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Title	VizieR Online Data Catalog: L1157-B1 DCN (2-1) and H13CN (2-1) datacubes (Busquet+, 2017)
Authors	Busquet, G.; Fontani, F.; Viti, S.; CODELLA, CLAUDIO; Lefloch, B.; et al.
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Handle	http://hdl.handle.net/20.500.12386/27383
Journal	VizieR Online Data Catalog



Portal Simbad Vizier Aladin X-Match Other Help

J/A+A/604/A20 L1157-B1 DCN (2-1) and H¹³CN (2-1) datacubes (Busquet+, 2017)

The L1157-B1 astrochemical laboratory: testing the origin of DCN.

Busquet, G., Fontani, F., Viti, S., Codella, C., Lefloch, B.,
Benedettini, M., Ceccarellli, C.

<Astron. Astrophys. 604, A20 (2017)>

=[2017A&A...604A..20B](#) (SIMBAD/NED BibCode)

ADC_Keywords: YSOs ; Interstellar medium ; Radio lines ;
Spectra, millimetric/submm

Keywords: ISM: jets and outflows - ISM: molecules - ISM: abundances -
stars: formation

Abstract:

We performed high-angular-resolution observations toward L1157-B1 with the IRAM NOEMA interferometer of the DCN (2-1) and H¹³CN (2-1) lines to compute the deuterated fraction, $D_{\text{frac}}(\text{HCN})$, and compare it with previously reported D_{frac} of other molecular species. Our aim is to observationally investigate the role of the different chemical processes at work that lead to formation of the DCN and compare it with HDCO, the two deuterated molecules imaged with an interferometer, and test the predictions of the chemical models for their formation.

Description:

IRAM NOEMA observations of DCN(2-1) and H¹³CN(2-1) toward the brightest bow-shock B1 of the L1157 molecular outflow. All data cubes are provided in fits format smoothed to a velocity resolution of 0.5km/s.

Objects:

```
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RA      (2000)  DE      Designation(s)
-----
20 39 10.2   +68 01 10.5   L1157-B1 = [DE95] LDN 1157-B1
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```

File Summary:

FileName	Lrecl	Records	Explanations
ReadMe	80	.	This file
list.dat	98	2	List of data cubes

fits/* 0 2 Individual data cubes

Byte-by-byte Description of file: [list.dat](#)

Bytes	Format	Units	Label	Explanations
1- 9	F9.5	deg	RAdeg	Right Ascension of center (J2000)
10- 18	F9.5	deg	DEdeg	Declination of center (J2000)
20- 22	I3	---	Nx	Number of pixels along X-axis
24- 26	I3	---	Ny	Number of pixels along Y-axis
28- 30	I3	---	Nz	Number of pixels along Z-axis
32- 36	F5.1	km/s	bVRAD	Lower value of VRAD interval
38- 41	F4.1	km/s	BVRAD	Upper value of VRAD interval
43- 45	F3.1	km/s	dVRAD	VRAD resolution
47- 51	I5	Kibyte	size	Size of FITS file
53- 74	A22	---	FileName	Name of FITS file, in subdirectory fits
76- 98	A23	---	Title	Title of the FITS file

Acknowledgements:

Gemma Busquet, busquet(at)ice.cat

(End)

Patricia Vannier [CDS] 30-Jun-2017

The document above follows the rules of the [Standard Description for Astronomical Catalogues](#); from this documentation it is possible to generate `f77` program to load files [into arrays](#) or [line by line](#)

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