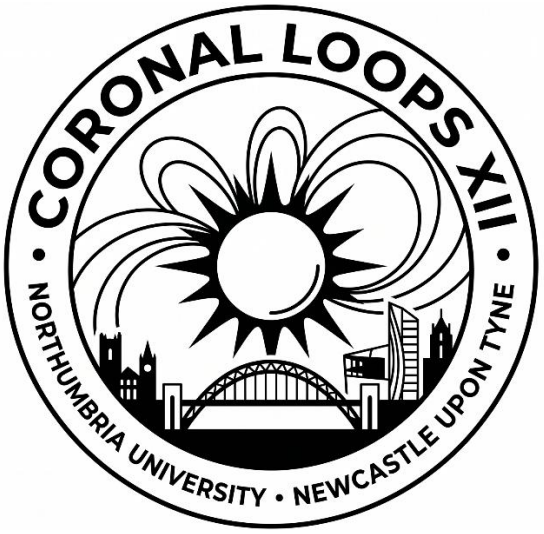
Coronal Loop Workshop XII (8-11 June 2026)

Northumbria University



Sessions

	Impulsive heating
	Science with solar observatories
	Magnetic and plasma processes in the corona
	Waves in magnetic structures
	Cool and hot plasmas

	Monday 8th June	
9:00-9:30	Welcome/Opening	
9:30-10:00	Craig Johnston (invited contribution) *"Self-Consistent Heating of the Magnetically Closed Solar Corona: Generation of Nanoflares, Thermodynamic Response of the Plasma and Observational Signatures"*	30 min
10:00-10:20	Will Barnes *"Evolution of Impulsive Heating in Active Region NOAA 12712"*	20 min
10:20-11:30	Coffee Break	
11:30-11:50	Joseph Plowman *"The Impulsive Coronal Heating Event Distribution of an Active Region From 3D Simulation of its Emission"*	20 min
11:50-12:10	Stephen Bradshaw *"Application of a multi-species NLTE modeling framework to impulsive coronal heating and the partition of energy among particle species"*	20 min
12:10-12:30	Alexander Russell *"Ion Temperatures in Solar Flares and Reconnection Heated Coronal Loops"*	20 min
12:30-14:00	Lunch	
14:00-14:20	Jack Reid *"Turbulent magnetic reconnection in braided coronal loops"*	20 min
14:20-14:40	Qihui Ming *"Distinct Regimes of Turbulent Reconnection: A New Trigger for Fast Coronal Energy Release?"*	20 min
14:40-15:00	Yajie Chen *"Heating and heat conduction in the transition region of coronal loops"*	20 min
15:00-16:00	Poster Session, Coffee Break	
16:00-16:30	Sarah Matthews (invited contribution) *"Solar-C science objectives"*	30 min
16:30-16:50	Ritesh Patel *"Solar Orbiter High Resolution Imager Reveals Unprecedented Fine-scale Structures in Solar Flare Ribbons in the Corona"*	20 min
16:50-17:10	Anna Rankin *"Exploring small-scale coronal loop structures using ultra high-resolution observations from Hi-C Flare"*	20 min
17:10-17:30	Open Discussion	
17:30-19:30	Welcome Drink	

	Tuesday 9th June	
9:00-9:30	Teodora Mihailescu (invited contribution) *"Hinode EIS Observations of Plasma Composition Evolution and Radiative Cooling of Solar Flare Loops"*	30 min
9:30-9:50	Jeffrey Reep *"Spatiotemporal Elemental Abundances in Coronal Loops"*	20 min
9:50-10:10	Paola Testa *"Non-Gaussian line profiles in IRIS full-disk Si IV observations, and where to find them"*	20 min
10:10-10:30	David Pontin *"Distribution of energy release events due to magnetic braiding in coronal loops"*	20 min
10:30-11:30	Coffee Break	
11:30-11:50	Erin Goldstraw *"Tearing instability evolution"*	20 min
11:50-12:10	Vadim Uritsky *"Coronal Loops are not Projected Veils"*	20 min
12:10-12:30	Stephane Regnier *"Revisiting the observed constant width of coronal loops with magnetic field extrapolations"*	20 min
12:30-14:00	Lunch	
14:00-14:30	Bablu Mandal (invited contribution) *"Spatio-Temporal Evolution of a Long-lived Supersonic Downflow above a Sunspot"*	30 min
14:30-14:50	Caroline Evans *"Understanding how Coronal Heating Affects Global Properties of the Low and Middle Corona"*	20 min
14:50-15:10	Thomas Howson *"The solar atmospheric response to coronal heating around magnetic null points"*	20 min
15:10-15:30	Ruhann Steyn *"Multi-wavelength response of the photosphere, chromosphere and corona to a C-class flare on 1 July 2012"*	20 min
15:30-16:30	Poster Session, Coffee Break	
16:30-17:00	Shanwlee Mondal (invited contribution) *"Deriving Coronal Heating Scaling Laws from 3D MHD Simulations"*	30 min
17:00-17:20	James Klimchuk *"A Fresh Look at Coronal Heating Scaling Laws"*	20 min
17:20-17:40	Fabio Reale *"MHD Coronal Loop Modeling and the Scaling of Loop Plasma Properties With the Ambient Magnetic Field"*	20 min
17:40-18:00	Open Discussion	

	Wednesday 10th June	
9:00-9:30	Rebecca Meadowcroft (invited contribution) *"Decay Lengths of Propagating Slow Waves in Coronal Fans with Simultaneous SDO/AIA and SolO/HRIEUV Observations"*	30 min
9:30-9:50	Tom van Doorsselaere *"MAD damping of slow waves as a seismological tool for probing the multi-thermal structure of coronal loops"*	20 min
9:50-10:10	Devesh Sharma *"Modelling Wave Dynamics of the Quiet Sun Atmosphere Driven by p-mode Oscillations"*	20 min
10:10-10:30	Hemanthi Miriyala *"Wave Propagation from Dynamic Spicules: A 3D Numerical Investigation with MUSE Diagnostics"*	20 min
10:30-11:30	Coffee Break – Photo	
11:30-11:50	Richard Morton *"Convective Origins of Alfvénic Waves in the Solar Atmosphere: Insights from DKIST"*	20 min
11:50-12:10	Ineke de Moortel *"The evolution of the coronal loop structure due to the phase mixing of high and low-frequency Alfvén waves"*	20 min
12:10-12:30	Hidetaka Kuniyoshi *"A self-consistent solar coronal heating model by Alfvénic waves"*	20 min
12:30-14:00	Lunch	
14:00-14:20	Luka Banovic *"Connecting coronal loops and kink wave heating: an analytical and numerical study"*	20 min
14:20-14:40	Hitesh Paliwal *"Sloshing Oscillations in coronal loops excited by successive M- and C-Class Flares"*	20 min
14:40-15:00	Konstantinos Karampelas *"Forward modelling MUSE observables of MHD waves in a coronal loop"*	20 min
15:00-16:00	Poster Session, Coffee Break	
16:00-16:30	Gabriele Cozzo (invited contribution) *"On the "cool" origin of nanojets"*	30 min
16:30-16:50	Patrick Antolin *"Compression, Impact and Hot Rebound Flows from Coronal Rain Downflows"*	20 min
16:50-17:10	Christopher Osborne *"Considering the Effects of Optically Thick Radiation in Cool Coronal Condensations"*	20 min
17:10-17:30	Open Discussion	
19:00-23:00	Conference Dinner at the Biscuit Factory	

	Thursday 11th June	
9:00-9:30	Bart de Pontieu (invited contribution) *"The Multi-slit Solar Explorer (MUSE)"*	30 min
9:30-9:50	Nicolas Le Nestour *"Study of thermal non-equilibrium in a 3D hydrodynamic simulation of an active region and comparison with EUV observables"*	20 min
9:50-10:10	Adrian Kelly *"Thermal instability in coronal loops: linking eigenvalue spectra to time-dependent evolution"*	20 min
10:10-10:30	Paolo Pagano *"MHD simulations of Nanojet with magnetic resistivity or viscosity"*	20 min
10:30-11:30	Coffee Break	
11:30-12:30	Summary and Discussion	
	led by Jim Klimchuk	
12:30-14:00	Lunch – End of meeting	

Posters

1. Gert Botha
   "Sunspot torsional oscillation"

2. Sherry Chhabra
   "Transition Region Treatment of 0D and 1D Simulations for Impulsively Heated Loops"

3. Cooper Downs
   "Magnetic Field Line Mappings and Field-Aligned Integrals as a Dimensionality-Reducing Tool to Analyze 3D Models of Coronal Heating and Loop Hydrodynamics"

4. Clara Froment
   "Thermal non-equilibrium cycles in a pseudo-streamer"

5. Erin Goldstraw
   "Energy subfluxes in Reduced MHD"

6. Hemanthi Miriyala
   "Resonant cavity effects on slow wave spectra in the sunspot corona"

7. Nicolas Poirier
   "High-order multi-fluid modelling of coronal loops: collision-mediated FIP fractionation of heavy elements"

8. Rashmi Sarwal
   "Wave Propagation in Horizontally Stratified Two-Layer Polytropic Model"

9. Sangat Sharma
   "Investigating spatio-temporal evolution of active region AR12740 using overlappogram inversion in Hinode/EIS slot data"

10. Khurram Shah
    "Wave-driven cross-field density transport in structured coronal-loop plasma"

11. Samuel Skirvin
    "Modelling Torsional Alfvén Waves in Coronal Waveguides"

12. Edris Tajfirouzeh
    "Spatially Coherent and Intermittent Alfvénic Fluctuations in Doppler Velocity of Polar Spicules from IRIS Observations"