

**C - S - N in Air Pollution** - and the *ozone chain* ( $N_2$  -oo- NO -oo-  $NO_2$  - O -oo-  $O_3$  --  $O_2$ ) where each is formed [rxns often use oo] & then reacts

	natural sources	human sources	reaction(s) to FORM it	reaction with $H_2O$	biological effects	properties: senses, lab
CO						
CO <sub>2</sub>				H <sub>2</sub> O-solubility?		
SO <sub>2</sub>				H <sub>2</sub> O-solubility?		
SO <sub>3</sub>						
N <sub>2</sub>	no, but Fig 6.23, CiC-267, is nitrogen cycle	-	N <sub>2</sub> is start of O <sub>3</sub> chain; in rxns below, each uses chemical formed before it	H <sub>2</sub> O-solubility?	-	
NO				-		
NO <sub>2</sub>	(when is it NO, NO <sub>2</sub> ?)	(when is it NO, NO <sub>2</sub> ?)	at high & low concentration:			
O	same as for O <sub>3</sub> - why?	also same as for O <sub>3</sub>		-	produces O <sub>3</sub>	
O <sub>3</sub>				-		rxn in stratosphere:
O <sub>2</sub>			(is in most rxns above)	H <sub>2</sub> O-solubility?		
	Where is "good O <sub>3</sub> " and why is it good? Where is bad ozone and why is it bad?		"exchange partners" for $N_2 + O_2 \rightarrow 2 NO$ , etc (to visualize the reaction)	"lassoo chemistry" [rip apart or put together] for $H_2O + CO_2$ / etc		make 2x2 grid for all ion-combinations: +1 +2 -1 -2 (bonus: also for +3 and -3)