: Paul Clark

11:15	Maxwell Moe	Populations and Formation Processes of Binary Stars
11:50	Tomer Shenar	Binarity at LOw Metallicity (BLOeM): An ESO/FLAMES monitoring of 1000 Massive Stars in the SMC
12:10	Jen Winters	Multiple Star Results for Nearby Mid-to-Late M Dwarfs from an All-Sky, High-Res Spectroscopic Program
12:30	Jenni French	Dwarfs of Fire and Ice: Studying irradiated white dwarf-brown dwarf binaries

Session 7: Binary evolution

Wednesday 14:00
Session chair: Andrej Prša

14:00	Elizabeth Stanway	The Uncertainties in Binary Star Evolution
14:35	Luca Sciarini	Chemical evolution of close binaries - tidally-enhanced or tidally-suppressed mixing?
14:55	Anna Francesca Pala	Population studies of accreting white dwarfs
15:15	Sophie Rosu	Apsidal Motion in (O-Star) Binaries: GENEC rotating binary models put to the k2-test

Session 8: Interacting binaries and mergers

Wednesday 16:15
Session chair: Kareem El-Badry

16:15	Koushik Sen	Interacting binaries and mergers
16:50	Ana Escorza	Stellar interactions, nucleosynthesis and pulsations as seen by binary-polluted stars
17:10	Tom Wagg	Assessing the impact of binary interactions on the timing and location of supernovae with cogsworth
17:30	Jaroslav Merc	Short-term variability of symbiotic binaries observed with TESS
17:50		Poster pop-ups: P16–P28

Session 9: Pulsations in binaries (1)

Thursday 09:00
Session chair: Andrew Tkachenko

09:00	Dominic Bowman	Asteroseismology of multiple systems: how binarity and pulsations go hand-in-hand for constraining stellar structure theory
09:35	Rahul Jayaraman	Tidally tilted and triaxial pulsators: what we think we know and what we would like to know
09:55	Ayush Moharana	Push, pull and pulse: Tidally perturbed Beta Cephei stars in eclipsing binaries
10:15	Federica Nardini	Tracing binary evolution with asteroseismology and spectroscopy of B stars in four Galactic open clusters

Session 10: Pulsations in binaries (2)

Thursday 11:15
Session chair: Max Moe

11:15	Kelly Hambleton Prša	Pulsations in binaries
11:50	Simon Murphy	Pulsation timing binaries in all-sky space photometry
12:10	Paul Beck	Sounding the treasure trove – Asteroseismology of solar-like oscillators and binaries systems
12:30	Jeppe Thomsen	KIC10001167: The prototype eclipsing binary for red giant seismology in the old in-situ Milky Way population

Session 11: Comparison to theoretical models

Thursday 14:00
Session chair: Gerald Handler

14:00	Poojan Agrawal	Binary Population Synthesis: Past, Present, and Future
14:35	Bethany Ludwig	Unveiling the hidden population of massive stars stripped in binaries with new UV photometry
14:55	Lisa Blomberg	Stripped stars in the Magellanic clouds: beyond the tip of the iceberg
15:15	Selma de Mink	Critical tests of Binary Physics with Space Mission Data of Post Interaction Binaries

Session 12: Looking forward to PLATO

Thursday 16:15
Session chair: Kelly Hambleton Prša

16:15	Andrew Tkachenko	From Telemetry to Discovery: PLATO Simulations for Binary Star Science
16:50	Hans Deeg	Expanding the Census and the Diversity of Circumbinary Planets with PLATO
17:10	Mohammad Farhat	Death and Dearth of Circumbinary Planets
17:30	Ganesh Pawar	Stability of light curve solutions for benchmark candidates in PLATO's LOPS2 field
17:50		Poster pop-ups: P29–P43

Session 13: Distance scale

Friday 09:00
Session chair: Kris Hełminiak

09:00	Darek Graczyk	Local distance scale with eclipsing binary stars
09:35	Thibault Merle	Exploring Spectroscopic Binaries: From SB9 to the 4MOST Large Survey
09:55	Michael Abdul-Masih	Improving the treatment of stellar distortions in spectroscopic and photometric studies
10:15	Alexios Liakos	Demographics and properties of delta Scuti stars in binary systems

Session 14: Benchmark stars (2)

Friday 11:15
Session chair: Nikki Miller

11:15	Kris Hełminiak	Detached eclipsing binaries and benchmark stars
11:50	Matthew Swayne	The Radius Inflation Problem in M-dwarfs - Insights from CHEOPS and TESS and a look to the future
12:10	Dominic Oddo	A catalogue of low-mass TESS M&M eclipsing binary orbital and physical properties
12:30	Emily Pass	Wide Binaries Elucidate Mid-to-Late M-Dwarf Spindown