

Open University

Partner contact person: [N. J. Mason](#)

Profile: The Open University hosts one of the UK's largest astronomy, space and planetary science research groups with over 100 academic and research staff based in its Centre for Earth, Planetary, Space and Astronomy Research (CEPSAR). The staff playing a leading role in several of Europe's and NASA's space missions and as such are a major user of atomic and molecular data. In 2004 the atomic, molecular and plasma (AMP) physics research group was established to support CEPSAR based research through a fundamental research programme to generate atomic and molecular data. Led by Professor N. J. Mason the AMP group studies the interaction of electron interactions with atom and molecules group and photoabsorption cross sections of molecular systems both in the gas and condensed phase. Such data is being compiled into data repositories for use in astrochemistry and plasma processing models, the latter in collaboration with Quantemol, a spin off company with one of the other partners (UCL). The OU AMP group is recognised as international experts in the assessment of both electron interaction databases and photoabsorption cross section data.

Role of OU in Project: The OU will lead WP2 establishing the Policies and Strategy reviews that will lead to the preparation and dissemination of the SUP@VAMDC roadmap. The OU will therefore chair the WP2 Board. The OU will also be responsible for SUP@VAMDC's engagement with new partners including publishers. N J Mason will also act as the Deputy coordinator and Chair of the Executive Project Team (EPT). OU will host the last Annual Meeting and all the related satellites meetings; OU will organise meetings as indicated on GANTT charts (PERT diagrams) and in section 2.3.

Key persons:

N. J. Mason, Professor of Molecular Physics

Expertise: He is a leading member of the Framework VII I3 programme for planetary Science 'Europlanet' which includes the development of the Integrated Data Information Service (IDIS). IDIS will provide a comprehensive data base for planetary and space science including spectroscopic and collisional cross section data. The OU AMP Research group has led several major EU research collaborations including the Electron Induced Processing At the Molecular Level (EIPAM) network, the Electron and Positron Induced Chemistry (EPIC) - a Framework VI Initial training Network. N J Mason is currently co-chair of the COST Electron Controlled Chemical Lithography Network (ECCL) and Ion Beam Cancer Therapy (IBCT) programmes and Chair of the COST action on Astrochemistry that have brought together the EU's leading research groups to coordinate ERA research in these areas, all of which require development of atomic and molecular databases. He also leads the EU Japan research network on plasma processing bringing together academic researchers with data users in the plasma and semiconductor industries and is a Board member of Quantemol a SME delivering scattering calculations relevant to study of plasma processes. He is currently co-chair of the Framework VII ITN programme Lassie dedicated to the training of younger researchers in surface processes relevant to Astrochemistry and the forthcoming (2012) PIMMS ITN exploiting proton transfer mass spectrometry in detection of volatile species with applications in environmental Science, security, food science and medicine . The AMP group is also a member of the UK and EU ITER Fusion research programmes, perhaps the largest user of atomic and molecular data in the ERA. He is a founder member of the VAMDC e-infrastructure with responsibility for outreach and engagement with A&M data users and provider.

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