Reaction	Rate coefficient or absorption cross section	Reference
$O_2 + h\nu$ (184.9 nm) $\rightarrow$ 2 O $\rightarrow$ 2 O_3	1.0×10^{-20}	Yoshino et al. (1992) Creasey et al. (2000)
$H_2O + h\nu$ (184.9 nm) $\rightarrow$ OH + H $\rightarrow$ OH + HO_2	7.14×10^{-20}	Cantrell et al. (1997)
$O_3 + h\nu$ (253.7 nm) $\rightarrow$ O_2 + O($^1D_2$)	1.15×10^{-17}	Burkholder et al. (2015)
OH + HO_2 $\rightarrow$ H_2O + O_2	1.01×10^{-10}	Burkholder et al. (2015)
OH + O_3 $\rightarrow$ HO_2 + O_2	8.45×10^{-14}	Burkholder et al. (2015)
HO_2 + O_3 $\rightarrow$ OH + 2 O_2	2.09×10^{-15}	Burkholder et al. (2015)
OH + OH $\rightarrow$ H_2O + O $\rightarrow$ H_2O + O_3	1.8×10^{-12}	Burkholder et al. (2015)
OH + OH ($+M$) $\rightarrow$ H_2O_2 ($+M$)	1.59×10^{-11}	Burkholder et al. (2015)
HO_2 + HO_2 $\rightarrow$ H_2O_2 + O_2	1.30×10^{-12}	Burkholder et al. (2015)
HO_2 + HO_2 + M $\rightarrow$ H_2O_2 + O_2	3.96×10^{-32}	Burkholder et al. (2015)
O($^1D_2$)+ O_2 $\rightarrow$ O + O_2 $\rightarrow$ O_3 + O_2	3.93×10^{-11}	Burkholder et al. (2015)
O($^1D_2$)+ N_2 $\rightarrow$ O + N_2 $\rightarrow$ O_3 + N_2	3.05×10^{-11}	Burkholder et al. (2015)
O($^1D_2$)+ H_2O $\rightarrow$ 2 OH	1.97×10^{-10}	Burkholder et al. (2015)