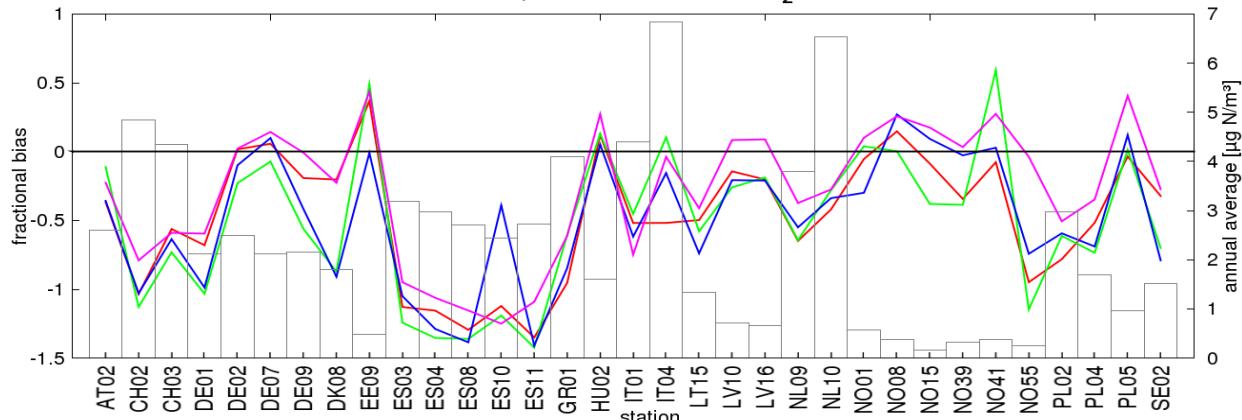
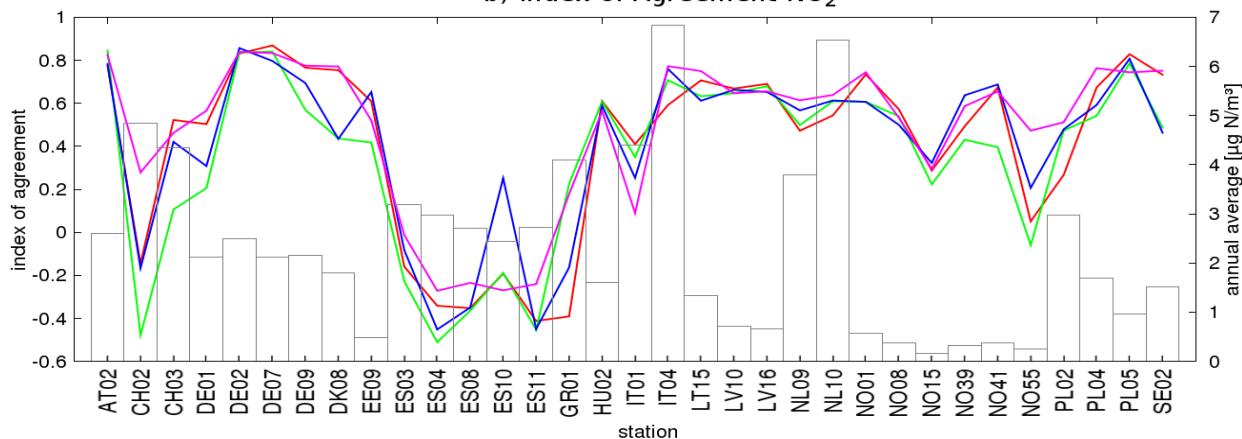


— EMEP — TNO-GEMS — IER-GKSS — SMOKE-EU □ measurement

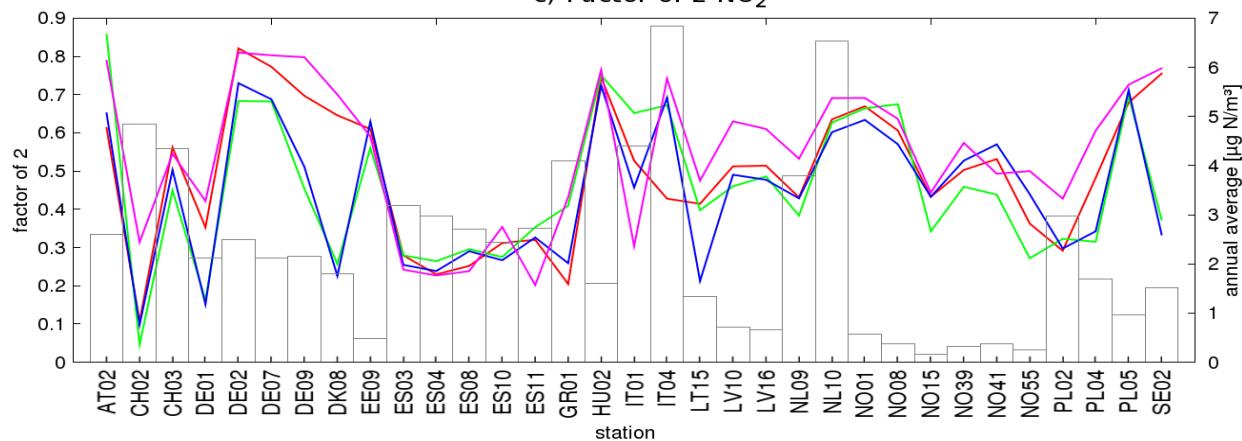
a) Fractional Bias NO<sub>2</sub>



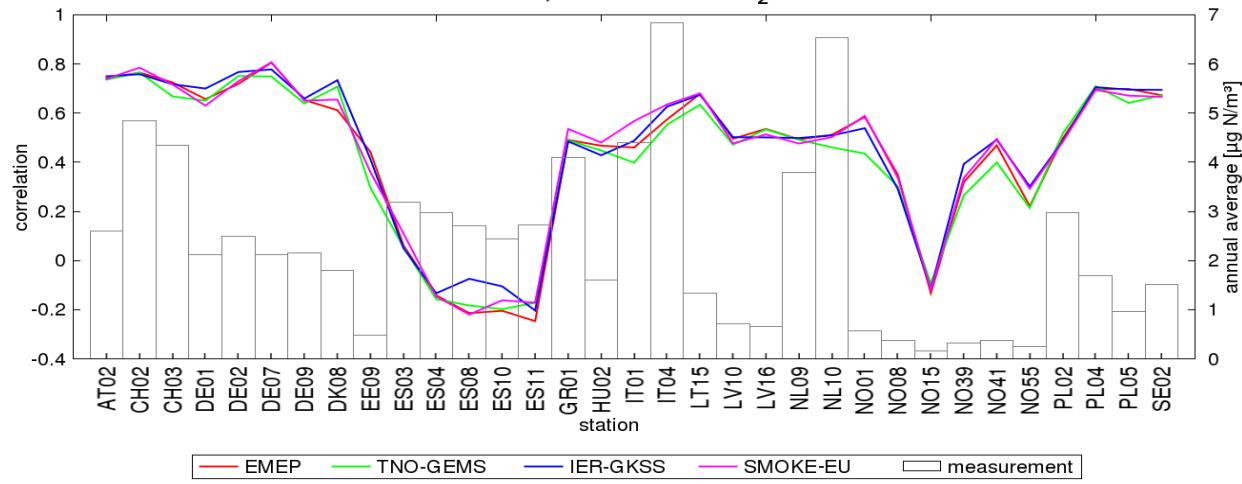
b) Index of Agreement NO<sub>2</sub>



c) Factor of 2 NO<sub>2</sub>



d) Correlation NO<sub>2</sub>



*Figure S1: Comparison of mean daily air concentrations of NO<sub>2</sub>, calculated by CMAQ using four different emission datasets, with observations from rural EMEP stations for 2000. a) fractional bias, b) index of agreement, c) relative amount of values within a factor of 2 (1=100%), d) correlation. Black boxes indicate measured annual average concentrations.*

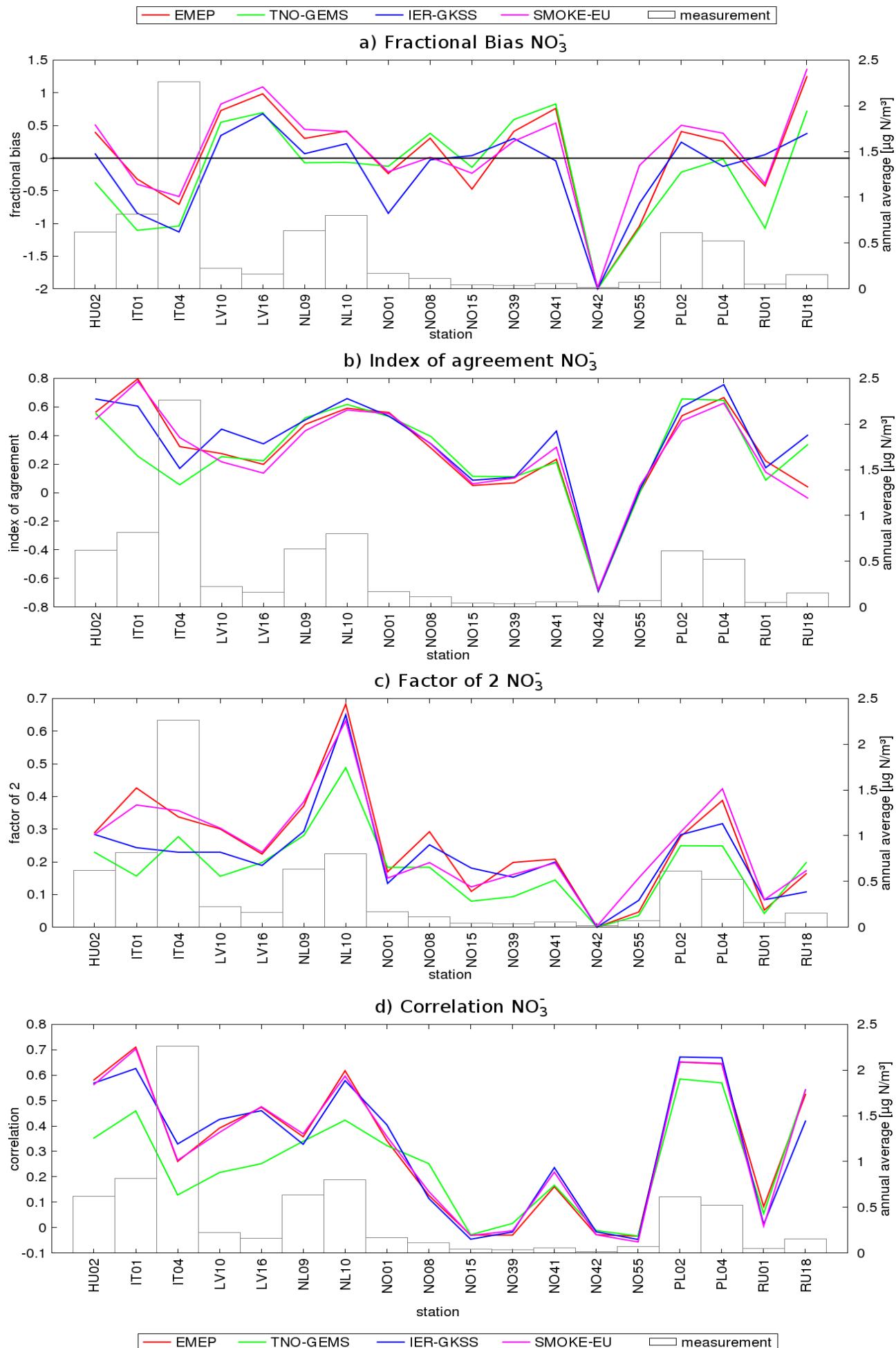
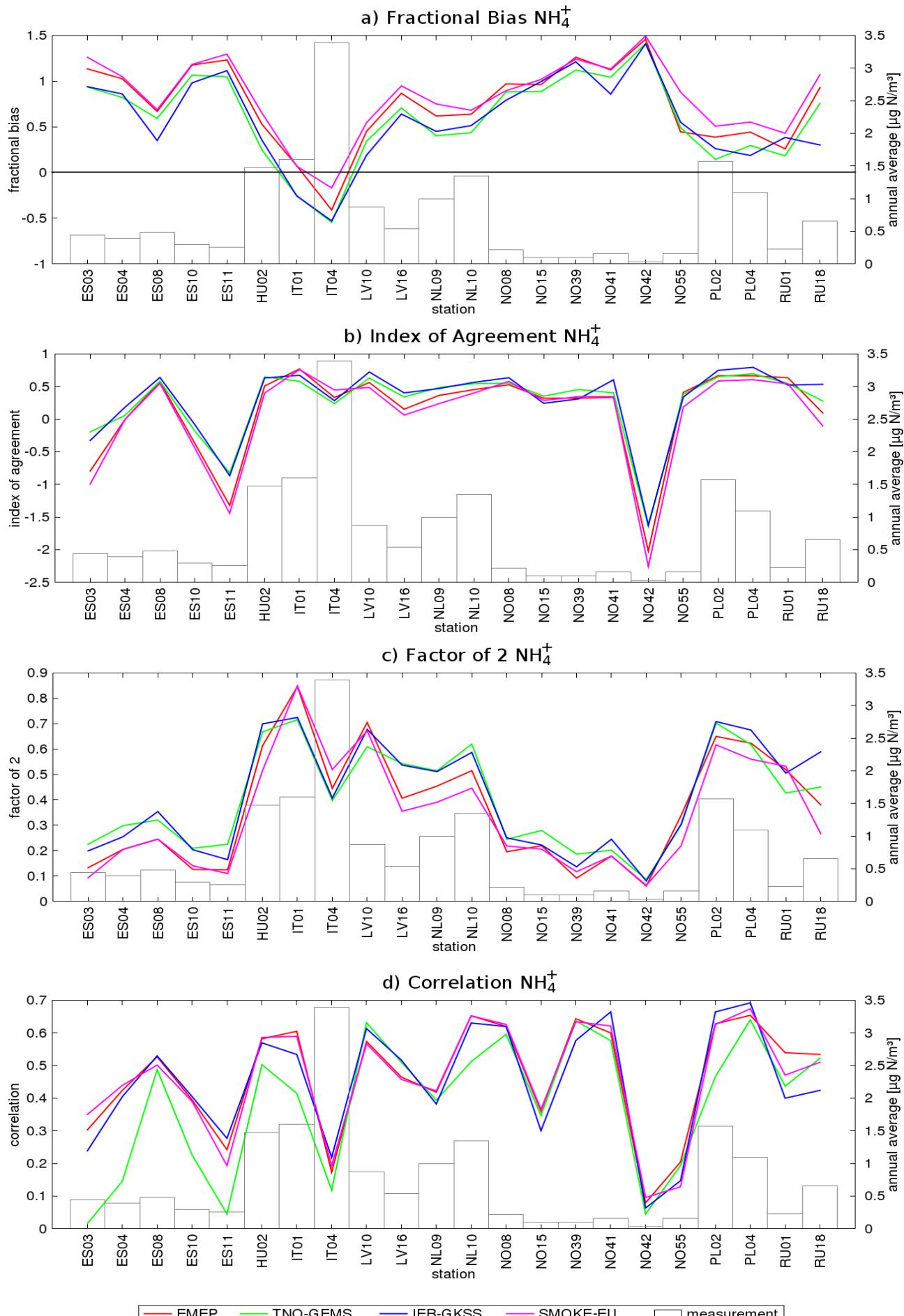


Figure S2: Comparison of mean daily air concentrations of  $\text{NO}_3^-$ , calculated by CMAQ using four different emission datasets, with observations from rural EMEP stations for 2000.

a)  
fractional bias, b) index of agreement, c) relative amount of values within a factor of 2 (1=100%),  
d) correlation. Black boxes indicate measured annual average concentrations.



*Figure S3: Comparison of mean daily air concentrations of  $\text{NH}_4^+$ , calculated by CMAQ using four different emission datasets, with observations from rural EMEP stations for 2000. a) fractional bias, b) index of agreement, c) relative amount of values within a factor of 2 (1=100%), d) correlation. Black boxes indicate measured annual average concentrations.*

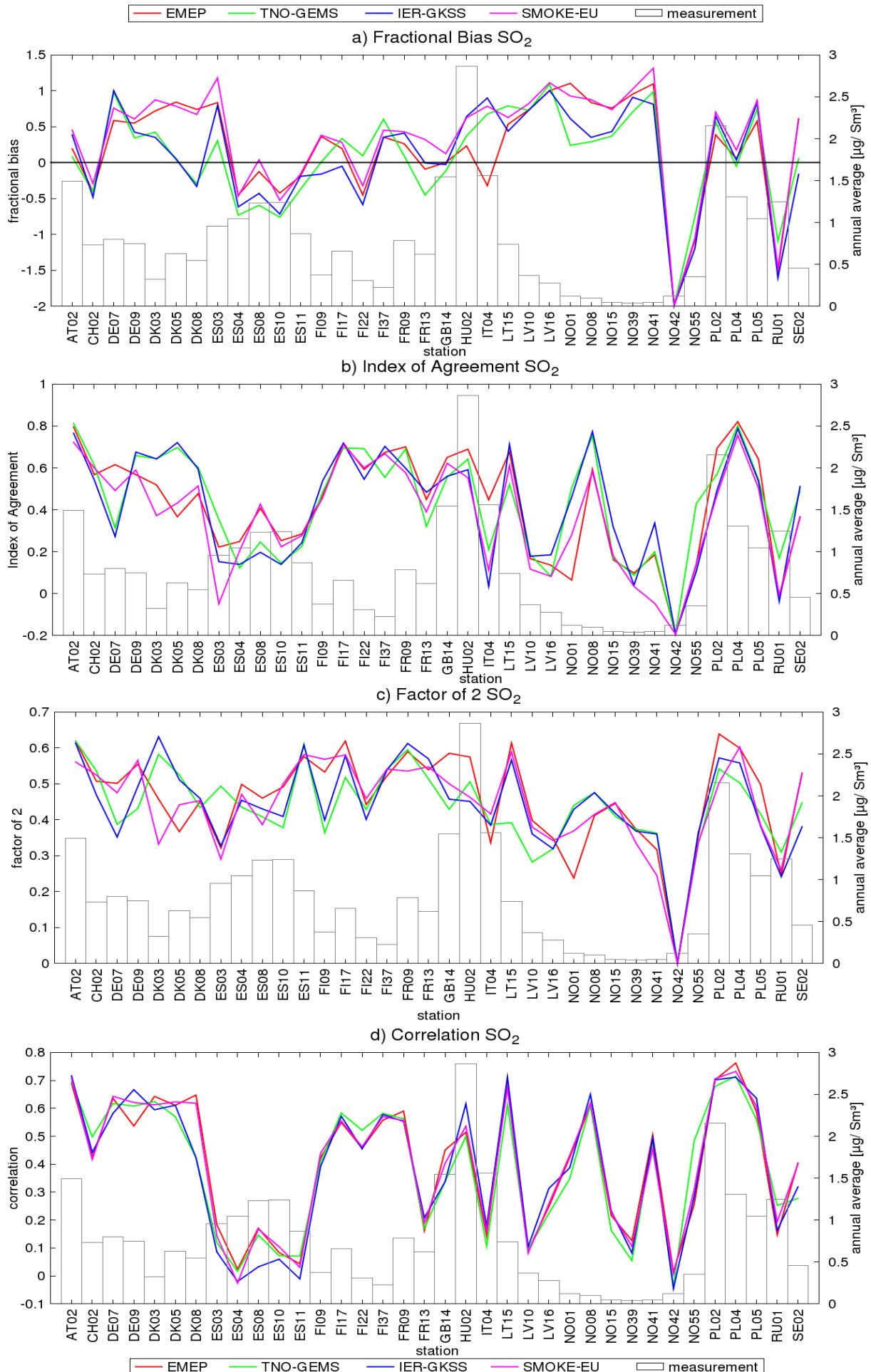


Figure S4: Comparison of mean daily air concentrations of  $\text{SO}_2$ , calculated by CMAQ using four different emission datasets, with observations from rural EMEP stations for 2000.

a) fractional bias, b) index of agreement, c) relative amount of values within a factor of 2 ( $I=100\%$ ), d) correlation. Black boxes indicate measured annual average concentrations.