

Scenario	Description
BASE	Base case using the default parameterization as described in Sect. 2.1.
BASE_NO _x	Same parameterization as BASE scenario but with doubled NO _x emissions for each SNAP (Selected Nomenclature for Air Pollution) category to be used as a second base case with higher ozone production according to Oikonomakis et al. (2018).
PHOT1	Increased concentrations of SO ₄ ²⁻ , NH ₄ ⁺ , NO ₃ ⁻ , POA, ASOA, EC and FPRM by a factor of 2 over land only in the calculation of AOD.
PHOT1_NO _x	Same method as PHOT1 but applied on the BASE_NO _x scenario.
PHOT2	Increased concentrations of SO ₄ ²⁻ , NH ₄ ⁺ , NO ₃ ⁻ , POA, ASOA, EC, FPRM by a factor of 3 over land only in the calculation of AOD.
PHOT2_NO _x	Same method as PHOT2 but applied on the BASE_NO _x scenario.
PHOT3	Increased concentrations of only SO ₄ ²⁻ by a factor of 3.4 and only in the calculation of AOD.
PHOT3_NO _x	Same method as PHOT3 but applied on the BASE_NO _x scenario.
BIO	Rerun of the BASE scenario with new biogenic emissions generated after decreasing SSR by 3 % in the biogenic emission model.
BIO_NO _x	Same method as BIO but applied on the BASE_NO _x scenario.
COMBO	A combination of the PHOT3 and BIO scenarios.
COMBO_NO _x	A combination of the PHOT3_NO _x and BIO_NO _x scenarios.