2nd Round Projects in Light Grey

Student Number	Family Name	First Name	Project Title	1st Supervisor
201407904	McClue	Dylan	Nonlinear waves in plasmas	Adam Noble
201342797	Sloan	Sean	Design and simulation of a millimetre wave source based on a pseudospark produced electron beam	Adrian Cross
201449492	Glass	Helena	Grating magneto-optical trap modelling	Aidan Arnold
201427636	Quinn	Gary	Understanding how to exploit diamond in solid-state lasers	Alan Kemp
201342307	Boyle	Michael	Simulations of the Demonstration of Ionisation Cooling Experiment	Alan Young
201405003	Catto	Jamie	Helical waves in optical cavities for quantum communication	Alison Yao
201417738	Love	Callum	Nonlinear Propagation of Structured Light	Alison Yao
201430566	Kinanis	Alexandros	Quantum interference and boson sampler verification	Andrew Daley
201427767	O'Brien	Ciaran	Magnetic states with long-range interactions	Andrew Daley
201418784	Wade	Ewan	Photonic Neurons: Spiking information processing with lasers	Antonio Hurtado
201411298	Cannon	Rachel	Computing the inverse square law	Ben Hourahine
201445422	Daffurn	Andrew	Twisted Nanostructures	Ben Hourahine
201411148	Benson	Philippa	Simulations of magnetic turbulence in plasma	Bengt Eliasson
201409979	Moir	Connor	Stochastic Particle Heating of Charged Particles by Plasma Waves	Bengt Eliasson
201416431	McCrory	Kieran	Ion Channel Laser with Large Oscillation Amplitude	Bernhard Ersfeld
201411873	Campbell	David	Monte Carlo Modelling of Particle Beam-Matter Interaction	Bernhard Hidding
201427385	Kelly	Ellis	Electron beam physics and transport modelling	Bernhard Hidding
201449531	McWilliam	Allan	Space Radiation Reproduction and Testing	Bernhard Hidding
201449450	Rutherford	Lorne	Space Radiation Reproduction and Testing	Bernhard Hidding
201424905	Anderson	Stewart	The theory of X-ray Free electron Lasers	Brian McNeil
201425202	Brown	James	The scientific applications of X-ray Free Electron Lasers	Brian McNeil
201449400	McCourt	Declan	Computational Modelling of X-ray Free Electron Lasers	Brian McNeil
201547258	Burns	Elise	Investigation of Polytypism in nitride semiconductors	Carol Trager-Cowan
201413556	Waters	Dale	Investigation of Polytypism in nitride semiconductors	Carol Trager-Cowan
201449353	Geddes	Daniel	Acquisition, Pointing, and Tracking for CubeSat QKD	Daniel Oi
201410439	Reddie	Grant	Gravity Gradiometry with Satellite Constellations	Daniel Oi
201516427	McQueen	Christopher	Radiation Reaction	Dino Jaroszynski
201617005	Thiagaraja	Anujan	Nonlinear Vacuum Electrodynamics	Dino Jaroszynski
201425618	Ballantyne	Calum	Implementation and characterization of optical lattice potentials for ultracold atoms	Elmar Haller
201441884	Twaddle	William	Design and Construction of a Fabry-Perot Scanning Interferometer	Elmar Haller

201344480	Archibald	Stuart	Parametric difference resonance in lasers	Francesco Papoff
201306288	McCormack	Robbie	Using angular momentum of light to detect particles in fluids	Francesco Papoff
201420553	Cuthbertson	Stuart	Moving a standing wave with an electronically controlled piezo-mirror device	Gail McConnell
201404591	Irwin	Edward	Making light-sheets for microscopy and mesoscopy	Gail McConnell
201316788	Percival	John	Quantification and measurement of marine microbial populations using the Mesolens	Gail McConnell
201238485	Carroll	Mark	Opto-mechanics of Bose-Einstein Condensates in Optical Cavities	Gian-Luca Oppo
201448886	Ferguson	Alistair	Cold Atom-Light Interactions	Gordon Robb
201313764	Smith	Cameron	Interactive Physics Simulations	Gordon Robb
201747337	Vandeville	Victor	Four-wave Mixing in Atomic Gases	Gordon Robb
201424913	Anderson	Steven	Quantum applications of Semiconductor Disk Lasers	Jennifer Hastie
201449468	Salmond	Ben	Colour stability of LEDs from the red to the UV	Jochen Bruckbauer
201404607	Reid	Michael	Creation and control of continuous-mode optical superposition qubits	John Jeffers
201417568	Preston	Jack	Long range entanglement in a hybrid atom-superconductor quantum processor	Jonathan Pritchard
201449557	Scott	Philip	Neurophotonic Systems for Interfacing with the Retina	Keith Mathieson
201313756	Graham	Stuart	Phosphorescence of glowstones™	Kevin O'Donnell
201314451	Taylor	Ahna	Hysteretic Photochromic Switching (HPS) of europium-magnesium (Eu-Mg) defects in GaN	Kevin O'Donnell
201426525	Webster	David	RE-doped III-nitrides for solid state lighting applications	Kevin O'Donnell
201318162	Galbraith	Connor	Numerical simulation of cyclotron maser amplifiers	Kevin Ronald
201516401	Wilson	Kieran	Simulation of Langmuir probes and sheaths in plasma	Kevin Ronald
201411203	Brown	Josh	Floquet theory for trapped atoms in optical lattices.	Luca Tagliacozzo
201444442	Bintener	Tom	Quantifying the resources of global quantum evolutions and measurements	Marco Piani
201424492	Lavan	Declan	Distinguishability of quantum states	Marco Piani
201422521	Bruce	Emily	Medical Radioisotope Production using a Laser-Plasma Wakefield Accelerator	Mark Wiggins
201415689	Bommer	Sean	Development of a highly accurate alignment process for multi-stage laser lithography	Michael Strain
201426973	Doak	Elliot	A Physical Investigation of Protein-drug Binding	Neil Hunt
201502488	O'Hare	Dawn	Uncovering the Early Stages of Protein Folding	Neil Hunt
201342315	Brodie	Seoras	Atomic Processes for Astrophysical Plasmas	Nigel Badnell
201449426	McLafferty	Sam	Nonlinear Optical Loop Mirrors Based on 3 X 3 fibre optic couplers	Nigel Langford
201447628	Stevenson	Jack	Investigation of multi-modal flex-tentional transducers	Nigel Langford
201410697	Hamilton	Julie	Pathological modifications in proteins detected by their intrinsic fluorescence	Olaf Rolinski
201415493	Jackson	James	Quantum Dots TBC	Olaf Rolinski

201412851	Maclure	Daniel	Pathological modifications in proteins detected by their intrinsic fluorescence	Olaf Rolinski
201509008	Lesniewska	Magdalena	Large scale lattice-Boltzmann simulation of colloid-liquid crystal composite materials	Oliver Henrich
201409962	McCallum	Jake	Signal processing for Atomic Magnetometry	Paul Griffin
201427270	McLaughlin	Sean	Grating Magneto-Optical Trap experiments	Paul Griffin
201418425	Steven	Rachael	A Polarisation Analyser for Quantum Optics Experiments	Paul Griffin
201438661	Valk	Jilles	Modelling relativistic electron motion in spatially varying intense laser fields	Paul McKenna
201424484	Williamson	Murray	High power laser-driven X-ray sources in dense plasma	Paul McKenna
201449311	Earle	Alasdair	Investigating non-ideal behaviour in current-voltage curves from GaN-based LEDs	Robert Martin
201419625	Highton	Jennifer	An ultrafast, time-resolving ion spectrometer as a diagnostic of intense laser-plasma dynamics	Ross Gray
201425105	Hunter	Daniel	Intense Laser Pulse Filamentation in Near Critical Density Plasmas	Ross Gray
201449565	Jordan	Brian	Three-Dimensional Single-Molecule Based Super-Resolution Imaging	Sebastian van de Linde
201348337	Clarkson	Scott	Design and Measurement of a Mode Converter for a Microwave Amplifier	Wenlong He
201407961	MacDonald	Louise	Design of a Brewster Window for a W-band Gyro-TWA	Wenlong He
201449573	McFarlane	Mollie	mRNA nanoparticles for cancer detection	Yu Chen
201401402	MacLean	Cameron	Plasma optical modulators for intense lasers	Zhengming Sheng