

Accepted Manuscript

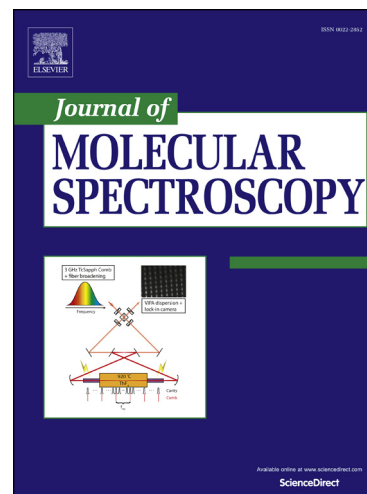
New model for datasets citation and extraction reproducibility in VAMDC

Carlo Maria Zwölf, Nicolas Moreau, Marie-Lise Dubernet

PII: S0022-2852(16)30061-3
DOI: <http://dx.doi.org/10.1016/j.jms.2016.04.009>
Reference: YJMSP 10709

To appear in: *Journal of Molecular Spectroscopy*

Received Date: 18 January 2016
Revised Date: 22 March 2016
Accepted Date: 18 April 2016



Please cite this article as: C.M. Zwölf, N. Moreau, M-L. Dubernet, New model for datasets citation and extraction reproducibility in VAMDC, *Journal of Molecular Spectroscopy* (2016), doi: <http://dx.doi.org/10.1016/j.jms.2016.04.009>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

New model for datasets citation and extraction reproducibility in VAMDC*.

Carlo Maria Zwölf^{a,1,*}, Nicolas Moreau^{a,1}, Marie-Lise Dubernet^{a,1}

^a*LERMA, Observatoire de Paris, PSL Research University, CNRS, Sorbonne University,
UPMC Univ Paris 06, 5 Place Janssen, 92190 Meudon, France*

Abstract

In this paper we present a new paradigm for the identification of datasets extracted from the Virtual Atomic and Molecular Data Centre (VAMDC) e-science infrastructure. Such identification includes information on the origin and version of the datasets, references associated to individual data in the datasets, as well as timestamps linked to the extraction procedure. This paradigm is described through the modifications of the language used to exchange data within the VAMDC and through the services that will implement those modifications. This new paradigm should enforce traceability of datasets, favor reproducibility of datasets extraction, and facilitate the systematic citation of the authors having originally measured and/or calculated the extracted atomic and molecular data.

Keywords: database, data citation, atomic data, molecular data

1. Introduction

Atomic and Molecular Data Providers are often at the forefront in defining new paradigms for the dissemination of their data to the scientific community:

Since the second half of 1990s, with the spread of the Internet, some historical databases such as VALD [Piskunov et al. (1995)], HITRAN [Rothman (1983), Rothman et al. (2013)], the Submillimeter, millimeter and microwave spectral line catalog (so-called JPL Catalogue) [Pickett et al. (1998)], CDMS

*<http://www.vamdc.org>

*corresponding author: carlo-maria.zwolf@obspm.fr

¹Paris Astronomical Data Centre

Download English Version:

<https://daneshyari.com/en/article/5414208>

Download Persian Version:

<https://daneshyari.com/article/5414208>

[Daneshyari.com](https://daneshyari.com)