

ELEMENTS

N

H

O

C

END

SPECIES

N2	H2	H	O2
O			
H2O	OH	H2O2	H02
CO			
CO2	CH4	CH3	CH2
CH2(S)			
C	CH	CH3O2	CH3OH
CH3O			
CH2OH	CH2O	HCO	H0CHO
C2H6			
C2H5	C2H4	C2H3	C2H2
CH3CHO			
CH3CO	CH2CHO	CH2CO	HCCO
CH3OC0			
C3H8	IC3H7	C3H6	C3H5-A
C3H4-P			
C3H4-A	C3H3	C3H2	C5H6
C5H5			
NO	N2O	HNO	N2H2
NH3			
HCN	HNC	HNC0	HCN0
N			
NH	NNH	NH2	CN
NCN			
NC0	H2CN		

END

REACTIONS

H2+M=2H+M		4.5770e+19
-1.400	104400.00	
H2/ 2.50/ H2O/ 12.00/ CO/ 1.90/ CO2/ 3.80/ CH4/ 2.00/ C2H6/ 3.00/		
H2+O=H+OH		5.0800e+04
2.670	6292.00	
H2+OH=H+H2O		4.3800e+13
0.000	6990.00	
2O+M=O2+M		6.1650e+15
-0.500	0.00	
H2/ 2.50/ H2O/ 12.00/ CO/ 1.90/ CO2/ 3.80/ CH4/ 2.00/ C2H6/ 3.00/		
H+O2=O+OH		1.1400e+14
0.000	15286.00	
H+OH+M=H2O+M		3.5000e+22
-2.000	0.00	
H2/ 0.73/ H2O/ 3.65/ CH4/ 2.00/ C2H6/ 3.00/		
O+H2O=2OH		6.7000e+07
1.704	14986.80	
H+O+M=OH+M		4.7140e+18
-1.000	0.00	
H2/ 2.50/ H2O/ 12.00/ CO/ 1.50/ CO2/ 2.00/ CH4/ 2.00/ C2H6/ 3.00/		

H2O2(+M)=2OH(+M)	2.0000e+12
0.900 48749.00	
LOW/ 2.49e+24 -2.300 48749.0/	
TROE/ 0.4300 1.000e-30 1.000e+30/	
H2O/ 7.65/ CO2/ 1.60/ N2/ 1.50/ O2/ 1.20/ H2O2/ 7.70/ H2/ 3.70/	
CO/ 2.80/	
H+H2O2=H2O+OH	2.4100e+13
0.000 3970.00	
H+H2O2=H2+H02	2.1500e+10
1.000 6000.00	
O+H2O2=OH+H02	9.5500e+06
2.000 3970.00	
OH+H2O2=H2O+H02	1.7400e+12
0.000 318.00	
DUPLICATE	
OH+H2O2=H2O+H02	7.5900e+13
0.000 7269.00	
DUPLICATE	
H+H02=2OH	7.0790e+13
0.000 295.00	
H+H02=H2+O2	1.1402e+10
1.083 553.78	
O+H02=O2+OH	3.2500e+13
0.000 0.00	
OH+H02=O2+H2O	7.0000e+12
0.000 -1092.96	
DUPLICATE	
OH+H02=O2+H2O	4.5000e+14
0.000 10929.60	
DUPLICATE	
2H02=O2+H2O2	1.0000e+14
0.000 11040.88	
DUPLICATE	
2H02=O2+H2O2	1.9000e+11
0.000 -1408.92	
DUPLICATE	
H+O2(+M)=H02(+M)	4.6500e+12
0.440 0.00	
LOW/ 1.74e+19 -1.230 0.0/	
TROE/ 0.6700 1.000e-30 1.000e+30 1.000e+30/	
H2/ 1.30/ CO/ 1.90/ CO2/ 3.80/ H2O/ 10.00/ CH4/ 2.00/ C2H6/	
3.00/	
O+CO(+M)=CO2(+M)	1.3620e+10
0.000 2384.00	
LOW/ 1.17e+24 -2.790 4191.0/	
H2/ 2.00/ H2O/ 12.00/ CO/ 1.75/ CO2/ 3.60/	
OH+CO=H+CO2	7.0150e+04
2.053 -355.70	
DUPLICATE	
OH+CO=H+CO2	5.7570e+12
-0.664 331.80	
DUPLICATE	
H02+CO=OH+CO2	1.5700e+05
2.180 17940.00	

O2+C0=0+C02		1.1190e+12
0.000	47700.00	
H+CH3 (+M)=CH4 (+M)		1.2700e+16
-0.630	383.00	
LOW/	2.48e+33	-4.760 2440.0/
TROE/	0.7830	74.00 2941. 6964./
H2/ 2.00/	H2O/ 6.00/	CO/ 1.50/ CO2/ 2.00/ CH4/ 2.00/ C2H6/
3.00/		
H+CH4=H2+CH3		6.1400e+05
2.500	9587.00	
0+CH4=0H+CH3		1.0200e+09
1.500	8600.00	
0H+CH4=H2O+CH3		5.8300e+04
2.600	2190.00	
H02+CH4=H2O2+CH3		1.1300e+01
3.740	21010.00	
H02+CH3=02+CH4		1.1600e+05
2.230	-3022.00	
CH4+CH2=2CH3		2.4600e+06
2.000	8270.00	
N2+CH2 (S)=N2+CH2		1.5000e+13
0.000	600.00	
H2O+CH2 (S)=H2O+CH2		3.0000e+13
0.000	0.00	
CO+CH2 (S)=CO+CH2		9.0000e+12
0.000	0.00	
CO2+CH2 (S)=CO2+CH2		7.0000e+12
0.000	0.00	
O2+CH2 (S)=>H+0H+CO		2.8000e+13
0.000	0.00	
O2+CH2 (S)=H2O+CO		1.2000e+13
0.000	0.00	
0+CH2 (S)=H2+CO		1.5000e+13
0.000	0.00	
0+CH2 (S)=H+HCO		1.5000e+13
0.000	0.00	
H2+CH2 (S)=H+CH3		7.0000e+13
0.000	0.00	
H+CH2 (S)=H2+CH		3.0000e+13
0.000	0.00	
0H+CH2 (S)=H+CH2O		3.0000e+13
0.000	0.00	
CO2+CH2 (S)=CO+CH2O		1.4000e+13
0.000	0.00	
H+CH2 (+M)=CH3 (+M)		2.5000e+16
-0.800	0.00	
LOW/	3.20e+27	-3.140 1230.0/
TROE/	0.6800	78.00 1995. 5590./
H2/ 2.00/	H2O/ 6.00/	CO/ 1.50/ CO2/ 2.00/ CH4/ 2.00/ C2H6/
3.00/		
O2+CH2=0H+HCO		1.0600e+13
0.000	1500.00	
O2+CH2=>2H+CO2		2.6400e+12
0.000	1500.00	

0+CH2=>2H+CO			5.0000e+13
0.000	0.00		
H+CH2=H2+CH			3.0000e+13
0.000	0.00		
OH+CH2=H2O+CH			1.1300e+07
2.000	3000.00		
O2+CH=O+HCO			3.3000e+13
0.000	0.00		
O+CH=H+CO			5.7000e+13
0.000	0.00		
H+CH=H2+C			1.1000e+14
0.000	0.00		
OH+CH=H+HCO			3.0000e+13
0.000	0.00		
H2O+CH=H+CH2O			1.7740e+16
-1.220	23.80		
CO2+CH=CO+HCO			1.7000e+12
0.000	685.00		
OH+C=H+CO			5.0000e+13
0.000	0.00		
O2+C=O+CO			5.0000e+13
0.000	0.00		
O2+CH3 (+M)=CH3O2 (+M)			7.8120e+09
0.900	0.00		
LOW/	6.85e+24	-3.000	0.0/
TROE/	0.6000	1000.	70.00 1700./
O2+CH3=O+CH3O			7.5460e+12
0.000	28320.00		
O2+CH3=OH+CH2O			2.6410e+00
3.283	8105.00		
O+CH3=H+CH2O			5.5400e+13
0.050	-136.00		
OH+CH3=H2O+CH2(S)			4.9360e+14
-0.669	-445.80		
PL0G /	0.0100000		4.93600e+14 -0.669000
-445.800	/		
PL0G /	0.100000		1.20700e+15 -0.778000
-175.600	/		
PL0G /	1.00000		5.28200e+17 -1.51800
1772.00	/		
PL0G /	10.0000		4.78800e+23 -3.15500
7003.00	/		
PL0G /	100.000		8.43300e+19 -1.96200
8244.00	/		
OH+CH3=H2+CH2O			3.5020e+05
1.441	-3244.00		
PL0G /	0.0100000		350200. 1.44100
-3244.00	/		
PL0G /	0.100000		885400. 1.32700
-2975.00	/		
PL0G /	1.00000		1.65000e+07 0.973000
-2010.00	/		
PL0G /	10.0000		5.37400e+09 0.287000
280.000	/		

PL0G / 100.000		9.49400e+18	-2.19900
9769.00	/		
0H+CH3=H+CH20H			1.6210e+10
0.965 3210.00			
PL0G / 0.0100000		1.62100e+10	0.965000
3214.00	/		
PL0G / 0.100000		1.80700e+10	0.950000
3247.00	/		
PL0G / 1.00000		4.68600e+10	0.833000
3566.00	/		
PL0G / 10.0000		1.52500e+13	0.134000
5641.00	/		
PL0G / 100.000		3.59000e+14	-0.186000
8601.00	/		
0H+CH3=H+CH30			1.1860e+09
1.016 11940.00			
PL0G / 0.0100000		1.18600e+09	1.01600
11940.0	/		
PL0G / 0.100000		1.18800e+09	1.01600
11940.0	/		
PL0G / 1.00000		1.23000e+09	1.01100
11950.0	/		
PL0G / 10.0000		1.79800e+09	0.965000
12060.0	/		
PL0G / 100.000		5.24200e+10	0.551000
13070.0	/		
0H+CH3=H20+CH2			4.2930e+04
2.568 3997.80			
H02+CH3=0H+CH30			1.0000e+12
0.269 -687.50			
0+CH302=02+CH30			3.6000e+13
0.000 0.00			
H+CH302=0H+CH30			9.6000e+13
0.000 0.00			
0H+CH302=02+CH30H			6.0000e+13
0.000 0.00			
CH3+CH302=2CH30			5.0800e+12
0.000 -1411.00			
2CH302=>02+CH30H+CH20			3.1100e+14
-1.610 -1051.00			
2CH302=>02+2CH30			1.4000e+16
-1.610 1860.00			
CH30H(+M)=0H+CH3(+M)			2.0840e+18
-0.615 92540.60			
LOW/ 1.50e+43 -6.995 97992.2/			
TR0E/ -0.4748 3.558e+04 1116. 9023./			
CH30H(+M)=H20+CH2(S)(+M)			3.1210e+18
-1.017 91712.00			
LOW/ 1.43e+47 -8.227 99417.1/			
TR0E/ 2.545 3290. 4.732e+04 4.711e+04/			
CH30H(+M)=H+CH20H(+M)			7.8960e-03
5.038 84467.40			
LOW/ 3.39e+42 -7.244 105230.3/			
TR0E/ -73.91 3.705e+04 4.150e+04 5220./			

H+CH3OH=H2+CH3O	1.9900e+05
2.560 10300.00	
H+CH3OH=H2+CH2OH	3.0700e+05
2.550 5440.00	
O+CH3OH=OH+CH3O	3.8800e+04
2.500 3080.00	
O+CH3OH=OH+CH2OH	3.8800e+05
2.500 3080.00	
OH+CH3OH=H2O+CH3O	1.5000e+02
3.030 -763.00	
OH+CH3OH=H2O+CH2OH	3.0800e+04
2.650 -806.70	
O2+CH3OH=HO2+CH3O	3.5800e+04
2.270 42764.50	
O2+CH3OH=HO2+CH2OH	3.5800e+05
2.270 42764.50	
HO2+CH3OH=H2O2+CH3O	1.2200e+12
0.000 20070.70	
HO2+CH3OH=H2O2+CH2OH	3.2600e+13
0.000 18782.20	
CH3+CH3OH=CH4+CH2OH	2.1300e-01
3.953 7055.10	
CH3+CH3OH=CH4+CH3O	3.2200e+03
2.425 8579.50	
CH3OH+HCO=CH2OH+CH2O	9.6300e+03
2.900 13110.00	
CH3OH+CH3O=CH3OH+CH2OH	3.0000e+11
0.000 4074.00	
O2+CH2OH=HO2+CH2O	1.5100e+15
-1.000 0.00	
DUPLICATE	
O2+CH2OH=HO2+CH2O	2.4100e+14
0.000 5017.00	
DUPLICATE	
H+CH2OH=H2+CH2O	6.0000e+12
0.000 0.00	
HO2+CH2OH=H2O2+CH2O	1.2000e+13
0.000 0.00	
CH2OH+HCO=2CH2O	1.8000e+14
0.000 0.00	
CH2OH+HCO=CO+CH3OH	1.0000e+13
0.000 0.00	
CH3O+CH2OH=CH3OH+CH2O	2.4000e+13
0.000 0.00	
OH+CH2OH=H2O+CH2O	2.4000e+13
0.000 0.00	
O+CH2OH=OH+CH2O	4.2000e+13
0.000 0.00	
2CH2OH=CH3OH+CH2O	3.0000e+12
0.000 0.00	
O2+CH3O=HO2+CH2O	4.3800e-19
9.500 -5501.00	
H+CH3O=H2+CH2O	2.0000e+13
0.000 0.00	

H02+CH30=H202+CH20	3.0100e+11
0.000 0.00	
CH3+CH30=CH4+CH20	1.2000e+13
0.000 0.00	
2CH30=CH30H+CH20	6.0300e+13
0.000 0.00	
H+HCO(+M)=CH20(+M)	1.0900e+12
0.480 -260.00	
LOW/ 1.35e+24 -2.570 1425.0/	
TR0E/ 0.7824 271.0 2755. 6570./	
H2/ 2.00/ H20/ 6.00/ CO/ 1.50/ CO2/ 2.00/ CH4/ 2.00/ C2H6/	
3.00/	
H2+CO(+M)=CH20(+M)	4.3000e+07
1.500 79600.00	
LOW/ 5.07e+27 -3.420 84348.0/	
TR0E/ 0.9320 197.0 1540. 1.030e+04/	
H2/ 2.00/ H20/ 6.00/ CO/ 1.50/ CO2/ 2.00/ CH4/ 2.00/ C2H6/	
3.00/	
O2+CH20=H02+HCO	8.0700e+15
0.000 53420.00	
O+CH20=OH+HCO	6.2600e+09
1.150 2260.00	
H+CH20=H2+HCO	5.7400e+07
1.900 2740.00	
OH+CH20=H20+HCO	7.8200e+07
1.630 -1055.00	
H02+CH20=H202+HCO	1.8800e+04
2.700 11520.00	
CH3+CH20=CH4+HCO	3.8300e+01
3.360 4312.00	
CH30+CH20=CH30H+HCO	6.6200e+11
0.000 2294.00	
HCO+M=H+CO+M	5.7000e+11
0.660 14870.00	
H2/ 2.00/ H20/ 6.00/ CO/ 1.50/ CO2/ 2.00/ CH4/ 2.00/ C2H6/ 3.00/	
O2+HCO=H02+CO	7.5800e+12
0.000 410.00	
O+HCO=OH+CO	3.0200e+13
0.000 0.00	
H+HCO=H2+CO	7.3400e+13
0.000 0.00	
OH+HCO=H20+CO	3.0110e+13
0.000 0.00	
CH3+HCO=CO+CH4	2.6500e+13
0.000 0.00	
2HCO=CO+CH20	1.8000e+13
0.000 0.00	
O+HCO=H+CO2	3.0000e+13
0.000 0.00	
H02+HCO=>H+OH+CO2	3.0000e+13
0.000 0.00	
2HCO=>H2+2CO	3.0000e+12
0.000 0.00	
H+CH20(+M)=CH20H(+M)	5.4000e+11

0.454	3600.00						
LOW/	1.27e+32	-4.820	6530.0/				
TROE/	0.7187	103.0	1291.	4160./			
H2/ 2.00/	H2O/ 6.00/	CO/ 1.50/	CO2/ 2.00/	CH4/ 2.00/	C2H6/		
3.00/							
CH3O(+M)=H+CH2O(+M)						6.8000e+13	
0.000	26170.00						
LOW/	1.87e+25	-3.000	24307.0/				
TROE/	0.9000	2500.	1300.	1.000e+99/			
H2/ 2.00/	H2O/ 6.00/	CO/ 1.50/	CO2/ 2.00/	CH4/ 2.00/	C2H6/		
3.00/							
HOCHO=H2O+CO						2.4500e+12	
0.000	60470.00						
HOCHO=H2+CO2						2.9500e+09	
0.000	48520.00						
H+HOCHO=>H2+H+CO2						4.2400e+06	
2.100	4868.00						
H+HOCHO=>H2+OH+CO						6.0300e+13	
-0.350	2988.00						
O+HOCHO=>2OH+CO						1.7700e+18	
-1.900	2975.00						
OH+HOCHO=>H+H2O+CO2						2.6200e+06	
2.060	916.00						
OH+HOCHO=>H2O+OH+CO						1.8500e+07	
1.510	-962.00						
CH3+HOCHO=>OH+CO+CH4						3.9000e-07	
5.800	2200.00						
HO2+HOCHO=>OH+H2O2+CO						1.0000e+12	
0.000	11920.00						
2CH3(+M)=C2H6(+M)						2.2770e+15	
-0.690	174.90						
LOW/	8.05e+31	-3.750	981.6/				
TROE/	0.000	570.0	1.000e+30	1.000e+30/			
H2O/ 5.00/	CO/ 2.00/	CO2/ 3.00/					
H+C2H5(+M)=C2H6(+M)						5.2100e+17	
-0.990	1580.00						
LOW/	1.99e+41	-7.080	6685.0/				
TROE/	0.8420	125.0	2219.	6882./			
H2/ 2.00/	H2O/ 6.00/	CO/ 1.50/	CO2/ 2.00/	CH4/ 2.00/	C2H6/		
3.00/							
O2+C2H6=HO2+C2H5						6.0300e+13	
0.000	51870.00						
O+C2H6=OH+C2H5						3.5500e+06	
2.400	5830.00						
H+C2H6=H2+C2H5						1.1500e+08	
1.900	7530.00						
OH+C2H6=H2O+C2H5						1.4800e+07	
1.900	950.00						
HO2+C2H6=H2O2+C2H5						3.4600e+01	
3.610	16920.00						
CH+C2H6=CH2+C2H5						1.1000e+14	
0.000	-260.00						
CH2(S)+C2H6=CH3+C2H5						1.2000e+14	
0.000	0.00						

CH3+C2H6=CH4+C2H5			5.5500e-04
4.720	3231.00		
CH30+C2H6=CH30H+C2H5			2.4100e+11
0.000	7090.00		
H+C2H4(+M)=C2H5(+M)			9.5690e+08
1.463	1355.00		
LOW/	1.42e+39	-6.642	5769.0/
TR0E/		-0.5690	299.0 -9147. 152.4/
H2/ 2.00/	H20/ 6.00/	CH4/ 2.00/	CO/ 1.50/ CO2/ 2.00/ C2H6/
3.00/			
H+C2H5=H2+C2H4			2.0000e+12
0.000	0.00		
2C2H4=C2H5+C2H3			4.8200e+14
0.000	71530.00		
CH3+C2H5=CH4+C2H4			1.1800e+04
2.450	-2921.00		
0+C2H5=H+CH3CH0			1.1000e+14
0.000	0.00		
2CH3=H+C2H5			4.7400e+12
0.105	10664.30		
PL0G /	0.0100000		4.74000e+12 0.105000
10664.3	/		
PL0G /	0.100000		2.57000e+13 -0.0960000
11406.1	/		
PL0G /	1.00000		3.10000e+14 -0.362000
13372.5	/		
PL0G /	10.0000		2.15000e+10 0.885000
13532.5	/		
PL0G /	100.000		103.200 3.23000
11236.1	/		
02+C2H5=H02+C2H4			2.0940e+09
0.490	-391.40		
PL0G /	0.0400000		2.09400e+09 0.490000
-391.400	/		
PL0G /	1.00000		1.84300e+07 1.13000
-720.600	/		
PL0G /	10.0000		7.56100e+14 -1.01000
4749.00	/		
02+C2H5=0H+CH3CH0			4.9080e-06
4.760	254.30		
PL0G /	0.0400000		4.90800e-06 4.76000
254.300	/		
PL0G /	1.00000		0.0680300 3.57000
2643.00	/		
PL0G /	10.0000		826.500 2.41000
5285.00	/		
H+C2H3(+M)=C2H4(+M)			6.0800e+12
0.270	280.00		
LOW/	1.40e+30	-3.860	3320.0/
TR0E/		0.7820	207.5 2663. 6095./
H2/ 2.00/	H20/ 6.00/	CO/ 1.50/	CO2/ 2.00/ CH4/ 2.00/ C2H6/
3.00/			
C2H4+M=H2+C2H2+M			2.6100e+16
0.000	67823.00		

H2/ 2.00/ H2O/ 6.00/ CH4/ 2.00/ CO/ 1.50/ CO2/ 2.00/ C2H6/ 3.00/			
O2+C2H4=H2O+C2H3			4.2200e+13
0.000 57623.10			
H+C2H4=H2+C2H3			5.0700e+07
1.930 12950.00			
OH+C2H4=H2O+C2H3			2.2300e+04
2.745 2215.50			
CH3O+C2H4=CH3OH+C2H3			1.2000e+11
0.000 6750.00			
CH3+C2H4=CH4+C2H3			9.7600e+02
2.947 15148.00			
DUPLICATE			
CH3+C2H4=CH4+C2H3			8.1300e-05
4.417 8835.80			
DUPLICATE			
O+C2H4=CH3+HCO			7.4530e+06
1.880 183.00			
O+C2H4=H+CH2CHO			6.0980e+06
1.880 183.00			
CH4+CH=H+C2H4			6.0000e+13
0.000 0.00			
CH3+CH2(S)=H+C2H4			2.0000e+13
0.000 0.00			
OH+C2H4=CH3+CH2O			5.3500e+00
2.920 -1732.70			
PL0G / 0.0100000	5.35000		2.92000
-1732.70 /			
PL0G / 0.0250000	31.9000		2.71000
-1172.30 /			
PL0G / 0.100000	555.000		2.36000
-180.800 /			
PL0G / 1.00000	178000.		1.68000
2060.50 /			
PL0G / 10.0000	2.37000e+09		0.560000
6006.70 /			
PL0G / 100.000	2.76000e+13		-0.500000
11455.1 /			
OH+C2H4=H+CH3CHO			2.3700e-07
5.300 -2050.60			
PL0G / 0.0100000	2.37000e-07		5.30000
-2050.60 /			
PL0G / 0.0250000	8.73000e-05		4.57000
-618.000 /			
PL0G / 0.100000	0.403000		3.54000
1881.70 /			
PL0G / 1.00000	0.0238000		3.91000
1722.70 /			
PL0G / 10.0000	8.25000e+08		1.01000
10507.3 /			
PL0G / 100.000	6.80000e+09		0.810000
13867.3 /			
H+C2H2(+M)=C2H3(+M)			1.7100e+10
1.266 2709.00			
LOW/ 6.35e+31 -4.664 3780.0/			

TR0E/	0.7880	-1.020e+04	1.000e-30/	
H2/ 2.00/	H20/ 6.00/	CO/ 1.50/	CO2/ 2.00/	CH4/ 2.00/ C2H6/
3.00/				
02+C2H3=0+CH2CHO				1.7600e+12
0.150	4205.00			
DUPLICATE				
PL0G /	0.0100000		7.88000e+20	-2.67000
6742.00	/			
PL0G /	0.100000		7.72000e+20	-2.67000
6713.00	/			
PL0G /	0.316000		9.87000e+20	-2.70000
6724.00	/			
PL0G /	1.00000		7.10000e+20	-2.65000
6489.00	/			
PL0G /	3.16000		4.50000e+20	-2.53000
6406.00	/			
PL0G /	10.0000		1.76000e+23	-3.22000
8697.00	/			
PL0G /	31.6000		3.14000e+25	-3.77000
11530.0	/			
PL0G /	100.000		1.02000e+26	-3.80000
13910.0	/			
02+C2H3=0+CH2CHO				1.7600e+12
0.150	4205.00			
DUPLICATE				
PL0G /	0.0100000		1.36000e+10	0.620000
-277.600	/			
PL0G /	0.100000		1.42000e+10	0.620000
-247.700	/			
PL0G /	0.316000		1.66000e+10	0.600000
-162.500	/			
PL0G /	1.00000		2.02000e+10	0.580000
38.4000	/			
PL0G /	3.16000		9.75000e+09	0.670000
248.000	/			
PL0G /	10.0000		7.34000e+09	0.720000
778.100	/			
PL0G /	31.6000		1.57000e+09	0.920000
1219.00	/			
PL0G /	100.000		7.85000e+07	1.28000
1401.00	/			
02+C2H3=H02+C2H2				6.4900e+06
1.500	5218.00			
DUPLICATE				
PL0G /	0.0100000		1.08000e+07	1.28000
3322.00	/			
PL0G /	0.100000		7.75000e+06	1.33000
3216.00	/			
PL0G /	0.316000		1.21000e+07	1.27000
3311.00	/			
PL0G /	1.00000		2.15000e+07	1.19000
3367.00	/			
PL0G /	3.16000		1.13000e+08	1.00000
3695.00	/			

PLQG / 10.0000		1.31000e+11	0.120000
5872.00	/		
PLQG / 31.6000		1.19000e+09	0.820000
5617.00	/		
PLQG / 100.000		1.06000e+17	-1.45000
12230.0	/		
02+C2H3=H02+C2H2			6.4900e+06
1.500	5218.00		
DUPLICATE			
PLQG / 0.0100000		47.6000	2.75000
-796.400	/		
PLQG / 0.100000		51.6000	2.73000
-768.300	/		
PLQG / 0.316000		55.5000	2.73000
-658.500	/		
PLQG / 1.00000		46.0000	2.76000
-492.800	/		
PLQG / 3.16000		3.75000	3.07000
-601.000	/		
PLQG / 10.0000		5.48000	3.07000
85.7000	/		
PLQG / 31.6000		4.47000e+08	0.00000
955.000	/		
PLQG / 100.000		20.2000	2.94000
1847.00	/		
02+C2H3=0H+CH2CO			1.1700e+03
2.430	7074.00		
DUPLICATE			
PLQG / 0.0100000		866.000	2.41000
6061.00	/		
PLQG / 0.100000		891.000	2.41000
6078.00	/		
PLQG / 0.316000		943.000	2.40000
6112.00	/		
PLQG / 1.00000		1060.00	2.39000
6180.00	/		
PLQG / 3.16000		1090.00	2.38000
6179.00	/		
PLQG / 10.0000		1390.00	2.36000
6074.00	/		
PLQG / 31.6000		2.49000e+06	1.42000
8480.00	/		
PLQG / 100.000		1.66000e+10	0.360000
12010.0	/		
02+C2H3=0H+CH2CO			1.1700e+03
2.430	7074.00		
DUPLICATE			
PLQG / 0.0100000		0.182000	3.12000
1331.00	/		
PLQG / 0.100000		0.207000	3.11000
1383.00	/		
PLQG / 0.316000		0.271000	3.08000
1496.00	/		
PLQG / 1.00000		0.526000	3.01000

1777.00	/		
PLOG / 3.16000		1.37000	2.90000
2225.00	/		
PLOG / 10.0000		0.419000	2.93000
2052.00	/		
PLOG / 31.6000		0.000119000	4.21000
2043.00	/		
PLOG / 100.000		0.00130000	3.97000
3414.00	/		
02+C2H3=CH2O+HCO			1.1600e+16
-1.130 3791.00			
DUPLICATE			
PLOG / 0.0100000		2.49000e+36	-7.60000
12640.0	/		
PLOG / 0.100000		2.43000e+36	-7.60000
12610.0	/		
PLOG / 0.316000		1.95000e+36	-7.57000
12490.0	/		
PLOG / 1.00000		2.73000e+35	-7.32000
11820.0	/		
PLOG / 3.16000		1.43000e+36	-7.47000
12460.0	/		
PLOG / 10.0000		5.18000e+35	-7.20000
13430.0	/		
PLOG / 31.6000		3.19000e+20	-2.57000
5578.00	/		
PLOG / 100.000		2.73000e+33	-6.28000
16000.0	/		
02+C2H3=CH2O+HCO			1.1600e+16
-1.130 3791.00			
DUPLICATE			
PLOG / 0.0100000		4.54000e+15	-1.28000
515.300	/		
PLOG / 0.100000		4.59000e+15	-1.28000
513.000	/		
PLOG / 0.316000		4.81000e+15	-1.29000
520.600	/		
PLOG / 1.00000		6.08000e+15	-1.31000
645.700	/		
PLOG / 3.16000		9.45000e+15	-1.36000
1066.00	/		
PLOG / 10.0000		2.56000e+15	-1.18000
1429.00	/		
PLOG / 31.6000		1.03000e+69	-19.2300
14760.0	/		
PLOG / 100.000		4.21000e+10	0.190000
830.600	/		
02+C2H3=>H+CO+CH2O			1.1600e+16
-1.130 3791.00			
DUPLICATE			
PLOG / 0.0100000		5.82000e+36	-7.60000
12640.0	/		
PLOG / 0.100000		5.66000e+36	-7.60000
12610.0	/		

PLOG / 0.316000		4.55000e+36	-7.57000
12490.0	/		
PLOG / 1.00000		6.36000e+35	-7.32000
11820.0	/		
PLOG / 3.16000		3.35000e+36	-7.47000
12460.0	/		
PLOG / 10.0000		1.21000e+36	-7.20000
13430.0	/		
PLOG / 31.6000		7.43000e+20	-2.57000
5578.00	/		
PLOG / 100.000		6.36000e+33	-6.28000
16000.0	/		
02+C2H3=>H+C0+CH20			1.1600e+16
-1.130	3791.00		
DUPLICATE			
PLOG / 0.0100000		1.06000e+16	-1.28000
515.300	/		
PLOG / 0.100000		1.07000e+16	-1.28000
513.000	/		
PLOG / 0.316000		1.13000e+16	-1.29000
520.600	/		
PLOG / 1.00000		1.42000e+16	-1.31000
645.700	/		
PLOG / 3.16000		2.20000e+16	-1.36000
1066.00	/		
PLOG / 10.0000		5.98000e+15	-1.18000
1429.00	/		
PLOG / 31.6000		2.39000e+69	-19.2300
14760.0	/		
PLOG / 100.000		9.81000e+10	0.190000
830.600	/		
02+C2H3=C0+CH30			3.0900e+13
-0.890	3682.00		
DUPLICATE			
PLOG / 0.0100000		8.19000e+18	-2.66000
3201.00	/		
PLOG / 0.100000		4.06000e+14	-1.32000
885.800	/		
PLOG / 0.316000		4.34000e+14	-1.33000
900.600	/		
PLOG / 1.00000		1.03000e+11	-0.330000
-747.800	/		
PLOG / 3.16000		1.89000e+12	-3.00000
-8995.00	/		
PLOG / 10.0000		1.93000e+24	-5.63000
1.80000	/		
PLOG / 31.6000		1.10000e+18	-2.22000
5178.00	/		
PLOG / 100.000		5.79000e+32	-6.45000
16810.0	/		
02+C2H3=C0+CH30			3.0900e+13
-0.890	3682.00		
DUPLICATE			
PLOG / 0.0100000		1.29000e+09	0.180000

-1717.00	/		
PLOG / 0.100000		5.99000e+11	-2.93000
-9564.00	/		
PLOG / 0.316000		2.91000e+11	-2.93000
-10120.0	/		
PLOG / 1.00000		5.77000e+21	-3.54000
4772.00	/		
PLOG / 3.16000		4.99000e+15	-1.62000
1849.00	/		
PLOG / 10.0000		9.33000e+16	-1.96000
3324.00	/		
PLOG / 31.6000		1.02000e+72	-20.6900
15860.0	/		
PLOG / 100.000		1.10000e+09	0.310000
1024.00	/		
02+C2H3=C02+CH3			6.1600e+13
-1.050	3743.00		
DUPLICATE			
PLOG / 0.0100000		2.37000e+35	-7.76000
12630.0	/		
PLOG / 0.100000		1.73000e+35	-7.72000
12520.0	/		
PLOG / 0.316000		4.47000e+34	-7.55000
12140.0	/		
PLOG / 1.00000		7.25000e+31	-6.70000
10440.0	/		
PLOG / 3.16000		3.63000e+35	-7.75000
12830.0	/		
PLOG / 10.0000		2.09000e+35	-7.53000
14050.0	/		
PLOG / 31.6000		3.84000e+18	-2.44000
5408.00	/		
PLOG / 100.000		1.21000e+32	-6.32000
16190.0	/		
02+C2H3=C02+CH3			6.1600e+13
-1.050	3743.00		
DUPLICATE			
PLOG / 0.0100000		6.27000e+13	-1.16000
406.300	/		
PLOG / 0.100000		6.24000e+13	-1.16000
401.400	/		
PLOG / 0.316000		6.12000e+13	-1.16000
397.000	/		
PLOG / 1.00000		5.32000e+13	-1.14000
446.700	/		
PLOG / 3.16000		1.45000e+14	-1.26000
987.700	/		
PLOG / 10.0000		5.02000e+13	-1.11000
1409.00	/		
PLOG / 31.6000		1.40000e+70	-20.1100
15430.0	/		
PLOG / 100.000		9.21000e+08	0.250000
855.300	/		
H+C2H3=H2+C2H2			9.6352e+13

0.000	0.00				
OH+C2H3=H2O+C2H2					3.0110e+13
0.000	0.00				
CH3+C2H3=CH4+C2H2					3.9200e+11
0.000	0.00				
2C2H3=C2H4+C2H2					9.6000e+11
0.000	0.00				
O+C2H2=CO+CH2					7.3950e+08
1.280	2472.00				
O+C2H2=H+HCCO					2.9580e+09
1.280	2472.00				
H02+C2H2=OH+CH2CO					6.0300e+09
0.000	7949.00				
HCO+C2H2=CO+C2H3					1.0000e+07
2.000	6000.00				
CH2+C2H2=H+C3H3					1.2000e+13
0.000	6620.00				
CH2(S)+C2H2=H+C3H3					2.0000e+13
0.000	0.00				
C2H2+HCCO=CO+C3H3					1.0000e+11
0.000	3000.00				
OH+C2H2=H+CH2CO					1.5780e+03
2.560	-844.50				
PLOG /	0.0100000		1578.00		2.56000
-844.500		/			
PLOG /	0.0250000		15180.0		2.28000
-292.100		/			
PLOG /	0.100000		301700.		1.92000
598.100		/			
PLOG /	1.00000		7.52800e+06		1.55000
2106.00		/			
PLOG /	10.0000		5.10100e+06		1.65000
3400.00		/			
PLOG /	100.000		14570.0		2.45000
4477.00		/			
OH+C2H2=CO+CH3					4.7570e+05
1.680	-329.80				
PLOG /	0.0100000		475700.		1.68000
-329.800		/			
PLOG /	0.0250000		4.37200e+06		1.40000
226.500		/			
PLOG /	0.100000		7.64800e+07		1.05000
1115.00		/			
PLOG /	1.00000		1.27700e+09		0.730000
2579.00		/			
PLOG /	10.0000		4.31200e+08		0.920000
3736.00		/			
PLOG /	100.000		825000.		1.77000
4697.00		/			
CH3CHO(+M)=CH3+HCO(+M)					2.4500e+22
-1.740	86355.00				
LOW/	1.03e+59	-11.300	95912.5/		
TROE/	0.002490	718.1	6.089	3780./	
CH3CHO(+M)=CO+CH4(+M)					2.7200e+21

-1.740	86355.00				
LOW/	1.14e+58	-11.300	95912.5/		
TROE/	0.002490	718.1	6.089	3780./	
O2+CH3CHO=H02+CH3CO					3.0100e+13
0.000	39150.00				
O+CH3CHO=OH+CH3CO					5.9400e+12
0.000	1868.00				
OH+CH3CHO=H2O+CH3CO					3.3700e+12
0.000	-619.00				
H02+CH3CHO=H202+CH3CO					1.0000e+12
0.000	11920.00				
H+CH3CHO=H2+CH2CHO					2.7200e+03
3.100	5210.00				
OH+CH3CHO=H2O+CH2CHO					1.7200e+05
2.400	815.00				
OH+CH3CHO=CH3+H0CHO					3.0000e+15
-1.076	0.00				
CH3CO=CO+CH3					1.0700e+12
0.630	16895.50				
PL0G /	0.100000		1.96000e+16		-2.09000
15196.6	/				
PL0G /	1.00000		6.45000e+18		-2.52000
16436.5	/				
PL0G /	10.0000		8.18000e+19		-2.55000
17263.1	/				
PL0G /	100.000		1.26000e+20		-2.32000
18012.1	/				
O2+CH3CO=H02+CH2CO					3.6000e+10
0.544	3721.00				
PL0G /	0.100000		1.30000e+08		1.98600
228.000	/				
PL0G /	1.00000		3.60000e+10		0.544000
3721.00	/				
PL0G /	10.0000		7.70000e+13		-0.335000
7510.00	/				
CH3CO(+M)=H+CH2CO(+M)					9.4130e+07
1.917	44987.20				
LOW/	1.52e+51	-10.270	55390.0/		
TROE/	0.6009	8.103e+09	667.7	5.000e+09/	
H+CH3CO=H2+CH2CO					2.0000e+13
0.000	0.00				
O+CH3CO=OH+CH2CO					2.0000e+13
0.000	0.00				
CH3+CH3CO=CH4+CH2CO					5.0000e+13
0.000	0.00				
CH2CHO(+M)=H+CH2CO(+M)					1.4300e+15
-0.150	45600.00				
LOW/	6.00e+29	-3.800	43423.9/		
TROE/	0.9850	393.0	9.800e+09	5.000e+09/	
CH2CHO(+M)=CO+CH3(+M)					2.9300e+12
0.290	40300.00				
LOW/	9.52e+33	-5.070	41300.0/		
TROE/	7.130e-17	1150.	4.990e+09	1.790e+09/	
CH2CO(+M)=CO+CH2(+M)					3.0000e+13

0.000	71000.00						
LOW/	3.00e+15	0.000	57000.0/				
H2/	2.00/	H2O/	6.00/	CO/	1.50/	CO2/	2.00/
3.00/						CH4/	2.00/
							C2H6/
0+C2H3=H+CH2CO							3.0000e+13
0.000	0.00						
H+CH2CO=CO+CH3							7.7700e+08
1.450	2780.00						
CH3+HCO=H2+CH2CO							4.9000e+08
0.750	842.00						
PL0G /	0.0500000			6.10000e+06		1.24000	
-1733.00	/						
PL0G /	0.100000			1.10000e+07		1.18000	
-1303.00	/						
PL0G /	1.00000			4.90000e+08		0.750000	
842.000	/						
PL0G /	10.0000			1.60000e+11		0.109000	
4387.00	/						
CH+CH2O=H+CH2CO							9.4600e+13
0.000	-515.00						
0+CH2CO=CO2+CH2							1.7500e+12
0.000	1350.00						
OH+CH2CO=CO+CH2OH							2.0000e+12
0.000	-1010.00						
CH2(S)+CH2CO=CO+C2H4							2.0000e+13
0.000	-526.00						
CH3+CH2CO=CO+C2H5							4.7690e+04
2.312	9468.00						
OH+HCCO=>H2+2CO							1.0000e+14
0.000	0.00						
0+HCCO=>H+2CO							8.0000e+13
0.000	0.00						
CO+CH+M=HCCO+M							7.5700e+22
-1.900	0.00						
H+HCCO=CO+CH2(S)							1.0000e+14
0.000	0.00						
O2+HCCO=>OH+2CO							1.9100e+11
-0.020	1020.00						
O2+HCCO=>H+CO+CO2							4.7800e+12
-0.142	1150.00						
CH+HCCO=CO+C2H2							5.0000e+13
0.000	0.00						
C3H8(+M)=CH3+C2H5(+M)							1.2900e+37
-5.840	97380.00						
LOW/	5.64e+74	-15.740	98714.0/				
TR0E/	0.3100	50.00	3000.	9000./			
H2/	2.00/	H2O/	6.00/	CO/	1.50/	CO2/	2.00/
3.00/						CH4/	2.00/
							C2H6/
H+IC3H7=C3H8							1.0000e+14
0.000	0.00						
O2+C3H8=H02+IC3H7							2.0000e+13
0.000	49640.00						
H+C3H8=H2+IC3H7							6.5000e+05
2.400	4471.00						

O+C3H8=OH+IC3H7					5.4900e+05
2.500	3140.00				
OH+C3H8=H2O+IC3H7					4.6700e+07
1.610	-35.00				
H02+C3H8=H202+IC3H7					6.3200e+01
3.370	13720.00				
CH3+C3H8=CH4+IC3H7					6.4000e+04
2.170	7520.00				
C2H3+C3H8=C2H4+IC3H7					1.0000e+11
0.000	10400.00				
C2H5+C3H8=C2H6+IC3H7					1.0000e+11
0.000	10400.00				
C3H8+C3H5-A=IC3H7+C3H6					7.9400e+11
0.000	16200.00				
CH30+C3H8=CH30H+IC3H7					3.0000e+11
0.000	7000.00				
H+IC3H7=CH3+C2H5					2.0000e+13
0.000	0.00				
OH+IC3H7=H2O+C3H6					2.4100e+13
0.000	0.00				
O+IC3H7=CH3+CH3CHO					4.8180e+13
0.000	0.00				
H02+IC3H7=>OH+CH3+CH3CHO					7.0000e+12
0.000	-1000.00				
CH302+IC3H7=>CH3+CH30+CH3CHO					7.0000e+12
0.000	-1000.00				
CH3+C2H3(+M)=C3H6(+M)					2.5000e+13
0.000	0.00				
LOW/	4.27e+58	-11.940	9769.8/		
TR0E/	0.1750	1341.	6.000e+04	1.014e+04/	
CH2(S)+C2H4=C3H6					4.8200e+57
-14.300	17100.00				
DUPLICATE					
PLOG /	0.0100000				4.82000e+57
17100.0	/				-14.3000
PLOG /	0.100000				3.84000e+59
18400.0	/				-14.4000
PLOG /	1.00000				2.13000e+58
20400.0	/				-13.5000
PLOG /	10.0000				8.48000e+52
20700.0	/				-11.6000
PLOG /	100.000				6.07000e+47
22100.0	/				-9.85000
CH2(S)+C2H4=C3H6					1.1500e+45
-11.100	6145.20				
DUPLICATE					
PLOG /	0.0100000				1.15000e+45
6145.20	/				-11.1000
PLOG /	0.100000				1.83000e+45
6638.50	/				-10.7000
PLOG /	1.00000				1.30000e+40
5863.80	/				-8.77000
PLOG /	10.0000				2.27000e+32
4317.90	/				-6.14000

PLOG / 100.000	1.28000e+24	-3.49000
2529.90 /		
CH2(S)+C2H4=H+C3H5-A		8.2000e+19
-2.060 1150.00		
DUPLICATE		
PLOG / 0.0100000	8.20000e+19	-2.06000
1150.00 /		
PLOG / 0.100000	2.27000e+21	-2.44000
2650.00 /		
PLOG / 1.00000	4.44000e+35	-6.55000
13900.0 /		
PLOG / 10.0000	1.18000e+28	-4.09000
14000.0 /		
PLOG / 100.000	6.51000e+26	-3.58000
18900.0 /		
CH2(S)+C2H4=H+C3H5-A		1.0800e+07
1.620 -3174.60		
DUPLICATE		
PLOG / 0.0100000	1.08000e+07	1.62000
-3174.60 /		
PLOG / 0.100000	137000.	2.15000
-3799.20 /		
PLOG / 1.00000	3.89000e+14	-0.420000
1237.60 /		
PLOG / 10.0000	2.45000e+10	0.670000
750.930 /		
PLOG / 100.000	181.000	2.97000
-746.030 /		
CH2(S)+C2H4=CH3+C2H3		1.7700e+19
-1.940 6790.00		
DUPLICATE		
PLOG / 0.0100000	1.77000e+19	-1.94000
6790.00 /		
PLOG / 0.100000	1.68000e+19	-1.80000
4310.00 /		
PLOG / 1.00000	4.16000e+24	-3.19000
9760.00 /		
PLOG / 10.0000	7.89000e+24	-3.07000
13900.0 /		
PLOG / 100.000	7.36000e+29	-4.28000
23800.0 /		
CH2(S)+C2H4=CH3+C2H3		4.3000e+12
0.190 -110.41		
DUPLICATE		
PLOG / 0.0100000	4.30000e+12	0.190000
-110.410 /		
PLOG / 0.100000	2.26000e+11	0.540000
47.8100 /		
PLOG / 1.00000	4.92000e+09	1.02000
599.770 /		
PLOG / 10.0000	1.47000e+08	1.33000
1228.40 /		
PLOG / 100.000	8.11000e+10	0.550000
5506.50 /		

CH3+C2H3=H+C3H5-A			4.1200e+29
-4.950	8000.00		
DUPLICATE			
PLOG /	0.0100000	4.12000e+29	-4.95000
8000.00	/		
PLOG /	0.100000	4.86000e+30	-5.03000
11300.0	/		
PLOG /	1.00000	5.30000e+29	-4.57000
14400.0	/		
PLOG /	10.0000	1.32000e+30	-4.54000
19300.0	/		
PLOG /	100.000	5.16000e+28	-4.03000
23800.0	/		
CH3+C2H3=H+C3H5-A			5.7300e+15
-0.770	1195.90		
DUPLICATE			
PLOG /	0.0100000	5.73000e+15	-0.770000
1195.90	/		
PLOG /	0.100000	2.06000e+13	-0.0740000
1428.70	/		
PLOG /	1.00000	4.48000e+10	0.600000
1421.60	/		
PLOG /	10.0000	4.10000e+06	1.71000
1056.90	/		
PLOG /	100.000	0.137000	3.91000
-353.550	/		
C3H6=CH3+C2H3			1.8800e+78
-18.700	130000.00		
DUPLICATE			
PLOG /	0.0100000	1.88000e+78	-18.7000
130000.	/		
PLOG /	0.100000	8.73000e+76	-17.9000
132000.	/		
PLOG /	1.00000	5.80000e+75	-17.2000
134000.	/		
PLOG /	10.0000	8.12000e+71	-15.8000
136000.	/		
PLOG /	100.000	2.15000e+64	-13.4000
135000.	/		
C3H6=CH3+C2H3			1.6900e+59
-13.600	113290.00		
DUPLICATE			
PLOG /	0.0100000	1.69000e+59	-13.6000
113290.	/		
PLOG /	0.100000	2.00000e+60	-13.7000
114890.	/		
PLOG /	1.00000	6.70000e+54	-11.8000
113840.	/		
PLOG /	10.0000	1.06000e+47	-9.27000
111510.	/		
PLOG /	100.000	7.29000e+38	-6.70000
108740.	/		
C3H6=H+C3H5-A			9.1600e+74
-17.600	120000.00		

DUPLICATE		
PL0G / 0.0100000	9.16000e+74	-17.6000
120000. /		
PL0G / 0.100000	1.73000e+70	-16.0000
120000. /		
PL0G / 1.00000	1.08000e+71	-15.9000
124860. /		
PL0G / 10.0000	6.40000e+65	-14.2000
125000. /		
PL0G / 100.000	8.05000e+56	-11.5000
122000. /		
C3H6=H+C3H5-A		2.9800e+54
-12.300 101200.00		
DUPLICATE		
PL0G / 0.0100000	2.98000e+54	-12.3000
101200. /		
PL0G / 0.100000	1.37000e+43	-8.87000
96365.0 /		
PL0G / 1.00000	6.28000e+42	-8.51000
98004.0 /		
PL0G / 10.0000	4.73000e+35	-6.26000
95644.0 /		
PL0G / 100.000	4.34000e+28	-4.06000
93114.0 /		
H+C3H6=H2+C3H5-A		3.6440e+05
2.455 4361.20		
O2+C3H6=H02+C3H5-A		1.2000e+20
-1.670 46192.10		
O+C3H6=0H+C3H5-A		5.2400e+11
0.700 5884.00		
0H+C3H6=H20+C3H5-A		4.4600e+06
2.072 1050.80		
H02+C3H6=H202+C3H5-A		3.0700e-02
4.403 13547.20		
CH3+C3H6=CH4+C3H5-A		2.2100e+00
3.500 5675.00		
CH30+C3H6=CH30H+C3H5-A		8.4000e+10
0.000 2600.00		
C2H5+C3H6=C2H6+C3H5-A		1.0000e+11
0.000 9800.00		
O+C3H6=HCO+C2H5		7.4500e+06
1.880 183.00		
O+C3H6=>H+CH3+CH2CO		3.0500e+06
1.880 183.00		
H+C3H6=CH3+C2H4		1.0000e+00
1.000 1.00		
DUPLICATE		
PL0G / 0.00130000	1.54000e+09	1.35000
2542.00 /		
PL0G / 0.0400000	7.88000e+10	0.870000
3599.60 /		
PL0G / 1.00000	2.67000e+12	0.470000
5431.10 /		
PL0G / 10.0000	9.25000e+22	-2.60000

12898.0	/		
PLOG / 100.000		1.32000e+23	-2.42000
16500.0	/		
H+C3H6=CH3+C2H4			1.0000e+00
1.000	1.00		
DUPLICATE			
PLOG / 0.00130000		1.00000e-10	0.00000
0.00000	/		
PLOG / 0.0400000		1.00000e-10	0.00000
0.00000	/		
PLOG / 1.00000		1.00000e-10	0.00000
0.00000	/		
PLOG / 10.0000		124000.	2.52000
3679.10	/		
PLOG / 100.000		2510.00	2.91000
3980.90	/		
H+C3H6=IC3H7			1.0000e+00
1.000	1.00		
DUPLICATE			
PLOG / 0.00130000		1.35000e+44	-10.6800
8196.40	/		
PLOG / 0.0400000		2.11000e+57	-14.2300
15147.0	/		
PLOG / 1.00000		3.26000e+61	-14.9400
20161.0	/		
PLOG / 10.0000		5.30000e+56	-13.1200
20667.0	/		
PLOG / 100.000		1.11000e+50	-10.8000
20202.0	/		
H+C3H6=IC3H7			1.0000e+00
1.000	1.00		
DUPLICATE			
PLOG / 0.00130000		2.17000e+130	-32.5800
136140.	/		
PLOG / 0.0400000		2.25000e+29	-5.84000
4241.90	/		
PLOG / 1.00000		1.06000e+30	-5.63000
5613.40	/		
PLOG / 10.0000		6.11000e+26	-4.44000
5182.30	/		
PLOG / 100.000		2.73000e+23	-3.26000
4597.00	/		
H02+C3H6=02+IC3H7			8.8700e+22
-3.090	26586.00		
PLOG / 0.0130000		1.02000e+07	1.16000
10273.0	/		
PLOG / 0.986900		1.31000e+20	-2.58000
19078.0	/		
PLOG / 9.87000		4.14000e+28	-4.92000
26212.0	/		
PLOG / 98.6900		8.87000e+22	-3.09000
26586.0	/		
H+C3H5-A=H2+C3H4-A			1.2320e+03
3.035	2582.00		

OH+C3H5-A=H2O+C3H4-A			6.0000e+12
0.000	0.00		
CH3+C3H5-A=CH4+C3H4-A			3.0000e+12
-0.320	-131.00		
C2H5+C3H5-A=C2H6+C3H4-A			4.0000e+11
0.000	0.00		
C2H3+C3H5-A=C2H4+C3H4-A			1.0000e+12
0.000	0.00		
2C3H4-A=C3H5-A+C3H3			5.0000e+14
0.000	64746.70		
2C3H5-A=C3H6+C3H4-A			9.5500e+40
-9.300	12470.00		
PLOG /	1.00000	4.77000e+40	-9.30000
12470.0	/		
PLOG /	4.00000	3.97000e+32	-6.80000
9180.00	/		
PLOG /	10.0000	1.46000e+28	-5.50000
7410.00	/		
C2H5+C3H5-A=C2H4+C3H6			4.0000e+11
0.000	0.00		
HCO+C3H5-A=CO+C3H6			6.0000e+13
0.000	0.00		
O2+C3H5-A=H2O+C3H4-A			4.9900e+15
-1.400	22428.00		
PLOG /	1.00000	4.99000e+15	-1.40000
22428.0	/		
PLOG /	10.0000	2.18000e+21	-2.85000
30755.0	/		
O2+C3H5-A=CH2O+CH3CO			1.1900e+15
-1.010	20128.00		
PLOG /	1.00000	1.19000e+15	-1.01000
20128.0	/		
PLOG /	10.0000	7.14000e+15	-1.21000
21046.0	/		
CH2O+C2H3=HCO+C2H4			1.0000e+11
0.000	0.00		
PLOG /	0.00100000	1.11000e+07	1.09000
1807.20	/		
PLOG /	0.0100000	2.47000e+07	0.993000
1994.90	/		
PLOG /	0.100000	2.47000e+08	0.704000
2596.20	/		
PLOG /	1.00000	1.42000e+10	0.209000
3934.20	/		
PLOG /	10.0000	3.45000e+13	-0.726000
6944.30	/		
PLOG /	100.000	3.31000e+14	-0.866000
10965.7	/		
PLOG /	1000.00	16.5000	3.17000
9399.80	/		
OH+C3H6=CH3+CH3CHO			6.9300e+05
1.490	-536.00		
PLOG /	0.00130000	693000.	1.49000
-536.000	/		

PL0G / 0.0100000	5940.00	2.01000
-560.000 /		
PL0G / 0.0130000	1100.00	2.22000
-680.000 /		
PL0G / 0.0250000	107.000	2.50000
-759.000 /		
PL0G / 0.100000	0.783000	3.10000
-919.000 /		
PL0G / 0.131500	0.307000	3.22000
-946.000 /		
PL0G / 1.00000	0.000316000	4.05000
-1144.00 /		
PL0G / 10.0000	7.59000e-06	4.49000
-680.000 /		
PL0G / 100.000	5.45000e-05	4.22000
1141.00 /		
C3H4-P+C3H3=C3H4-A+C3H3		6.1400e+06
1.740 10450.00		
O2+C3H4-P=H02+C3H3		3.0000e+13
0.000 42630.00		
O+C3H4-P=OH+C3H3		7.6500e+08
1.500 8600.00		
H+C3H4-P=H2+C3H3		3.5720e+04
2.825 4821.00		
OH+C3H4-P=H2O+C3H3		2.0000e+07
2.000 5000.00		
H02+C3H4-P=H202+C3H3		9.5500e-02
4.170 9632.80		
CH3+C3H4-P=CH4+C3H3		1.8000e+12
0.000 7700.00		
C2H3+C3H4-P=C2H4+C3H3		1.0000e+12
0.000 7700.00		
C3H5-A+C3H4-P=C3H6+C3H3		3.0000e+12
0.000 7700.00		
H+C3H4-A=H2+C3H3		6.6250e+03
3.095 5522.00		
O2+C3H4-A=H02+C3H3		4.0000e+13
0.000 41320.00		
OH+C3H4-A=H2O+C3H3		2.0000e+07
2.000 5000.00		
CH3+C3H4-A=CH4+C3H3		1.3000e+12
0.000 7700.00		
H02+C3H4-A=H202+C3H3		3.5800e-02
4.170 9632.80		
C3H5-A+C3H4-A=C3H6+C3H3		2.0000e+11
0.000 7700.00		
H+C3H4-A=H+C3H4-P		2.4400e+10
1.040 2159.00		
DUPLICATE		
PL0G / 0.00100000	8.49000e+10	0.890000
2503.00 /		
PL0G / 0.0390000	1.48000e+13	0.260000
4103.00 /		
PL0G / 1.00000	2.48000e+15	-0.330000

6436.00	/		
PLOG / 10.0000		2.35000e+25	-3.23000
13165.0	/		
PLOG / 100.000		1.02000e+24	-2.67000
15552.0	/		
H+C3H4-A=H+C3H4-P			2.4400e+10
1.040	2159.00		
DUPLICATE			
PLOG / 0.00100000		1.00000e-10	0.00000
0.00000	/		
PLOG / 0.0390000		1.00000e-10	0.00000
0.00000	/		
PLOG / 1.00000		1.00000e-10	0.00000
0.00000	/		
PLOG / 10.0000		1.79000e+07	1.98000
4521.00	/		
PLOG / 100.000		46300.0	2.62000
4466.00	/		
H+C3H4-A=C3H5-A			2.2100e+61
-15.250	20076.00		
DUPLICATE			
PLOG / 0.00100000		2.21000e+61	-15.2500
20076.0	/		
PLOG / 0.0390000		1.24000e+52	-12.0200
17839.0	/		
PLOG / 1.00000		4.67000e+51	-11.4500
21340.0	/		
PLOG / 10.0000		3.75000e+48	-10.2700
22511.0	/		
PLOG / 100.000		4.23000e+43	-8.61000
22522.0	/		
H+C3H4-A=C3H5-A			2.2100e+61
-15.250	20076.00		
DUPLICATE			
PLOG / 0.00100000		2.80000e+38	-8.67000
8035.00	/		
PLOG / 0.0390000		9.33000e+36	-8.19000
7462.00	/		
PLOG / 1.00000		3.32000e+30	-5.78000
6913.00	/		
PLOG / 10.0000		2.29000e+26	-4.32000
6163.00	/		
PLOG / 100.000		4.38000e+21	-2.71000
5187.00	/		
H+C3H4-A=CH3+C2H2			3.7400e+01
3.350	57.80		
DUPLICATE			
PLOG / 0.00100000		1.23000e+08	1.53000
4737.00	/		
PLOG / 0.0390000		2.72000e+09	1.20000
6834.00	/		
PLOG / 1.00000		1.26000e+20	-1.83000
15003.0	/		
PLOG / 10.0000		1.68000e+16	-0.600000

14754.0	/		
PLOG / 100.000		1.37000e+17	-0.790000
17603.0	/		
H+C3H4-A=CH3+C2H2			3.7400e+01
3.350	57.80		
DUPLICATE			
PLOG / 0.00100000		1.00000e-10	0.00000
0.00000	/		
PLOG / 0.0390000		1.00000e-10	0.00000
0.00000	/		
PLOG / 1.00000		12300.0	2.68000
6335.00	/		
PLOG / 10.0000		3.31000e+08	1.14000
8886.00	/		
PLOG / 100.000		1.28000e+06	1.71000
9774.00	/		
H+C3H4-P=CH3+C2H2			2.1200e+10
1.060	3945.00		
PLOG / 0.00100000		2.44000e+10	1.04000
3980.00	/		
PLOG / 0.0390000		3.89000e+10	0.989000
4114.00	/		
PLOG / 1.00000		3.46000e+12	0.442000
5463.00	/		
PLOG / 10.0000		1.72000e+14	-0.0100000
7134.00	/		
PLOG / 100.000		1.90000e+15	-0.290000
8306.00	/		
H+C3H4-P=C3H5-A			1.1000e+60
-14.560	28100.00		
PLOG / 0.100000		1.10000e+60	-14.5600
28100.0	/		
PLOG / 1.00000		4.91000e+60	-14.3700
31644.0	/		
PLOG / 2.00000		3.04000e+60	-14.1900
32642.0	/		
PLOG / 5.00000		9.02000e+59	-13.8900
33953.0	/		
PLOG / 10.0000		2.20000e+59	-13.6100
34900.0	/		
PLOG / 100.000		1.60000e+55	-12.0700
37500.0	/		
CH3+C2H2=C3H5-A			8.2000e+53
-13.320	33200.00		
PLOG / 0.100000		8.20000e+53	-13.3200
33200.0	/		
PLOG / 1.00000		2.68000e+53	-12.8200
35730.0	/		
PLOG / 2.00000		3.64000e+52	-12.4600
36127.0	/		
PLOG / 5.00000		1.04000e+51	-11.8900
36476.0	/		
PLOG / 10.0000		4.40000e+49	-11.4000
36700.0	/		

PLOG / 100.000	3.80000e+44	-9.63000
37600.0 /		
0+C3H4-P=CH3+HCCO		7.3000e+12
0.000 2250.00		
0+C3H4-P=CO+C2H4		1.0000e+13
0.000 2250.00		
0+C3H4-P=HCO+C2H3		3.2000e+12
0.000 2010.00		
0+C3H4-A=CO+C2H4		2.0000e+07
1.800 1000.00		
0+C3H4-A=CH2O+C2H2		3.0000e-03
4.610 -4243.00		
H02+C3H4-P=>OH+CO+C2H4		3.0000e+12
0.000 19000.00		
H02+C3H4-A=>OH+CO+C2H4		1.0000e+11
0.000 14000.00		
H02+C3H4-A=>OH+CH2+CH2CO		4.0000e+12
0.000 19000.00		
H02+C3H3=>OH+CO+C2H3		8.0000e+11
0.000 0.00		
HCO+C3H3=CO+C3H4-A		2.5000e+13
0.000 0.00		
HCO+C3H3=CO+C3H4-P		2.5000e+13
0.000 0.00		
O2+C3H3=HCO+CH2CO		1.7000e+05
1.700 1500.00		
H+C3H3=H2+C3H2		2.1400e+05
2.520 7453.00		
OH+C3H3=H2O+C3H2		2.0000e+13
0.000 8000.00		
OH+C3H3=CH2O+C2H2		2.0000e+12
0.000 0.00		
OH+C3H3=HCO+C2H3		1.0000e+13
0.000 0.00		
OH+C3H3=CO+C2H4		1.0000e+13
0.000 0.00		
CH3CHO=H2+CH2CO		4.0000e+13
0.000 80500.00		
O2+C3H4-A=>CH2O+CH2CO		1.0000e+15
0.000 41000.00		
0+C2H2=>CH2CO		1.0000e+13
0.000 15000.00		
0+CH2CO=>2HCO		2.0000e+13
0.000 2300.00		
0+CH2CO=>CO+CH2O		1.0000e+12
0.000 5000.00		
OH+CH2CO=>CO2+CH3		1.0000e+13
0.000 0.00		
O2+CH2CO=>CO2+CH2O		1.0000e+14
0.000 37000.00		
O2+CH2CO=>OH+CO+HCO		3.0000e+14
0.000 40000.00		
OH+CH3CO=>H2O+CH2CO		3.0000e+12
0.000 0.00		

OH+CH2CHO=>H2O+CH2CO	5.0000e+12
0.000 0.00	
H02+CH2CO=>OH+CO+CH2O	1.0000e+10
0.000 5000.00	
O2+CH2CHO=>H02+CH2CO	5.0000e+11
0.000 3000.00	
2CH2CO=CH3CO+HCCO	1.5000e+13
0.000 60500.00	
2CH2CO=CO2+C3H4-A	7.5000e+09
0.000 27700.00	
2CH2CO=>2CO+C2H4	7.5000e+10
0.000 40000.00	
CH2CO=>H+HCCO	1.5000e+14
0.000 102400.00	
CH2+CH2CO=CO+C2H4	5.0000e+03
2.800 6210.00	
CH2+CH2CO=CH3+HCCO	3.6000e+13
0.000 11000.00	
CH3+CH2CO=OH+C3H4-A	1.5000e+11
0.000 32300.00	
CH3+CH2CO=OH+C3H4-P	3.0000e+10
0.000 39000.00	
OH+HCCO=H+CO+HCO	1.0000e+13
0.000 0.00	
O2+HCCO=CO2+HCO	2.4000e+11
0.000 -854.00	
CH2+HCCO=CO+C2H3	3.0000e+13
0.000 0.00	
2HCCO=>2CO+C2H2	1.0000e+13
0.000 0.00	
C2H3+HCCO=CO+C3H4-P	4.0000e+13
0.000 0.00	
O2+C2H2=OH+HCCO	2.0000e+07
1.500 30000.00	
O2+C3H2=HCO+HCCO	4.0000e+13
0.000 0.00	
CH2O+CH3CO=HCO+CH3CHO	1.0830e+06
2.000 11500.00	
CH2O+C2H5=HCO+C2H6	1.8390e+05
2.000 5917.09	
CH2O+IC3H7=HCO+C3H8	1.0830e+05
2.000 8166.15	
CH2O+CH2CHO=HCO+CH3CHO	1.8390e+05
2.000 9527.24	
CH2O+HCCO=HCO+CH2CO	3.4240e+05
2.000 3698.82	
CH2O+C3H3=HCO+C3H4-A	2.1600e+05
2.000 11811.53	
CH3OH+CH3CO=CH3O+CH3CHO	6.7670e+04
2.000 16897.45	
CH3OH+CH2CHO=CH3O+CH3CHO	1.1490e+04
2.000 13414.83	
CH3OH+HCCO=CH3O+CH2CO	2.1400e+04
2.000 7064.07	

CH3OH+C3H3=CH3O+C3H4-A	1.3500e+04
2.000 15866.89	
CH3OH+CH3CO=CH2OH+CH3CHO	4.0600e+05
2.000 16918.97	
CH3OH+C2H3=CH2OH+C2H4	2.0350e+05
2.000 7914.10	
CH3OH+C2H5=CH2OH+C2H6	6.8950e+04
2.000 10525.57	
CH3OH+C3H5-A=CH2OH+C3H6	1.6160e+05
2.000 16025.57	
CH3OH+IC3H7=CH2OH+C3H8	4.0600e+04
2.000 13025.57	
CH3OH+CH2CHO=CH2OH+CH3CHO	6.8950e+04
2.000 14525.57	
CH3OH+HCCO=CH2OH+CH2CO	1.2840e+05
2.000 8025.57	
CH3OH+C3H3=CH2OH+C3H4-A	8.1010e+04
2.000 17025.57	
H+CH2CO=>H2+HCCO	1.5000e+14
0.000 14126.59	
CH3+CH2CO=>CH4+HCCO	2.5000e+12
0.000 15137.82	
O2+CH2CO=>H2O+HCCO	7.4540e+06
2.000 51172.82	
OH+CH2CO=>H2O+HCCO	1.7470e+06
2.000 1698.84	
O+CH2CO=>OH+HCCO	5.9210e+06
2.000 8519.89	
H2O+CH2CO=>H2O2+HCCO	2.3570e+05
2.000 19802.73	
C2H5+CH2CO=>C2H6+HCCO	1.0060e+05
2.000 14621.99	
CH2CO+C3H5-A=>HCCO+C3H6	1.0530e+05
2.000 23429.40	
CH2CO+IC3H7=>HCCO+C3H8	5.9210e+04
2.000 15821.88	
C2H3+CH2CO=>C2H4+HCCO	2.9670e+05
2.000 11151.84	
CH2CO+C3H3=>HCCO+C3H4-A	1.1810e+05
2.000 22567.15	
CH3CO+CH2CO=>CH3CHO+HCCO	5.9210e+05
2.000 22155.49	
CH2CHO+CH2CO=>CH3CHO+HCCO	1.0060e+05
2.000 18968.53	
O+OH+M=H2O+M	1.0000e+16
0.000 0.00	
H2O+CO=H2+CO2	2.0000e+11
0.000 38000.00	
OH+CH=H2O+C	4.0000e+07
2.000 3000.00	
O2+C2H5=>CH3O+CH2O	1.0000e+14
0.000 24000.00	
O2+C2H5=>O+CH3+CH2O	1.0000e+13
0.000 27000.00	

O+C2H5=>0.35H+0.30H+0.35CH3+0.35CH2O+0.3C2H4+0.35CH3CHO	5.0000e+13
0.000 0.00	
H02+C2H5=>OH+CH3+CH2O	5.0000e+12
0.000 0.00	
O+C2H4=>CH3CHO	1.0000e+09
0.000 5000.00	
CH3OCO=C02+CH3	1.5500e+12
0.514 15200.00	
CH3OCO=C0+CH3O	7.3700e+12
0.479 23800.00	
CH3O2=OH+CH2O	1.5000e+13
0.000 47000.00	
OH+CH3O2=>H02+CH3O	3.0000e+12
0.000 0.00	
H02+CH3O2=>O2+H2O+CH2O	5.0000e+10
0.000 0.00	
CH3O2+C3H5-A=>CH3O+CH2O+C2H3	7.5000e+10
0.000 0.00	
CH3O2+CH2O=>H2+OH+C0+CH2O	2.0000e+11
0.000 11000.00	
C0+CH3O2=>C02+CH3O	1.0000e+14
0.000 24000.00	
CH3+CH2O=H+CH3CHO	2.0000e+11
0.000 7600.00	
CH2+HCO=C0+CH3	2.0000e+13
0.000 0.00	
O+CH2=H2+C0	5.0000e+13
0.000 0.00	
OH+CH2=H+CH2O	3.0000e+13
0.000 0.00	
C02+CH2=C0+CH2O	1.1000e+11
0.000 1000.00	
O+CH2(S)=2H+C0	3.0000e+13
0.000 0.00	
OH+C3H2=HCO+C2H2	5.0000e+13
0.000 0.00	
CH3+CH=H+C2H3	3.0000e+13
0.000 0.00	
CH3+C=H+C2H2	5.0000e+13
0.000 0.00	
CH4+CH2(S)=2CH3	4.3000e+13
0.000 0.00	
C2H6+C2H2=C2H5+C2H3	2.0000e+14
0.000 60000.00	
2CH3=>H2+C2H4	5.0000e+14
0.000 32000.00	
2CH2=>2H+C2H2	1.2000e+14
0.000 0.00	
CH2+CH=H+C2H2	4.0000e+13
0.000 0.00	
CH+C2H2=H+C3H2	8.4000e+13
0.000 0.00	
C2H5+IC3H7=>C2H4+C3H8	5.0000e+11
0.000 0.00	

CH3+IC3H7=>CH4+C3H6			6.0000e+10
0.000	0.00		
C2H2+C3H6=C2H3+C3H5-A			4.0000e+13
0.000	46800.00		
C3H3=H+C3H2			1.0000e+13
0.000	97000.00		
C2H4+IC3H7=C2H5+C3H6			1.0000e+11
0.000	7600.00		
2C3H6=IC3H7+C3H5-A			1.0000e+15
0.000	68000.00		
C2H6=H2+C2H4			3.0000e+13
0.000	78500.00		
C3H6=H2+C3H4-A			1.8000e+13
0.000	78000.00		
C3H6=H2+C3H4-P			1.8000e+13
0.000	78000.00		
C3H8=H2+C3H6			5.0000e+13
0.000	70000.00		
H+C3H3=C3H4-A			2.0500e+13
0.206	-173.00		
PL0G /	0.0400000	3.39000e+36	-7.41000
6337.00	/		
PL0G /	1.00000	3.16000e+29	-5.00000
4711.00	/		
PL0G /	10.0000	8.71000e+23	-3.20000
3255.00	/		
PL0G /	100.000	2.05000e+13	0.206000
-173.000	/		
H+C3H3=C3H4-P			6.4000e+13
0.102	-31.20		
PL0G /	0.0400000	3.63000e+36	-7.36000
6039.00	/		
PL0G /	1.00000	7.94000e+29	-5.06000
4861.00	/		
PL0G /	10.0000	1.07000e+24	-3.15000
3261.00	/		
PL0G /	100.000	6.40000e+13	0.102000
-31.2000	/		
H+CH3CO=CH3CHO			1.3000e+13
0.000	0.00		
O2+C3H4-P=>HCO+CH3CO			7.0000e+13
0.000	41000.00		
O2+CH3CHO=H02+CH2CHO			4.0000e+13
0.000	49000.00		
H+CH3CHO=H2+CH3CO			5.0000e+07
2.000	3600.00		
CH3+CH3CHO=CH4+CH3CO			2.6000e+05
2.000	4100.00		
C2H3+CH3CHO=C2H4+CH3CO			4.0700e+05
2.000	3965.69		
C2H5+CH3CHO=C2H6+CH3CO			1.3790e+05
2.000	5917.09		
CH3CHO+C3H5-A=CH3CO+C3H6			3.2330e+05
2.000	10895.64		

CH3CHO+IC3H7=CH3CO+C3H8	8.1200e+04
2.000 8166.15	
CH3CHO+CH2CHO=CH3CHO+CH3CO	1.3790e+05
2.000 9527.24	
CH3CHO+HCCO=>CH3CO+CH2CO	2.5680e+05
2.000 3698.82	
CH3CHO+C3H3=CH3CO+C3H4-A	1.6200e+05
2.000 11811.53	
CH3+CH3CHO=CH4+CH2CHO	1.1710e+05
2.000 7968.53	
O+CH3CHO=OH+CH2CHO	4.0600e+06
2.000 5025.57	
C2H3+CH3CHO=C2H4+CH2CHO	2.0350e+05
2.000 8001.75	
C2H5+CH3CHO=C2H6+CH2CHO	6.8950e+04
2.000 10525.57	
CH3CHO+C3H5-A=CH2CHO+C3H6	1.6160e+05
2.000 16025.57	
H02+CH3CHO=H202+CH2CHO	1.6160e+05
2.000 15025.57	
CH3CHO+IC3H7=CH2CHO+C3H8	4.0600e+04
2.000 13025.57	
CH3CHO+HCCO=>CH2CHO+CH2CO	1.2840e+05
2.000 8025.57	
CH3CHO+C3H3=>CH2CHO+C3H4-A	8.1010e+04
2.000 17025.57	
H+CH3OH=>H2O+CH3	6.5000e+11
0.000 5300.00	
O+CH2O=>2H+CO2	2.0000e+13
0.000 5000.00	
O+CH3CHO=>H+CO2+CH3	2.0000e+13
0.000 3000.00	
OH+CH2O=>H2+H+CO2	1.0000e+11
0.000 0.00	
OH+CH3CHO=>H2+CO2+CH3	2.0000e+11
0.000 0.00	
H02+C2H2=>CH2O+HCO	5.0000e+12
0.000 15000.00	
CH2O+HCO=CO2+CH3	5.0000e+11
0.000 6000.00	
HCO+CH3CHO=>CO2+C2H5	3.0000e+11
0.000 6000.00	
CH2O+C2H3=>0.5CH3O+0.5CH2OH+C2H2	5.0000e+11
0.000 6000.00	
CO+CH3O=CO2+CH3	5.0000e+11
0.000 6500.00	
O2+C2H2=>CO+CH2O	3.0000e+11
0.000 26000.00	
O2+C2H4=>2CH2O	1.0000e+14
0.000 48000.00	
O2+C2H2=>2HCO	3.0000e+11
0.000 27000.00	
O2+C2H4=>CH3O+HCO	1.0000e+14
0.000 43000.00	

O2+CH2CHO=>OH+CO+CH2O	6.0000e+10
0.000 0.00	
O+CH3+M=>CH3O+M	5.0000e+16
0.000 0.00	
O+C2H3=>CH2CHO	2.5000e+13
0.000 0.00	
O+C3H5-A=>CH2O+C2H3	3.2500e+13
0.000 0.00	
O+CH2CHO=>CH2O+HCO	5.0000e+13
0.000 0.00	
OH+C2H3=>CH3CHO	5.0000e+12
0.000 0.00	
H02+C2H3=>OH+CH2CHO	3.0000e+12
0.000 0.00	
H02+HCO=H2O2+CO	4.0000e+11
0.000 0.00	
OH+CH3O=>H2O+CH2O	1.5000e+13
0.000 0.00	
CH3O+HCO=2CH2O	1.0000e+13
0.000 0.00	
CH3O+HCO=>CO+CH3OH	1.0000e+13
0.000 0.00	
CH3+CH2OH=>CH4+CH2O	1.5000e+13
0.000 0.00	
H+CH2CHO=>CH3CHO	6.0000e+13
0.000 0.00	
OH+CH2CHO=>CH2OH+HCO	1.0000e+13
0.000 0.00	
CH2CHO=CH3CO	2.0000e+11
0.000 32000.00	
OH+C2H2=>CH2CHO	5.0000e+11
0.000 0.00	
C2H6+C2H3=C2H5+C2H4	6.1050e+05
2.000 7629.22	
C2H6+C3H3=C2H5+C3H4-A	2.4300e+05
2.000 17025.57	
C2H6+HCCO=>C2H5+CH2CO	3.8520e+05
2.000 8025.57	
O+C2H4=OH+C2H3	1.0830e+07
2.000 8781.96	
C2H4+C3H5-A=C2H3+C3H6	4.3100e+05
2.000 20927.50	
H02+C2H4=H2O2+C2H3	4.3100e+05
2.000 19844.40	
C2H4+C3H3=C2H3+C3H4-A	2.1600e+05
2.000 22007.87	
C2H4+HCCO=>C2H3+CH2CO	3.4240e+05
2.000 12160.02	
HCCO+C3H8=>CH2CO+IC3H7	8.5590e+04
2.000 5333.37	
C3H8+C3H3=IC3H7+C3H4-A	5.4010e+04
2.000 13781.28	
HCO+C3H6=>CH2O+C3H5-A	3.7890e+05
2.000 12360.44	

HCCO+C3H6=>CH2CO+C3H5-A	1.2840e+05
2.000 5333.37	
O+C3H4-A=OH+C3H3	8.1200e+07
2.000 8781.96	
CH3O+C3H4-P=CH3OH+C3H3	2.5680e+06
2.000 7522.23	
CH2OH+C3H4-P=CH3OH+C3H3	1.6970e+06
2.000 18214.10	
HCCO+C3H4-P=CH2CO+C3H3	2.5680e+06
2.000 12160.02	
CH3CO+C3H4-P=CH3CHO+C3H3	8.1200e+06
2.000 22331.49	
C5H6=H+C5H5	1.5000e+15
0.000 81500.00	
C2H2+C3H4-A=C5H6	2.0000e+11
0.000 22000.00	
C2H2+C3H4-P=C5H6	2.5000e+10
0.000 22000.00	
C2H4+C3H3=H+C5H6	5.0000e+10
0.000 20400.00	
H+C5H6=>C2H2+C3H5-A	2.0000e+12
0.000 8000.00	
OH+C5H6=>HCO+C2H4+C2H2	2.0000e+12
0.000 0.00	
OH+C5H6=>CH3+C2H2+CH2CO	2.0000e+13
0.000 0.00	
O2+C5H6=>2CO+C3H6	1.0000e+13
0.000 39000.00	
O2+C5H6=>CO+HCO+C3H5-A	4.0000e+13
0.000 39000.00	
O+C5H6=>CH2CO+C3H4-A	3.0000e+12
0.000 0.00	
O+C5H6=>CH2CO+C3H4-P	3.0000e+12
0.000 0.00	
OH+C5H5=>CO+C2H4+C2H2	2.0000e+14
0.250 4350.00	
OH+C5H5=>H+CH2CO+C3H3	3.5000e+13
0.250 4350.00	
O+C5H5=>HCCO+C3H4-A	5.0000e+12
0.000 0.00	
O+C5H5=>HCCO+C3H4-P	5.0000e+12
0.000 0.00	
H+C5H6=>H2+C5H5	1.2000e+15
0.000 7925.00	
H2+C5H5=>H+C5H6	1.8000e+14
0.000 30000.00	
OH+C5H6=>H2O+C5H5	1.0000e+14
0.000 1714.00	
C5H5=>C2H2+C3H3	2.0000e+12
0.000 68000.00	
C2H3+C3H4-A=>H+C5H6	5.0000e+11
0.000 3000.00	
C2H3+C3H4-P=>H+C5H6	5.0000e+11
0.000 3000.00	

OH+NH3=H2O+NH2		3.6830e+03
2.860	197.00	
0+NH3=0H+NH2		9.4000e+06
1.940	6460.00	
0+NH2=H+HNO		6.6000e+14
-0.500	0.00	
0+NH2=0H+NH		6.8000e+12
0.000	0.00	
0+NH2=H2+N0		1.3000e+08
1.025	-627.00	
02+NH2=0H+HNO		2.9000e-02
3.764	18185.00	
0H+NH2=H2O+NH		4.0000e+06
2.000	1000.00	
H02+NH2=02+NH3		1.7000e+04
1.550	2027.00	
N+NH2=N2+2H		7.0000e+13
0.000	0.00	
NH+NH2=H+N2H2		4.3000e+14
-0.272	-77.00	
2NH2=H2+N2H2		1.7000e+08
1.620	11783.00	
2NH2=NH3+NH		5.6000e+00
3.530	552.00	
N0+NH2=0H+NNH		6.2000e+15
-1.150	2518.00	
N0+NH2=N2+H2O		1.2000e+20
-2.576	725.00	
H+NH=H2+N		3.0000e+13
0.000	0.00	
0+NH=H+N0		9.2000e+13
0.000	0.00	
0H+NH=H+HNO		2.0000e+13
0.000	0.00	
0H+NH=H2O+N		5.0000e+11
0.500	2000.00	
0H+NH=H2+N0		2.0000e+13
0.000	0.00	
02+NH=0+HNO		4.6000e+05
2.000	6500.00	
02+NH=0H+N0		1.3000e+06
1.500	100.00	
2NH=N2+2H		2.5000e+13
0.000	0.00	
N+NH=N2+H		3.0000e+13
0.000	0.00	
N0+NH=N2+0H		2.2000e+13
-0.230	0.00	
0H+N=H+N0		3.8000e+13
0.000	0.00	
02+N=0+N0		6.4000e+09
1.000	6280.00	
N0+N=N2+0		3.3000e+12
0.300	0.00	

N2H2+M=H+NNH+M					1.0000e+17
0.000	50000.00				
H2O/	16.25/	CO/	1.88/	CO2/	3.75/
CH4/	16.25/	C2H6/	16.25/		
H+N2H2=H2+NNH					1.1000e+14
0.000	3128.00				
O+N2H2=NO+NH2					1.0000e+13
0.000	1000.00				
O+N2H2=OH+NNH					2.0000e+13
0.000	1000.00				
OH+N2H2=H2O+NNH					1.0000e+13
0.000	1000.00				
NO+N2H2=N2O+NH2					3.0000e+12
0.000	0.00				
N2H2+NH=NNH+NH2					1.0000e+13
0.000	1000.00				
N2H2+NH2=NH3+NNH					8.8000e-02
4.050	1610.00				
NNH=N2+H					1.0000e+07
0.000	0.00				
H+NNH=N2+H2					1.0000e+14
0.000	0.00				
O+NNH=H+N2O					1.9000e+14
-0.274	-22.00				
O+NNH=NO+NH					5.2000e+11
0.388	-409.00				
OH+NNH=N2+H2O					5.0000e+13
0.000	0.00				
O2+NNH=N2+HO2					5.6000e+14
-0.385	-13.00				
NH+NNH=N2+NH2					5.0000e+13
0.000	0.00				
NNH+NH2=N2+NH3					5.0000e+13
0.000	0.00				
NO+NNH=N2+HNO					5.0000e+13
0.000	0.00				
HCO+NO=CO+HNO					6.9000e+12
0.000	0.00				
H+NO(+M)=HNO(+M)					1.5000e+15
-0.410	0.00				
LOW/	2.40e+14	0.206		-1550.0/	
TROE/	0.8200	1.000e-30	1.000e+30	1.000e+30/	
N2/	1.60/				
H+HNO=H2+NO					4.4000e+11
0.720	650.00				
O+HNO=OH+NO					1.0000e+13
0.000	0.00				
OH+HNO=H2O+NO					3.6000e+13
0.000	0.00				
O2+HNO=HO2+NO					1.0000e+13
0.000	25000.00				
HNO+NH2=NO+NH3					5.9000e+02
2.950	-3469.00				
NO+HNO=OH+N2O					2.0000e+12
0.000	26000.00				

2HNO=H2O+N2O		9.0000e+08
0.000	3100.00	
H2+CN=H+HCN		1.1000e+05
2.600	1908.00	
O+HCN=H+NCO		1.4000e+04
2.640	4980.00	
O+HCN=CO+NH		3.5000e+03
2.640	4980.00	
O+HCN=OH+CN		2.7000e+09
1.580	29200.00	
OH+HCN=H2O+CN		3.9000e+06
1.830	10300.00	
OH+HCN=H+HNCO		2.0000e-03
4.000	1000.00	
OH+HCN=CO+NH2		7.8000e-04
4.000	4000.00	
O+CN=CO+N		7.7000e+13
0.000	0.00	
OH+CN=H+NCO		4.0000e+13
0.000	0.00	
O2+CN=CO+NO		2.8000e+17
-2.000	0.00	
O2+CN=O+NCO		5.7600e+12
0.000	-417.20	
NCO+M=CO+N+M		3.1000e+16
-0.500	48000.00	
N2/ 1.50/		
H+NCO=CO+NH		7.2000e+13
0.000	1000.00	
O+NCO=CO+NO		2.0000e+13
-0.500	0.00	
N+NCO=N2+CO		2.0000e+13
0.000	0.00	
CO+N2O=N2+CO2		2.7000e+11
0.000	20237.00	
O2+NCO=CO2+NO		2.0000e+12
0.000	20000.00	
OH+NCO=HCO+NO		5.0000e+12
0.000	15000.00	
HCO+NCO=CO+HNCO		3.6000e+13
0.000	0.00	
CH2O+NCO=HCO+HNCO		6.0000e+12
0.000	0.00	
HNO+NCO=NO+HNCO		1.8000e+13
0.000	0.00	
2NCO=N2+2CO		1.8000e+13
0.000	0.00	
H+HCNO=OH+HCN		5.5000e+12
0.000	0.00	
O+HCNO=HCO+NO		7.0000e+13
0.000	0.00	
OH+HCNO=CH2O+NO		2.0000e+13
0.000	0.00	
HNCO+M=CO+NH+M		1.1000e+16

0.000	86000.00		
N2/	1.50/		
H+HNC0=CO+NH2			2.2500e+07
1.700	3800.00		
0+HNC0=OH+NCO			2.2000e+06
2.110	11430.00		
0+HNC0=CO2+NH			9.6000e+07
1.410	8520.00		
0+HNC0=CO+HNO			1.5000e+08
1.570	44012.00		
H02+HNC0=H202+NCO			3.0000e+11
0.000	22000.00		
02+HNC0=CO2+HNO			1.0000e+12
0.000	35000.00		
HNC0+NH2=NH3+NCO			5.0000e+12
0.000	6200.00		
HNC0+NH=NH2+NCO			3.0000e+13
0.000	23700.00		
HNC0+CN=HCN+NCO			1.5000e+13
0.000	0.00		
H2+NCO=H+HNC0			7.6000e+02
3.000	4000.00		
OH+HNC0=H20+NCO			6.4000e+05
2.000	2560.00		
N0+NCO=N2+CO2			7.8000e+17
-1.730	763.00		
N0+NCO=CO+N20			6.2000e+17
-1.730	763.00		
H2CN=H+HCN			6.0000e+31
-6.460	32110.00		
PLOG /	0.100000	1.30000e+29	-6.03000
29894.0	/		
PLOG /	1.00000	6.00000e+31	-6.46000
32110.0	/		
PLOG /	10.0000	3.50000e+29	-5.46000
32547.0	/		
H+H2CN=H2+HCN			2.4000e+08
1.500	-894.00		
0+H2CN=OH+HCN			1.7000e+08
1.500	-894.00		
OH+H2CN=H20+HCN			1.5000e+19
-2.180	2166.00		
DUPLICATE			
PLOG /	0.100000	2.10000e+17	-1.68000
318.000	/		
PLOG /	1.00000	1.50000e+19	-2.18000
2166.00	/		
PLOG /	10.0000	9.50000e+21	-2.91000
5633.00	/		
OH+H2CN=H20+HCN			1.2000e+06
2.000	-1192.00		
DUPLICATE			
PLOG /	0.100000	1.20000e+06	2.00000
-1192.00	/		

PL0G / 1.00000	1.20000e+06	2.00000
-1192.00 /		
PL0G / 10.0000	1.20000e+06	2.00000
-1192.00 /		
O2+H2CN=CH2O+N0		3.0000e+12
0.000 5961.00		
NH2+H2CN=NH3+HCN		9.2000e+05
1.940 -1152.00		
NH+H2CN=HCN+NH2		1.7000e+08
1.500 -894.00		
N+H2CN=N2+CH2		2.0000e+13
0.000 0.00		
CO2+N=CO+N0		1.9000e+11
0.000 3400.00		
CO2+CN=CO+NCO		3.6700e+06
2.160 26887.00		
CH3+N=H+H2CN		7.1000e+13
0.000 0.00		
CH3+N0=H2O+HCN		4.9000e+08
0.460 12398.90		
CH3+N0=OH+H2CN		2.2000e+09
0.750 11723.30		
CH2+N=H+HCN		5.0000e+13
0.000 0.00		
N2+CH2=HCN+NH		1.0000e+13
0.000 73520.00		
CH+N=H+CN		1.3000e+13
0.000 0.00		
CH+N2O=N0+HCN		9.6000e+12
0.000 -993.00		
N2+C=N+CN		6.3000e+13
0.000 46000.00		
C+N0=O+CN		1.9000e+13
0.000 0.00		
C+N0=CO+N		2.9000e+13
0.000 0.00		
CH+N0=O+HCN		5.5000e+13
0.000 0.00		
CH+N0=H+NCO		2.0000e+13
0.000 0.00		
CH+N0=HCO+N		3.0000e+13
0.000 0.00		
CH2+N0=H2+NCO		3.5000e+12
0.000 -378.00		
CH2(S)+N0=H2+NCO		3.5000e+12
0.000 -378.00		
CH2+N0=OH+HCN		2.2000e+12
0.000 -378.00		
CH2(S)+N0=OH+HCN		2.0000e+13
0.000 0.00		
CH2+N0=H+HNCO		1.3000e+12
0.000 -378.00		
CH2(S)+N0=H+HNCO		3.1000e+17
-1.380 1270.00		

CH2+NO=H+HCNO			1.3000e+12
0.000	-378.00		
CH2(S)+NO=H+HCNO			3.8000e+13
-0.360	580.00		
H+HCNO=H+HNCO			5.0000e+10
0.000	0.00		
HCNO=O+HCN			4.2000e+31
-6.100	61292.00		
PLOG /	0.100000	2.00000e+30	-6.00000
60733.0	/		
PLOG /	1.00000	4.20000e+31	-6.10000
61292.0	/		
PLOG /	10.0000	5.90000e+31	-5.85000
62088.0	/		
HCN=HNC			1.9000e+24
-4.230	49575.65		
PLOG /	0.100000	1.50000e+23	-4.20000
49456.4	/		
PLOG /	1.00000	1.90000e+24	-4.23000
49575.7	/		
PLOG /	10.0000	5.30000e+25	-4.34000
50191.6	/		
H+HNC=H+HCN			7.8000e+13
0.000	3590.00		
O+HNC=CO+NH			4.6000e+12
0.000	2200.00		
OH+HNC=H+HNCO			3.6000e+12
0.000	-479.00		
OH+HNC=H2O+CN			3.0000e+02
3.160	10600.00		
C2H6+CN=C2H5+HCN			1.2000e+05
2.770	-1790.00		
C2H6+NCO=C2H5+HNCO			1.5000e-09
6.890	-2910.00		
C2H4+CN=C2H3+HCN			5.9000e+14
-0.240	0.00		
C3H6+CN=C3H5-A+HCN			6.0500e+14
-0.190	0.00		
C2H3+NO=C2H2+HNO			1.0000e+12
0.000	1000.00		
C2H2+NCO=HCCO+HCN			1.4000e+12
0.000	1815.00		
CH2CO+CN=HCCO+HCN			2.0000e+13
0.000	0.00		
CH4+CN=CH3+HCN			6.2000e+04
2.640	-437.00		
C2H3+N=CH2+HCN			2.0000e+13
0.000	0.00		
HCCO+N=CO+HCN			5.0000e+13
0.000	0.00		
HCCO+NO=CO+HCNO			2.7500e+13
0.000	436.00		
HCCO+NO=CO2+HCN			7.0000e+12
0.000	1674.00		

C3H3+N=C2H2+HCN	1.0000e+14
0.000 0.00	
N2O(+M)=N2+O(+M)	1.3000e+12
0.000 62570.00	
LOW/ 4.00e+14 0.000 56600.0/	
N2/ 1.70/ O2/ 1.40/ CO2/ 3.00/ H2O/ 12.00/ N2/ 1.70/ O2/ 1.40/	
H2O/ 12.00/ CO2/ 3.00/	
H+N2O=N2+OH	3.3000e+10
0.000 4729.00	
DUPLICATE	
H+N2O=N2+OH	4.4000e+14
0.000 19254.00	
DUPLICATE	
NO+NH=H+N2O	3.1900e+14
-0.455 0.00	
O+N2O=2NO	2.9000e+13
0.000 23150.00	
O+N2O=N2+O2	1.4000e+12
0.000 10800.00	
OH+N2O=N2+H2O	2.0000e+12
0.000 40000.00	
O2+HCN=H2O+CN	5.0000e+12
0.000 72500.00	
CH4+NO=CH3+HNO	5.0000e+11
0.000 50000.00	
C2H6+NO=C2H5+HNO	7.0000e+11
0.000 48000.00	
CH3O+NO=CH2O+HNO	6.0000e+13
-0.600 0.00	
N2+CH=H+NCN	4.0960e+08
1.122 17523.40	
N2O+CN=NO+NCN	1.8000e+10
0.000 1450.00	
CN+NCO=CO+NCN	1.8000e+13
0.000 0.00	
NCN=N+CN	2.9500e+30
-5.290 117090.00	
NCN=N2+C	2.6600e+28
-5.320 83110.00	
H+NCN=HCN+N	3.4900e+14
0.000 7956.00	
O+NCN=NO+CN	9.6000e+13
0.000 1385.00	
O+NCN=N2+CO	2.4200e+02
2.320 -1135.00	
O+NCN=N+NCO	2.2000e+09
0.420 -157.00	
OH+NCN=NO+HCN	3.3200e+10
-0.970 7290.00	
O2+NCN=NO+NCO	3.8000e+09
0.510 24590.00	
CH+NCN=HCN+CN	3.2100e+13
0.000 -860.00	
CH2+NCN=CN+H2CN	7.9900e+13

0.000	4630.00	
NCN+M=N2+C+M		8.9000e+13
0.000	62127.00	
2NCN=N2+2CN		3.7000e+12
0.000	0.00	
C+NCN=2CN		1.0000e+14
0.000	0.00	
N+NCN=N2+CN		1.0000e+13
0.000	0.00	
CH2CO+NH2=>HCCO+NH3		3.3770e+04
2.000	-218.01	
CH4+NH2=>CH3+NH3		7.8800e+04
2.000	6420.66	
C2H4+NH2=>C2H3+NH3		9.0050e+04
2.000	6668.39	
C2H6+NH2=>C2H5+NH3		1.0130e+05
2.000	3863.80	
C3H6+NH2=>C3H5-A+NH3		3.3770e+04
2.000	3143.17	
C3H8+NH2=>IC3H7+NH3		2.2510e+04
2.000	1777.23	
C3H8+CN=>IC3H7+HCN		6.7990e+06
2.000	-2457.22	
H2O2+NH2=>H2O+NH3		9.0050e+03
2.000	-1507.20	
H2O2+CN=>H2O+HCN		2.7200e+06
2.000	-4569.75	
CH3OH+NH2=>CH3O+NH3		5.6280e+03
2.000	1198.83	
CH3OH+CN=>CH3O+HCN		1.7000e+06
2.000	-3470.54	
CH3OH+NH2=>CH2OH+NH3		3.3770e+04
2.000	4513.05	
CH3OH+CN=>CH2OH+HCN		1.0200e+07
2.000	-397.95	
CH2O+NH2=>HCO+NH3		9.0050e+04
2.000	1189.51	
CH2O+CN=>HCO+HCN		2.7200e+07
2.000	-2634.16	
CH3CHO+NH2=>CH3CO+NH3		6.7540e+04
2.000	1520.39	
CH3CHO+CN=>CH3CO+HCN		2.0400e+07
2.000	-2303.28	
CH3CHO+NH2=>CH2CHO+NH3		3.3770e+04
2.000	4712.83	
CH3CHO+CN=>CH2CHO+HCN		1.0200e+07
2.000	-198.17	
C5H6+NH2=>C5H5+NH3		1.1260e+05
2.000	1315.38	
C5H6+CN=>C5H5+HCN		3.3990e+07
2.000	-2919.06	
H2O+NH3=>H2O2+NH2		1.6160e+06
2.000	27340.80	
HCO+NH3=>CH2O+NH2		3.7890e+06

2.000	27387.51	
	CH3+NH3=>CH4+NH2	1.1710e+06
2.000	16118.66	
	C2H5+NH3=>C2H6+NH2	6.8950e+05
2.000	20561.80	
	C3H5-A+NH3=>C3H6+NH2	7.2200e+05
2.000	30691.17	
	IC3H7+NH3=>C3H8+NH2	4.0600e+05
2.000	22275.23	
	C2H3+NH3=>C2H4+NH2	2.0350e+06
2.000	16066.39	
	C3H3+NH3=>C3H4-A+NH2	8.1010e+05
2.000	28808.90	
	CH2OH+NH3=>CH3OH+NH2	8.4830e+05
2.000	24211.05	
	CH3CO+NH3=>CH3CHO+NH2	4.0600e+06
2.000	29518.39	
	HCCO+NH3=>CH2CO+NH2	1.2840e+06
2.000	18179.99	
	CH3O+NH3=>CH3OH+NH2	1.2840e+06
2.000	12296.83	
	CH2CHO+NH3=>CH3CHO+NH2	6.8950e+05
2.000	25410.83	
	H02+HCN=>H2O2+CN	8.0820e+04
2.000	29189.25	
	HCO+HCN=>CH2O+CN	1.8950e+05
2.000	28474.84	
	IC3H7+HCN=>C3H8+CN	2.0300e+04
2.000	22951.78	
	C3H3+HCN=>C3H4-A+CN	4.0500e+04
2.000	27769.90	
	CH2OH+HCN=>CH3OH+CN	4.2410e+04
2.000	24211.05	
	CH3CO+HCN=>CH3CHO+CN	2.0300e+05
2.000	30605.72	
	CH3O+HCN=>CH3OH+CN	6.4200e+04
2.000	12538.46	
	CH2CHO+HCN=>CH3CHO+CN	3.4470e+04
2.000	25410.83	
	END	