

Jaime Dawson

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born in Solihull, UK, 24/01/1977

My research career began with the search for Dark Matter - one of the most intriguing challenges common to astrophysics and particle physics. With now an education in the techniques of low background physics and rare event searches, I began my foray into the fundamental question of the neutrino identity via the search for neutrinoless double beta decay. Then I moved naturally to my current research interest: neutrino oscillation and neutrino mixing properties; first, contributing to the experiment Double Chooz and more recently DUNE. Having worked in the past on dual phase xenon detectors (for Dark Matter searches), I am particularly interested in the use of liquid argon for the giant far detectors of DUNE. I participate to the prototyping effort on protoDUNE Dual-Phase and am currently interested in the development of the readout for the Si-PM photodetectors for the Vertical Drift detector.

Curriculum Vitae

Education

- 1999–2003 Ph.D. title: ZEPLIN III: A Two-Phase Xenon WIMP Detector
Imperial College London.
Thesis director: Prof. Timothy J. Sumner.
Jury: Prof. J. Hough, Prof. J. M. Pendlebury.
- 1995–1999 M.Sci. Astrophysics, First Class, University College London.

Experience

- 2012–today CNRS Chargé de Recherche at laboratoire AstroParticule et Cosmologie.
Neutrinos - projects Double Chooz and DUNE
- 2008–2012 Postdoctoral Researcher at laboratoire AstroParticule et Cosmologie.
Double Chooz, reactor neutrino oscillation experiment.
- 2005–2008 Postdoctoral Researcher at University of Sussex (UK).
COBRA: neutrinoless double beta decay experiment.
- 2003–2005 Postdoctoral Researcher at Imperial College London.
ZEPLIN III: Direct Dark Matter experiment

DUNE - [2008 - today]

- co-convenor Dual-Phase analysis group (with V. Galymov).
- Responsible for the Light Read Out electronics for the Dual Phase detector (with T. Patzak, B. Courty and D. Nitta). Co-author of electronics chapter in Dual-Phase volume of DUNE TDR.

Double Chooz - [2008 - 2020]

- Very active in the Data Acquisition and Electronics groups. Co-ordinator of electronics group.
- Development and responsibility for DAQ system
- Responsible for electronics installation and co-responsible for Near Detector commissioning and Far Detector upgrades.

COBRA - [2005 - 2008]

- Coordinateur of R&D on CdZnTe (CZT) semi-conductors within collaboration
- Responsible for COBRA laboratories at University of Sussex and in underground laboratory at Gran Sasso (LNGS).
- Heavily involved in construction, delivery, installation and maintenance of COBRA experiment at LNGS.

ZEPLIN III - [1999-2005]

- Conception and construction of major parts of the experiment.
- Responsible for detector thermal control, trigger electronics, data analysis and slow control.
- Dual Phase (liquid and gas) detector simulations.
- Prediction via simulation of sensitivity to WIMP Dark Matter.

Teaching

I have been involved in undergraduate teaching from 2001 to the present; as a laboratory demonstrator for all undergraduate years, as a course assistant teaching in workshop classes, and as a supervisor for undergraduate and postgraduate projects. I have experience with organising and lecturing undergraduate courses, having lectured Nuclear and Particle Physics to 3rd year undergraduates and postgraduates. I was also a substitute lecturer for an undergraduate Electromagnetism course. I provide support and assistance to the PhD students within my research groups and collaboration etc.

2020	Thesis jury member: Jean-Phillipe Zapounidis Sorbonne université (LPNHE)
2019 - 2020	Co-supervisor: Ph.D R. Bajou (HDR A. Tonazzo)
2019	Supervision of 2 masters students NPAC M2 mini-stage
2019	Supervision of internship of NPAC Master student R. Bajou
2019	Thesis jury member: Olivier Volcy Université Paris-Saclay (LLR)
2019	Thesis jury member: Laura Bernard Université Grenoble Alpes (LPSC)
2018	Supervision of 2 masters students NPAC M2 mini-stage
2018	Thesis jury member: Anne Chappuis Université Grenoble Alpes (LAPP)
2018	Supervision of NPAC M1 Masters student
2017	Thesis jury member: Thibaud Le Noblet Université Grenoble Alpes (LAPP)
2017	Thesis jury member: Julia Casaneuva Université Paris-Saclay (LAL)
2014-2017	Thesis following committee (suivi d'étudiant) for Thibaut Houdy
2014	Supervisor of u/g (equivalent L3)
2013-2016	Supervisor Ph.D. Adrien Hourlier
2013	Supervisor master student project NPAC M2
2013	Supervisor u/g (equivalent L3)

Organisation/Administration

2016-present	Member of comité nationale (CoNRS Section 01)
2015-2018	Head of Neutrino group (APC)
2014-2017	Member of Laboratory Council (APC)
2014	Member of Local Organising Committee for conference NNN2014
2012-2015	Deputy-head of Neutrino group (APC)
2010-2012	Neutrino group Seminar organiser (APC)

Expertise

2019	Member of jury for Physics Tournament FPT2019
2018	Research proposal reviewer
2018	participated in writing of 'IN2P3 contribution for the update of European Strategy for Particle Physics' (P. Verdier)
2017	Selection panel for university lecturer (29MCF666)

Other Skills

Programming in ADA, C++, HTML, Bash, Fortran et Labview.
Firmware programming, VHDL et Quartus (Altera).

Knowledge of O/S Linux et bus VME.
Qualification Maître de Conférence 2009.

Conferences and Seminaires

- 2019 EPSHEP2019 (Ghent Belgique) - presentation on DUNE
- 2019 RAL (UK) - seminar on DUNE et protoDUNE Dual-Phase
- 2018 TPC2018 (Paris) - presentation on Liquid Argon TPC protoDUNE Dual-Phase
- 2017 NNN2017 (Warwick UK) - presentation on Double Chooz results
- 2017 University of Lancaster (UK) - seminar on Double Chooz
- 2016 Neutrino2016 (London) - poster on the liquid argon TPC ProtoDUNE Dual-Phase
- 2014 ANT2014 (Los Angeles) - presentation on a novel neutrino detector (Organic Liquid TPC)
- 2014 SUSY2014 (Manchester) - reactor experiment overview
- 2012 GANIL (CAEN) - seminar Double Chooz
- 2012 LAL (Paris) - seminar Double Chooz
- 2011 Rencontres de Physique (La Thuile) - presentation Double Chooz
- 2011 CPPM (Marseille) - seminar Double Chooz
- 2011 IPNL (Lyon) - seminar Double Chooz
- 2011 LPC (Clermont) - seminar Double Chooz