

LETTER TO THE EDITOR

Discovery of HC_3O^+ in space: The chemistry of O-bearing species in TMC-1[★] (Corrigendum)

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Key words. astrochemistry – ISM: molecules – ISM: individual objects: TMC-1 – line: identification – molecular data – errata, addenda

Table 1 of the paper “Discovery of HC_3O^+ : The chemistry of O-bearing species in TMC-1” contains two typographical errors. The correct values are given in Table 1 of this corrigendum. Also, the units of the derived distortion constant have to be corrected. The value derived from the astronomical observations is $D = 0.5106 \pm 0.0047$ kHz, and the one obtained from the merged fit to the laboratory and astronomical data is $D = 0.5064 \pm 0.0030$ kHz.

Table 1. Observed line parameters for the new molecule in TMC-1.

$J_u - J_l$	ν_{obs} ^(a) (MHz)	$\nu_o - \nu_c$ ^(b) (kHz)	$\int T_A^* dv$ ^(c) (mK km s ⁻¹)	$\Delta\nu$ ^(d) (km s ⁻¹)	T_A^* (mK)
4–3	35684.590	0.6	9.1 ± 0.5	0.63 ± 0.03	13.8
5–4	44605.648	+4.4	10.7 ± 0.6	0.45 ± 0.03	22.5
10–9	89209.744	-11.3	6.4 ± 1.0	0.44 ± 0.09	13.8
11–10	98130.267	8.0	2.4 ± 0.7	0.40 ± 0.10	5.8

Notes. ^(a)Observed frequencies adopting a v_{LSR} of 5.83 km s⁻¹ for TMC-1. The uncertainty is 10 kHz for all the lines. ^(b)Observed minus calculated frequencies in kilohertz. ^(c)Integrated line intensity in mK km s⁻¹. ^(d)Line width at half intensity derived by fitting a Gaussian line profile to the observed transitions (in km s⁻¹).

* Based on observations carried out with the Yebes 40 m telescope (projects 19A003 and 20A014) and the Institut de Radioastronomie Millimétrique (IRAM) 30 m telescope. The 40 m radio telescope at Yebes Observatory is operated by the Spanish Geographic Institute (IGN, Ministerio de Transportes, Movilidad y Agenda Urbana); IRAM is supported by INSU/CNRS (France), MPG (Germany), and IGN (Spain).