

CONTACT	✉ m.zamyatina@exeter.ac.uk ✎ m_zamyatina 🌐 mzamyatina 🌐 mzamyatina.github.io		
ACADEMIC CAREER	Postdoctoral Research Fellow Department of Physics and Astronomy, University of Exeter Exeter, UK ■ Adapting LFRic to model atmospheres of hot Jupiters Postdoctoral Research Fellow Department of Physics and Astronomy, University of Exeter Exeter, UK ■ Modelling hot Jupiter atmospheric chemistry with the Met Office Unified Model	Apr 2022-now	Sep 2019-Apr 2022
EDUCATION	PhD in Environmental Sciences School of Environmental Sciences, University of East Anglia Norwich, UK Supervisors: Prof. Claire Reeves, Dr Paul Griffiths, Dr Marcus Köhler, Dr Mike Newland Thesis: Impacts of C ₁ -C ₃ alkyl nitrates on tropospheric ozone chemistry MSc in Climate Change with Distinction School of Environmental Sciences, University of East Anglia Norwich, UK Supervisor: Prof. Claire Reeves Thesis: Investigation of the relationship between tropospheric ozone production efficiency and carbon bond emissions Specialist Diploma in Meteorology Faculty of Geography, Lomonosov Moscow State University Moscow, Russia Supervisor: Prof. Alexander V. Kislov Thesis: Climatically-induced variations of the Caspian Sea level over the last Millennium	2015-2020	2014-2015 2009-2014
PUBLICATIONS	6. Taylor, J., Radica, M., Welbanks, L., MacDonald, R. J., et al. (incl. Zamyatina, M.) (2023). Awesome SOSS: atmospheric characterisation of WASP-96b using the JWST early release observations. MNRAS. 5. Radica, M., Welbanks, L., Espinoza, N., Taylor, J., et al. (incl. Zamyatina, M.) (2023). Awesome SOSS: transmission spectroscopy of WASP-96b with NIRISS/SOSS. MNRAS. 4. Zamyatina, M. , Hébrard, E., Drummond, B., Mayne, N. J., Manners, J., et al. (2023). Observability of signatures of transport-induced chemistry in clear atmospheres of hot gas giant exoplanets. MNRAS. 3. Ridgway, R. J., Zamyatina, M. , Mayne, N. J., Manners, J., Lambert, F. H., et al. (2023). 3D modelling of the impact of stellar activity on tidally locked terrestrial exoplanets: atmospheric composition and habitability. MNRAS. 2. Christie, D. A., Lee, E. K. H., Innes, H., Noti, P. A., et al. (incl. Zamyatina, M.) (2022). CAMEMBER: A Mini-Neptunes GCM Intercomparison, Protocol Version 1.0. A CUISINES Model Intercomparison Project. Planet. Sci. J. 1. Braam, M., Palmer, P. I., Decin, L., Ridgway, R. J., Zamyatina, M. , et al. (2022). Lightning-induced chemistry on tidally-locked Earth-like exoplanets. MNRAS.		
INVITED TALKS	Feb 2023 Atmospheric dynamics and chemistry on exoplanets University of Queensland (astronomy seminar) Brisbane, Australia University of Southern Queensland (exoplanet seminar) Brisbane, Australia University of New South Wales (astronomy seminar) Sydney, Australia Nov 2022 Observability of signatures of wind-driven chemistry in atmospheres of hot gas giants Celebrating JWST's first six months of exoplanet data Ringberg castle, Germany Oct 2022 Modelling chemistry of hot Jupiter atmospheres with the Met Office Unified Model Met Office Exeter, UK Feb 2022 Transport-induced quenching shapes transmission spectra of warm and hot Jupiters University of Warwick (astronomy seminar) virtual		
CONTRIBUTED TALKS	June 2021 Overview of the Met Office Unified Model adapted to simulate exoplanetary atmospheres Ariel consortium meeting virtual Apr, Sep 2021 3D simulations of warm and hot Jupiter atmospheres: the role of 3D mixing in shaping CH ₄ -to-CO conversion pathways EPSC conference virtual UKEXOM conference virtual University of Exeter (astronomy seminar) Exeter, UK		

Mar, Apr, Jun 2019	Impact of C ₁ -C ₃ alkyl nitrate chemistry on tropospheric ozone: box and global model perspectives University of Exeter (XCS seminar) Exeter, UK EGU conference Vienna, Austria University of East Anglia (AMB seminar) Norwich, UK	
Apr 2017	Adding new chemistry into UM-UKCA Cambridge-EnvEast doctoral alliance symposium Cambridge, UK	
Sep 2012	Assessment of climatological potential of transboundary air pollution transport in Eastern Siberia and the Russian Far East Air quality management at urban, regional and global scales 4th international symposium/IUAPPA regional conference Istanbul, Turkey	
POSTERS		
Sep 2022	Applying known chemical kinetics data to model atmospheres of extrasolar planets iCACGP-IGAC conference Manchester, UK	
Sep 2021	Local and global impacts of C ₁ -C ₃ alkyl nitrate photochemistry and emissions on tropospheric ozone IGAC conference virtual	
Sep 2018	Impact of alkyl nitrate chemistry on tropospheric ozone iCACGP-IGAC conference Takamatsu, Japan	
Mar, Apr 2018	Impact of C ₁ -C ₅ alkyl nitrate chemistry on tropospheric ozone - a box modelling study Cambridge-EnvEast doctoral alliance symposium Cambridge, UK; EGU conference Vienna, Austria	
AWARDS		
	2023 Above & Beyond Award	
	2022 EPSRC vacation internship (for 3 interns)	12893.55£
	2022 Jackson-Grime-Davies (JGD) research internship (for 1 intern)	2428.71£
	2021 IGAC Early Career Scientist poster prize & travel grant	1227.70£
	2015-2019 Lord Zuckerman studentship	112269.50£
	2014-2015 Simon Wharmby postgraduate scholarship	3000.00£
	2012 World Meteorological Organization travel grant	1154.10£
AWARDED OBSERVING TIME		
May 2023	Co-I JWST GO-3154 (PI: Eva-Maria Ahrer) ▪ Testing the C/O ratio prediction for hot Jupiters from disk-free migration	10.36 prime hours
May 2023	Co-I JWST GO-3838 (PI: James Kirk Co-PI: Eva-Maria Ahrer) ▪ Does atmospheric composition actually trace formation? Observing aligned vs misaligned hot Jupiters as a testbed	49.21 prime hours
May 2023	Co-I JWST GO-3969 (PI: Nestor Espinoza, Co-PI: Diana Powell) ▪ Hot Jupiter atmospheric forecast: Are mornings cloudier than evenings in other worlds?	61.53 prime hours
May 2023	Co-I JWST GO-4082 (PI: Michael Radica, Co-PI: Jake Taylor) ▪ Putting it all together: Dynamics and chemistry probed through transmission spectroscopy of a cloud-free exoplanet	6.69 prime hours
SUPERVISION	Primary supervisor and co-supervisor. Students who went on to do a PhD are marked with *.	
	PhD supervision (2)	
Sep 2023-now	Sophia Adams Thesis: TBD Co-supervisors: Prof. N. J. Mayne, TBD	
Nov 2020-May 2023	Robert J. Ridgway Thesis: Simulating the impact of stellar flares on the climate and habitability of terrestrial Earth-like exoplanets Co-supervisors: Prof. N. J. Mayne, Prof. F. H. Lambert, Dr. J. Manners	
	Undergraduate and summer internship supervision (4)	
Jun-Aug 2022	EPSRC-funded: <u>Harry Baskett</u> , <u>Ben Moore*</u> , <u>James McDermott*</u> ; JGD-funded: <u>Graig Lils</u> Project: 3D modelling of hot Saturn atmospheric chemistry	
TEACHING		
Jul 2023	Module leader Module: No place like home: placing Earth in its geological and astronomical contexts International sustainability summer school University of Exeter, Exeter, UK	
Jul 2022, Jul 2023	Lecturer Module: No place like home: placing Earth in its geological and astronomical contexts International sustainability summer school University of Exeter, Exeter, UK	
Sep 2021-Feb 2022	Associate Tutor	

		Modules: Experimental science, Frontiers in science University of Exeter Exeter, UK	
	Jan 2018	Instructor Module: Introduction to Python in environmental sciences University of East Anglia Norwich, UK	
	2015-2018	Associate Tutor Modules: Numerical skills for scientists, Atmospheric chemistry and global change, Atmospheric composition (measurements and modelling), Atmosphere & oceans I University of East Anglia Norwich, UK	
VOCATIONAL TRAINING	Mar 2023	Leadership training	
	Dec 2022	Interview training	
	Mar 2020	JWST proposal planning workshop	
	Apr 2016	NAME workshop	
	Jan 2016	Introduction to UKCA	
	Dec 2015	Introduction to Unified Model	
	Nov 2015	Introduction to Atmospheric Science	
	2015-2019	EnvEast Doctoral Training Programme	
ACADEMIC COMMUNITY		Organisation of scientific meetings	
	26-30 Jun 2023	Exoclimates VI conference (LOC member) University of Exeter Exeter, UK	~200 attendees
	22-24 Jun 2023	ExoSLAM school (LOC member) University of Exeter Exeter, UK	~50 attendees
	5-6 Dec 2022	BOWIE meeting [JWST proposal brainstorming] (co-organiser) University of Exeter Exeter, UK	17 attendees
	Sep 2017-Jun 2018	Atmospheric and Marine Biogeochemistry (AMB) seminars (co-organiser) University of East Anglia Norwich, UK	~20 attendees
		Reviewing Journals: The Astrophysical Journal	
OUTREACH			
	Nov 2015-Jun 2019	@AtmosChemUEA Twitter account (maintainer)	