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The Virtual Atomic and Molecular Data Centre (VAMDC)

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Abstract content
 (Max 300 words)

Atomic and molecular data are used in many diverse areas of scientific research and industrial development. Each area has developed its own specialized data repositories and protocols for accessing these data. Often, users from one area are not aware of results produced by other groups, which can lead to duplication of effort in generating data.

The Virtual Atomic and Molecular Data Centre (VAMDC) is a European Union Framework 7 funded programme that has built a common electronic infrastructure for the exchange and distribution of a range of diverse atomic and molecular databases using a standard protocol via a single portal. Therefore, the effort expended by users in searching for and retrieving data is minimized.

VAMDC includes access to the Vienna Atomic Line Database (VALD-3), Cologne Database for Molecular Spectroscopy (CDMS), the UMIST database for astrochemistry, CHIANTI, and BASECOL. Data provided includes central wavelengths, energy levels, statistical weights, transition probabilities, electron and proton collision rates and line broadening parameters. Because a number of different databases are interrogated by VAMDC, the reliability and accuracy of data can be assessed.

The presentation will illustrate how to use the VAMDC tools to extract atomic and molecular data from the various databases.

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no

Level for award
 (Hons, MSc,
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n/a

Main supervisor (name and email)
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yes

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