

# Virtual Atomic and Molecular Data Centre: An interoperable infrastructure

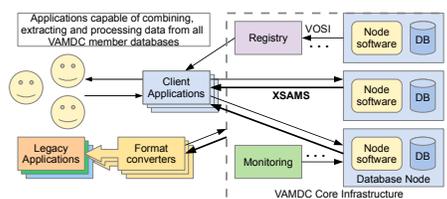
M.L. Dubernet<sup>a</sup> on behalf of VAMDC Collaboration<sup>b</sup>

<sup>a</sup>LPMAA, UMR7092, Université Pierre et Marie Curie, Case 76, 4 Place Jussieu, 75252 Paris, France  
and LUTH, Observatoire de Paris, 5 Place Janssen, 92192 Meudon, France

<sup>b</sup> see reference [1, 2, 3]

The Virtual Atomic and Molecular Data Centre (VAMDC, <http://www.vamdc.eu>) is an international Consortium that combines the expertise of existing Atomic and Molecular (A&M) databases, data producers and service providers with the specific aim of creating an interoperable e-science infrastructure that is easily tuned to the requirements of a wide variety of users in academic, governmental, industrial or public communities. It has started thanks to a major European initiative (FP7 ERA funding) with the aim to build a unified, secure, documented, flexible and interoperable e-science environment-based interface to existing A&M data. The VAMDC defines standards for the exchange of atomic and molecular data, develop reference implementation of those standards, deploys registries of internet resources (“yellow pages”), designs user applications in order to meet the user needs, builds data access layers above databases to provide unified outputs from these databases, cares about asynchronous queries with workflows and connects its infrastructure to the grid.

The paper describes the current ‘Level 3’ service deployment of the VAMDC data infrastructure across



our 20 databases.

Note: The VAMDC satellite meeting (<http://physics.nist.gov/Icamdata/index.php?view=meetings>) will expose VAMDC to the US community and vice versa and will aim to initiate collaborations between database providers and users with VAMDC.

## Acknowledgements

VAMDC is funded under the "Combination of Collaborative Projects and Coordination and Support Actions" Funding Scheme of EU-FP7 Program, call topic INFRA-2008-1.2.2 Scientific Data Infrastructure and Grant Agreement number 239108.

## References

1. M.L. Dubernet, V. Boudon, J.L. Culhane, et al. 2010, J. Quant. Spec. Radiat. Transf., 111, 2151
2. G. Rixon, M.L. Dubernet and VAMDC Consortium, in American Institute of Physics Conference Series, Vol. 1344, ed. A. Bernotas, R. Karazija, & Z. Rudzikas, 107–115