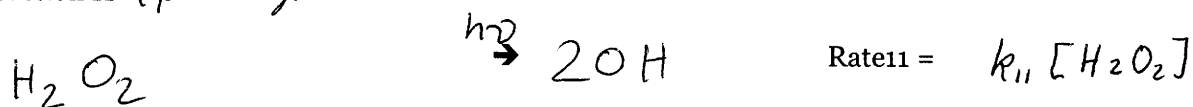


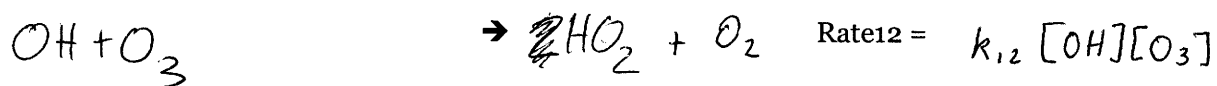
Richard, Lu, Zack, Julia

HOx Reaction Scheme

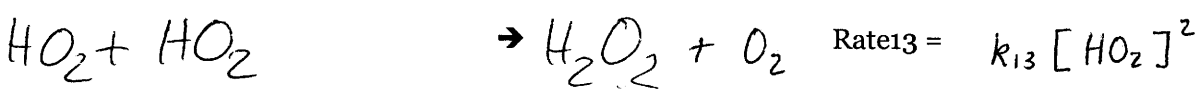
Reaction 11 (photolysis)



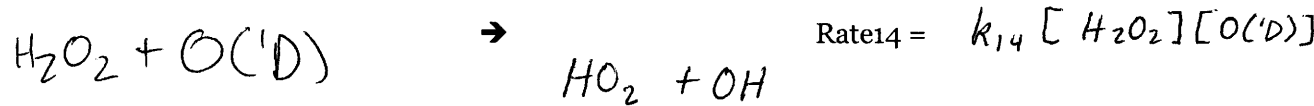
Reaction 12 (bimolecular ~~2TS~~ 1TS)



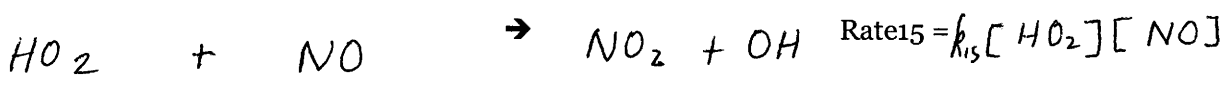
Reaction 13 (bimolecular 2TS)



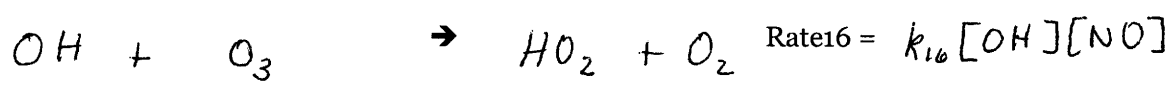
Reaction 14 (bimolecular 1TS)



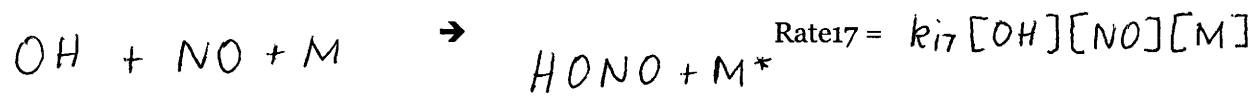
Reaction 15 (bimolecular 1TS)



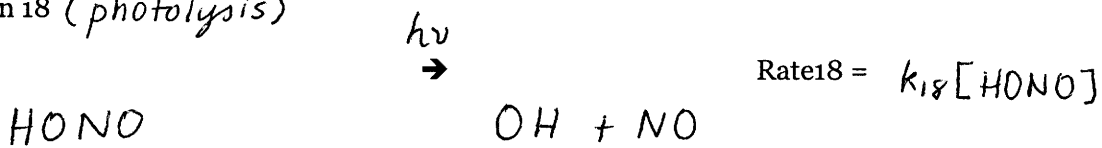
Reaction 16 (bimolecular 1TS)



Reaction 17 (termolecular)

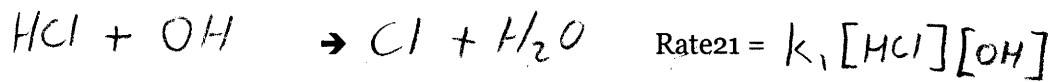


Reaction 18 (photolysis)

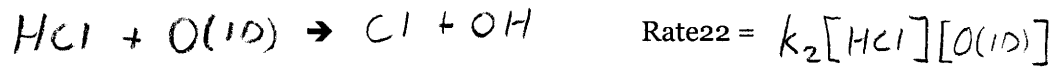


ClOx Reaction Scheme

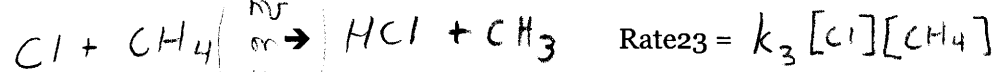
II Reaction 21



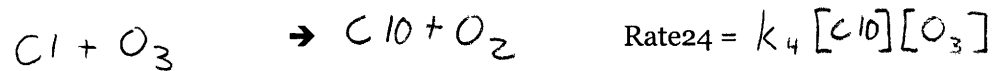
IV Reaction 22



I Reaction 23



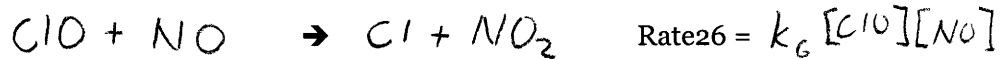
I Reaction 24



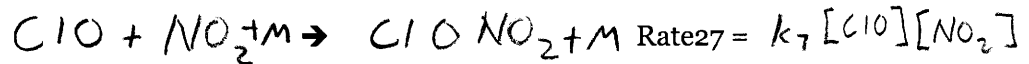
II Reaction 25



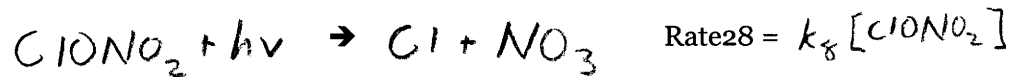
II Reaction 26



II Reaction 27



I Reaction 28



Photolysis

Jordan Laser
Sabrina Coxhead
Chris Hare

NOx Reaction Scheme

Reaction 1

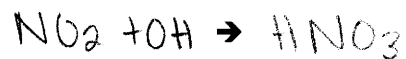
bimolecular
mixed



$$\text{Rate}_1 = k_1 [\text{NO}] [\text{O}_3]$$

Reaction 2

~~bimolecular~~
termolecular



$$\text{Rate}_2 = k_2 [\text{NO}_2] [\text{OH}]$$

Reaction 3

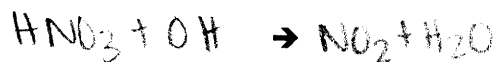
Photolysis



$$\text{Rate}_3 = k_3 [\text{HNO}_3] [h\nu]$$

Reaction 4

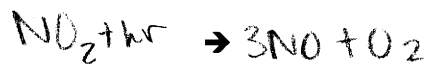
bimolecular
mixed



$$\text{Rate}_4 = k_4 [\text{HNO}_3] [\text{OH}]$$

Reaction 5

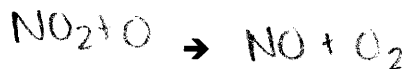
Photolysis



$$\text{Rate}_5 = k_5 [\text{NO}_2] [h\nu]$$

Reaction 6

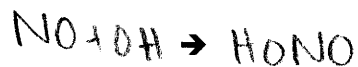
mixed bimolecular



$$\text{Rate}_6 = k_6 [\text{NO}_2] [\text{O}]$$

Reaction 7

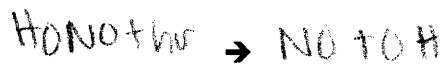
~~bimolecular~~
termolecular



$$\text{Rate}_7 = k_7 [\text{NO}] [\text{OH}]$$

Reaction 8

Photolysis

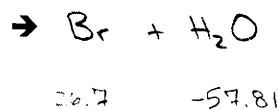
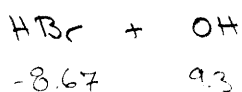


$$\text{Rate}_8 = k_8 [\text{HONO}] [h\nu]$$

Group #3

BrOx Reaction Scheme

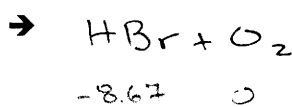
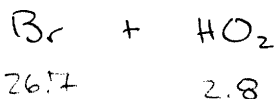
Reaction 31



$$\text{Rate}_{31} = \frac{d[\text{HBr}]}{dt} = -k_{31}[\text{HBr}][\text{OH}]$$

$$\Delta H = -31.74$$

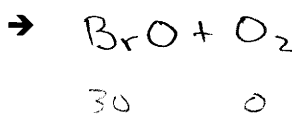
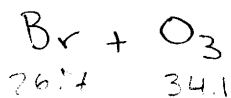
Reaction 32



$$\text{Rate}_{32} = \frac{d[\text{Br}]}{dt} = -k_{32}[\text{Br}][\text{HO}_2]$$

$$\Delta H = -38.17$$

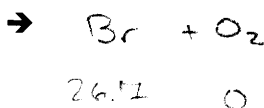
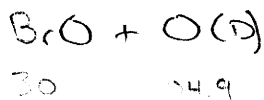
Reaction 33



$$\text{Rate}_{33} = -k_{33}[\text{Br}][\text{O}_3]$$

$$\Delta H = -34.1$$

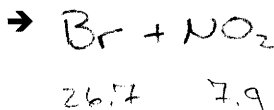
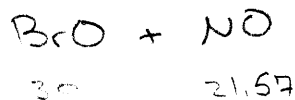
Reaction 34



$$\text{Rate}_{34} = -k_{34}[\text{BrO}][\text{O}(\text{D})]$$

$$\Delta H = 108.200$$

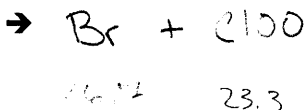
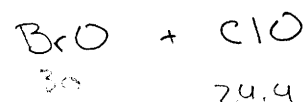
Reaction 35



$$\text{Rate}_{35} = -k_{35}[\text{BrO}][\text{NO}]$$

$$\Delta H = -16.97$$

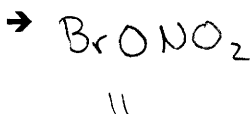
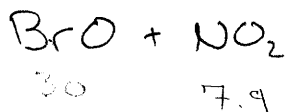
Reaction 36



$$\text{Rate}_{36} = -k_{36}[\text{BrO}][\text{ClO}]$$

$$\Delta H = -4.4$$

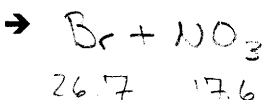
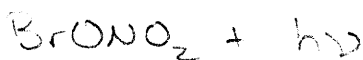
Reaction 37



$$\text{Rate}_{37} = -k_{37}[\text{BrO}][\text{NO}_2]$$

$$\Delta H = -26.9$$

Reaction 38



$$\text{Rate}_{38} = -k_{38}[\text{BrONO}_2]$$

$$\Delta H = 33.3$$