Supplement

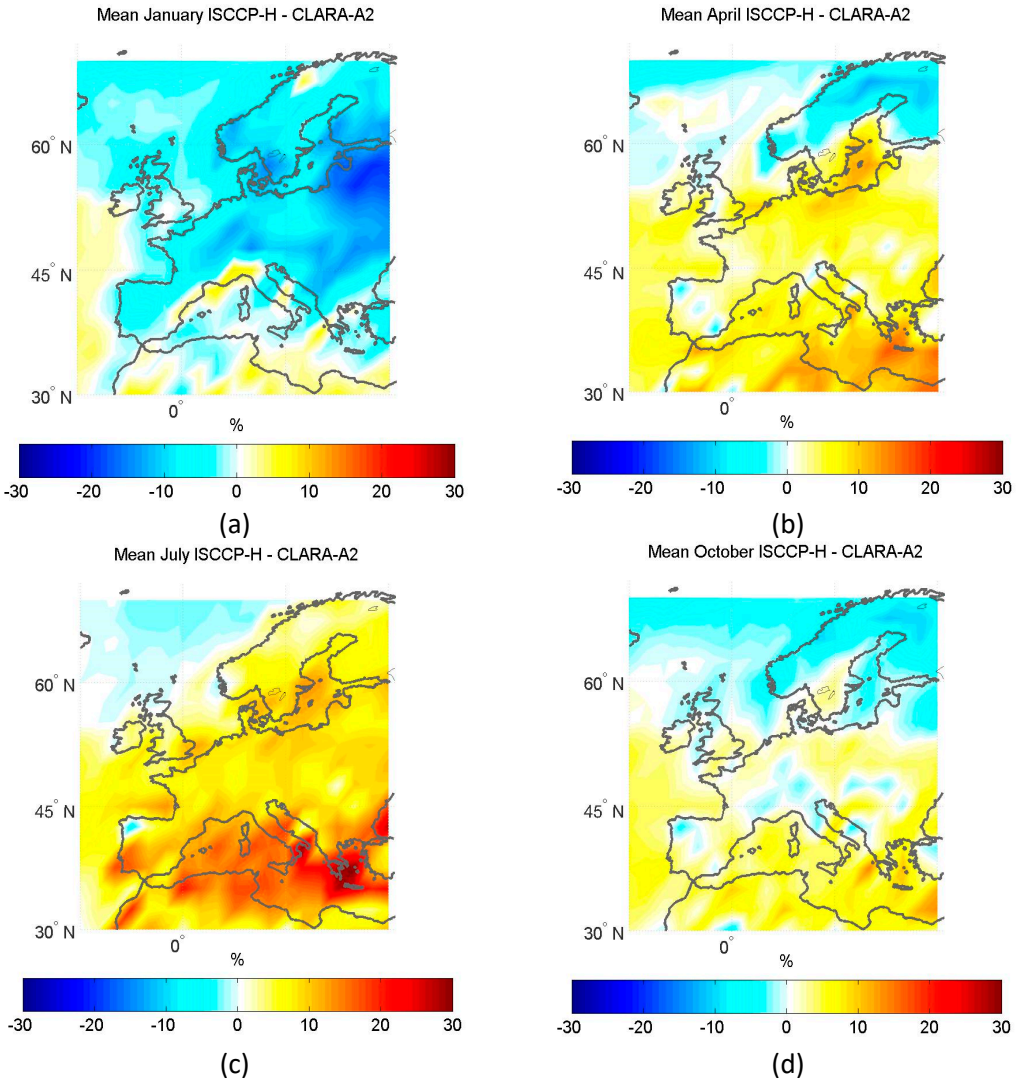

Figure S1. European Geographical difference (in absolute terms) between ISCCP-H and CLARA-A2 TCC for (a) January, (b) April, (c) July and (d) October. Results are averaged over the 29-year period 1984-2012.

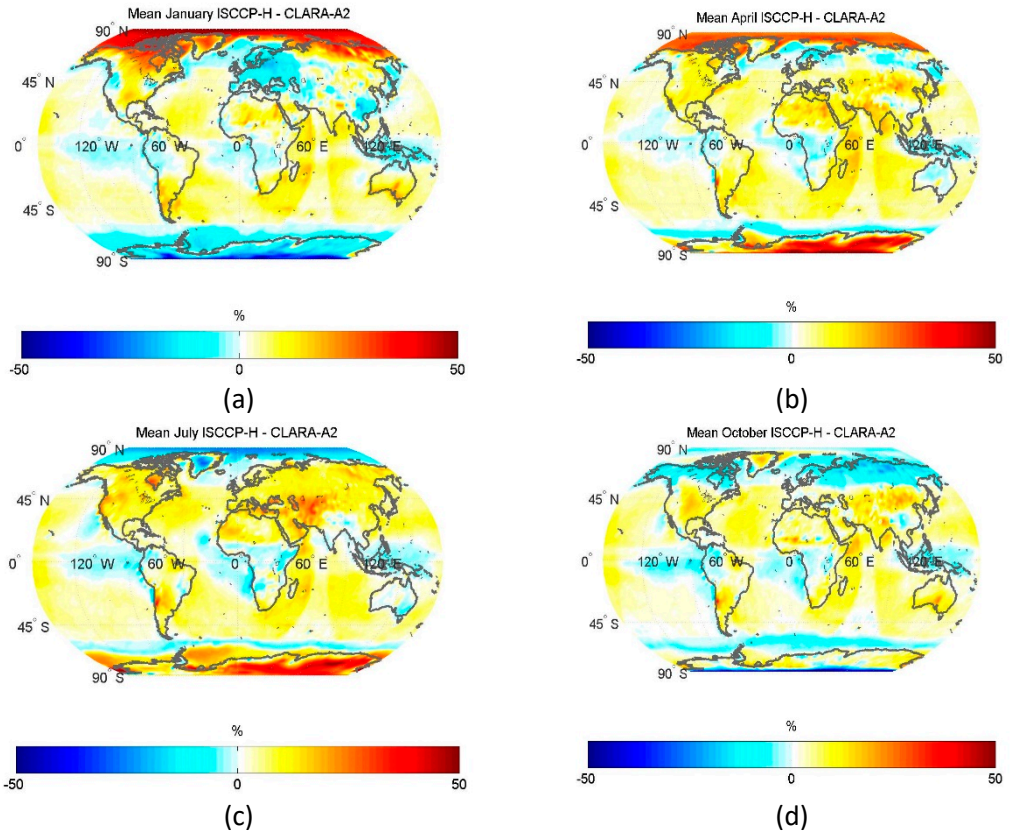

Figure S2. Global geographical difference (in absolute terms) between ISCCP-H and CLARA-A2 TCC for (a) January, (b) April, (c) July and (d) October. Results are averaged over the 29-year period 1984-2012.

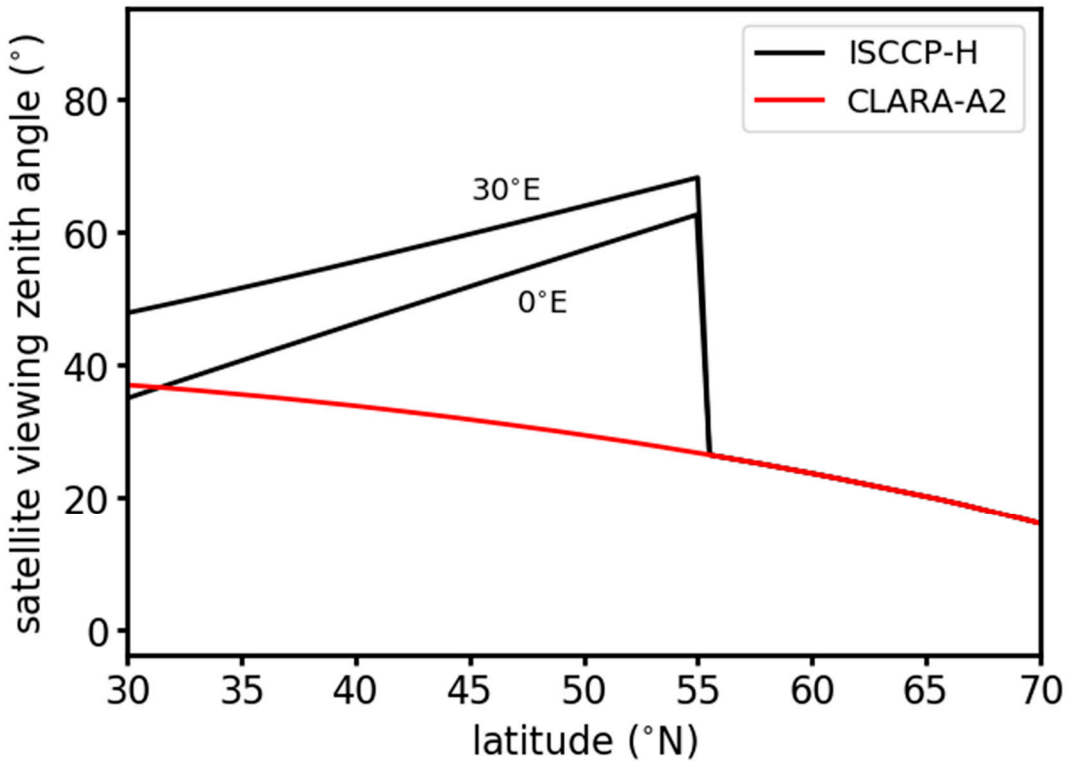

Figure S3. Latitudinal dependence of the mean satellite zenith angle of CLARA-A2 and ISCCP-H over Europe (30°-70°N). For ISCCP-H two curves are plotted: the lower and upper curves show the mean

satellite zenith angle at a longitude of 0° and 30°E, respectively. For latitudes larger than 50°N the CLARA-A2 and ISCCP-H curves overlap.

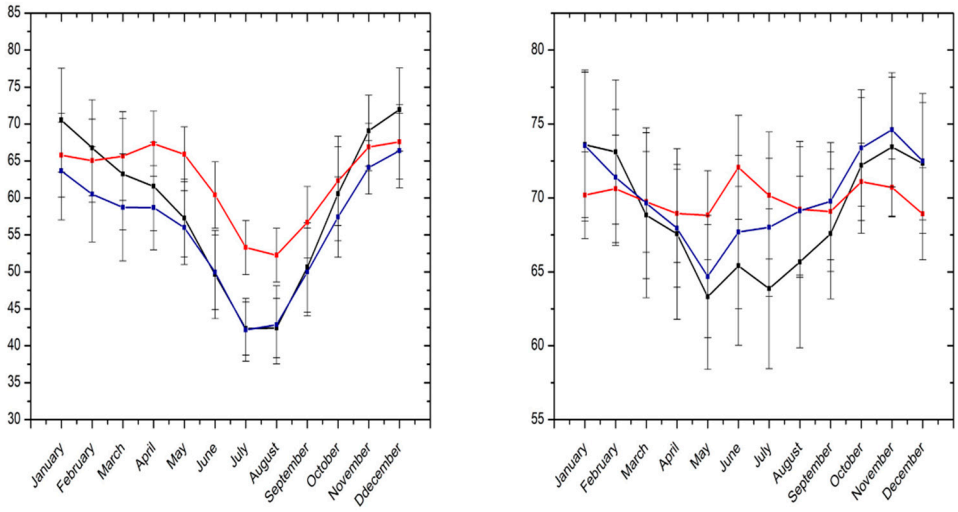

Figure S4. Seasonal variation of TCC averaged over all ECA&D stations (in blue) south (left) and north (right) of 55N and the corresponding grid cells of ISCCP-H (in red) and CLARA-A2 (in black). These results are similar to those of Figure 8b of the manuscript but given separately for northern and southern stations.