pi	nu 0	e	h bar	m sub e	a0	c	mp
3.1415927E+00	1.2566371E-06	1.6021892E-19	1.0545888E-34	9.1095345E-31	5.2917706E-11	2.9979246E+08	1.6726486E-27
	epsilon 0	uB	eV/cm^-1		aH		md
	8.8541878270E-12	9.27400949E-24	0.000123985		5.29465E-11		3.3435860E-27
			re	r C	aD		
			1.087 Å	1.20654	5.29321E-11		
a (m)	b (m)	c' (m)	2c' (m)	eccentricity	R of sp3		
8.59066E-11	6.59492E-11	5.50514E-11	1.10103E-10	0.64083	0.91771		
1.62340	1.24626	1.04032	2.08064				
0.91771432							
3.67085728							
0.666666667							
	Ve (eV)	Vp (eV)	T (eV)	Vm (eV)	Et (eV)	E of sp3	
Evib CH4 (cm^-1)	-145.86691	52.31390	44.92637	-22.46318	-85.72472	14.63489	
2865.86						E of H(a0)	
Evib CH4 (eV)					-85.72406	13.605804	
0.35532					match 4XH2+3XH		
	Td						
	w (s-1)	EK (eV)					
	2.57338E+16	16.93841			-71.08917		
0.583079537							
		0.31967					
	EDoppler (eV)	CH4 Eocs (eV)	CH4 ET (eV)	CH4 ED (eV)	ED (kcal/mole)	Rel. Error	
	0.25758	0.07992	86.04373	4.4900	103.54357	-0.00119	
cm-1/eV							
1.239810E-04							
kcal/mole/eV			angle of intersection				
4.336340E-02			0.066347899				
kJ/mole/eV			1.504399653				
0.010364101			86.20				
		theta C	93.80				
			1.637193				
			0.734752857				
Do H-CH3			0.825302271				
103.42		theta H2 MO	47.29				
432.70928		dH2 MO	1.10121	5.82734E-11			
4.48464		dC AO	0.06089	3.22208E-12			
ET CH4							
-86.03837		polar angle	polar radius ri				
		234.57	8.05530E-11				
		4.094018826	1.52223				
Do H-CH2							
108.95							
455.8468							
4.72444							
ET CH3							
-67.95529							
Do H-CH							
417.85							
4.33064							
ET CH2							
-49.63241							
Do H-C	Do D-C						
3.47	3.52						
ET CH	ET CD						
-31.70333	-28.3833						