AUXILIARY INFORMATION FOR

Role of the land-atmosphere coupling in systematic mid-latitude summer warm biases and

climate change amplification in CMIP5 simulations .

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Introduction

The list of included CMIP5 models for the AMIP and fully coupled analysis is reported in the supplementary material (table 1) , together with the latitude and longitude bounds for the 5 boxes analyzed (table 2).

1. Table 1.

1.1 Column 'Model Name', Name of the CMIP5 model

1.2 Column 'AMIP', a cross is put if the AMIP simulation of the particular model is used in the analyse.

1.3 Column 'Coupled', a cross is put if the RCP8.5 coupled simulation of the particular model is used in the analyse.

1.4 Column 'C', a cross is put when the coupling index is computed for the particular model. The choice relies on the availability of the soil moisture information.

1.5 Column 'Surface Energy Budget' a cross is put when each term of the surface energy budget is available for the particular model.

1.6 Column 'SW clear sky down', a cross is put when the clear sky downward SW radia-

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tion is available for the particular model.

2. Table 2.

2.1 Column ′Region Name′, Name of the region for the detailed analysis described in the paper

2.2 Column ′Longitude′, Longitude bounds of the particular region

2.3 Column ′Latitude′, latitude bounds of the particular region

3. figure:compar.cor.nocor.eps

Correlation between δT and δEF (a), δT and $\delta SWCRE$ (c) , $\delta(T)^l$ and δEF (b), δT^l and $\delta SWCRE$ (d). Grid cells where the correlations are significant at the 90% level are overlaid with crosses. Panels a-b are equivalent to Figure 1e-f in the main article, while panels c-d refer to the local anomalies of the changes.