

Supplementary material

Atmospheric Chemistry and Physics paper ACP-2010-958

## **The impact of temperature changes on summer time ozone and its' precursors in the Eastern Mediterranean**

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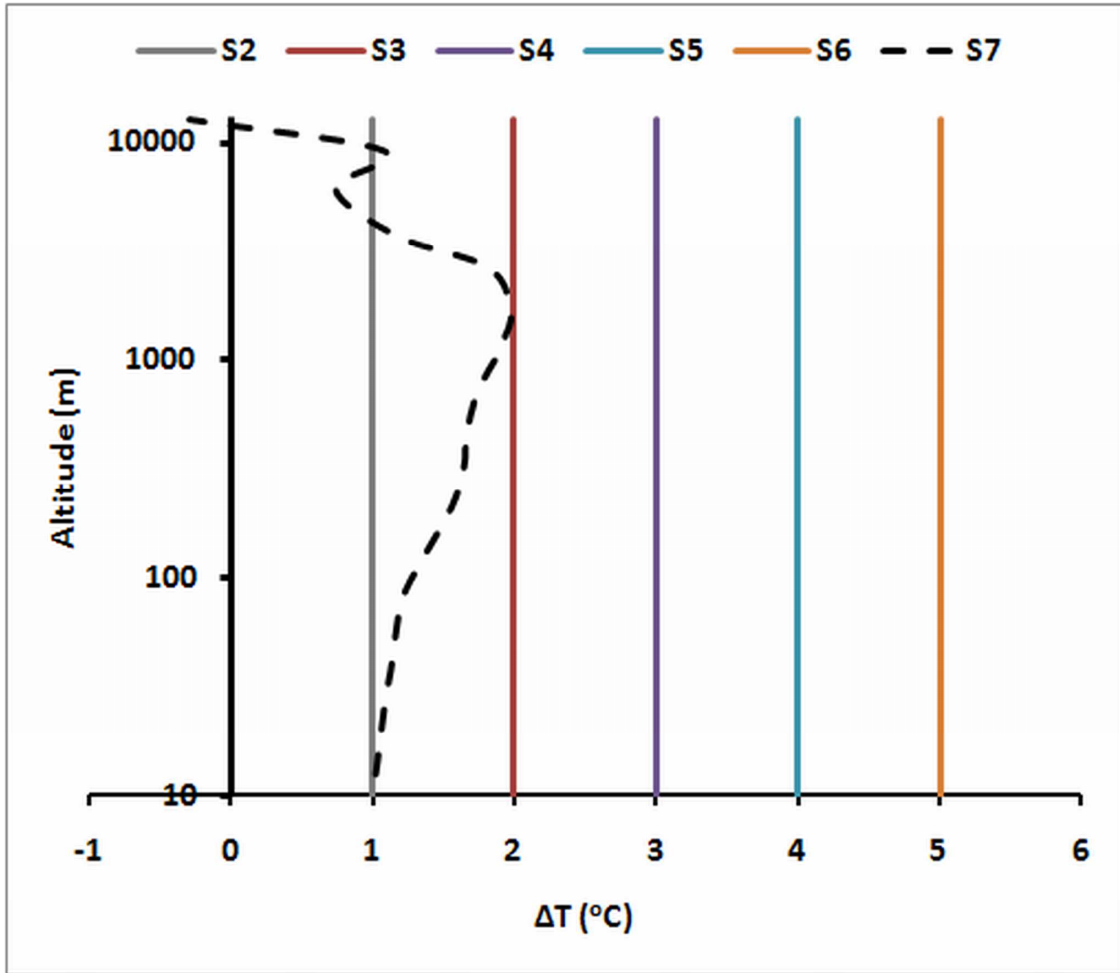
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**Fig. S1.** The difference of mean vertical temperatures between scenarios and base case simulations.

### Model performance metrics

The statistical parameters applied in this study to evaluate model performance are: correlation coefficient ( $r$ : Eq. 1), Mean Normalized Bias (MNB: Eq. 2) and Index of Agreement (IOA: Eq. 3).

$$r = \left[ \frac{\frac{1}{N} \sum_{i=1}^N (O_i - \bar{O})(P_i - \bar{P})}{\sigma_O \sigma_P} \right] \quad (1)$$

$$MNB = \frac{1}{N} \sum_{i=1}^N \left( \frac{P_i - O_i}{O_i} \right) \quad (2)$$

$$IOA = 1 - \frac{\sum_{i=1}^N (P_i - O_i)^2}{\sum_{i=1}^N \left( |P_i - \bar{O}| + |O_i - \bar{O}| \right)^2} \quad (3)$$

where  $O_i$  and  $P_i$  stand for observations and predictions at each time step,  $\bar{O}$  and  $\bar{P}$  stand for the daily mean of observations and predictions, and  $\sigma$  stands for standard deviation.