

| Ozone source  | Definition  | Notation              |
|---|---|-----------------------|
| Base  | Standard simulation   | $O_3\text{-Base}$     |
| Natural background                                  | Simulation with no global anthropogenic emissions and anthropogenic $CH_4$  | $O_3\text{-NAT}$      |
| North American background                           | Simulation with no North American anthropogenic emissions   | $O_3\text{-NAB}$      |
| US background                                       | Simulation with no US anthropogenic emissions   | $O_3\text{-USB}$      |
| US anthropogenic emissions                          | $O_3\text{-Base} - O_3\text{-USB}$  | $O_3\text{-USA}$      |
| Anthropogenic emissions from Canada and Mexico      | $O_3\text{-USB} - O_3\text{-NAB}$   | $O_3\text{-CA+MX}$    |
| Intercontinental transport and anthropogenic $CH_4$ | $O_3\text{-NAB} - O_3\text{-NAT}$   | $O_3\text{-ICT+CH}_4$ |
| North American lightning $NO_x$                     | $O_3\text{-Base}$ – simulation with the North American lightning $NO_x$ source shut off   | $O_3\text{-NALNO}_x$  |
| Soil $NO_x$ emissions                               | $O_3\text{-Base}$ – simulation with the soil $NO_x$ emissions shut off  | $O_3\text{-SNO}_x$    |
| Terrestrial biogenic VOC emissions                  | $O_3\text{-Base}$ – simulation with the terrestrial biogenic emissions shut off   | $O_3\text{-BVOC}$     |
| All emissions except terrestrial biogenic VOCs      | Simulation with terrestrial biogenic VOC emissions shut off   | $O_3\text{-noBVOC}$   |
| Biomass burning emissions                           | $O_3\text{-Base}$ – simulation with biomass burning emissions ( $NO_x$ , $CO$ , VOCs, aerosols, and precursors from fires) shut off | $O_3\text{-BB}$       |