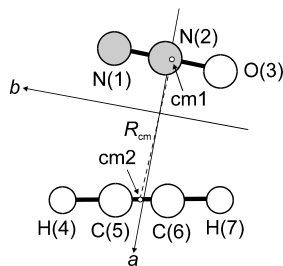


222 **C₂H₂N₂O** **Acetylene – dinitrogen monoxide (1/1)** **C_s**
 MW Ethyne – dinitrogen monoxide (1/1) (effective symmetry class)
 (weakly bound complex) (large-amplitude motion)
 HC≡CH · N₂O

r_0	Å	θ_0	deg
R_{cm}	3.2961(8)	N(2)–cm1...cm2 ^{a)}	93.9(5)
		cm1...cm2–C(6) ^{a)}	80.3(8)

Atom	a_0 [Å]	b_0 [Å]
N(1)	–1.311	1.194
N(2)	–1.230	0.071
O(3)	–1.145	–1.117
cm1 ^{a)}	–1.225	–0.004
H(4)	2.346	1.646
C(5)	2.171	0.600
C(6)	1.972	–0.587
H(7)	1.796	–1.633
cm2 ^{a)}	2.071	0.006



The monomers have a planar, nearly parallel orientation. They deviate from parallel by 13.6°, and the tilt moves the oxygen end of the N₂O closer to the acetylene.

^{a)} cm1 and cm2 denote the centers of mass of the nitrous oxide and the acetylene, respectively.

Peebles, R.A., Peebles, S.A., Kuczkowski, R.L., Leung, H.O.: J. Phys. Chem. A **103** (1999) 10813.

See also: Leung, H.O.: J. Chem. Phys. **107** (1997) 2232.

[II/25B\(3, 614\)](#)