The Solar Cycle Influence: How TSI and Insolation Warm and Cool the Ocean

Abstract

LASP SORCE TSI, the CDR TSI, and Historical Solar Magnetic Mean Field drives TSI & TSI Threshold Found

Ocean warming under rising TSI and Solar Activity

- The IPCC AR5 climate model forecast a physical ocean warming trend to 2100. However, data over a very short time about TSI effect.

The Sun causes warming, cooling, and extreme events, not CO2!

Background and Development

The IPCC AR5 climate models forecast a physical ocean warming trend to 2100. However, data over a very short time about TSI effect.

The Solar Cycle Influence on Sea Surface Temperatures

- The expected 2018-2019 change in HadSST3 was predicated on the now combined F10.7cm-TSI-SST3 model was predicated on the SWPC predicted 12 month change in F10.7cm flux, high to low range, from Dec 2015 to Dec 2016.

Table 2. The performance of the F10.7cm-TSI model: actual TSI change vs model change tested

<table>
<thead>
<tr>
<th>Year</th>
<th>SWPC Actual</th>
<th>SWPC Model</th>
<th>Liquid</th>
<th>Continental</th>
<th>Maritime</th>
<th>Idealized</th>
<th>Actual</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>-0.05 W/m²</td>
<td>-0.05 W/m²</td>
<td>-0.05 W/m²</td>
<td>-0.05 W/m²</td>
<td>-0.05 W/m²</td>
<td>-0.05 W/m²</td>
<td>-0.05 W/m²</td>
<td>-0.05 W/m²</td>
</tr>
<tr>
<td>2016</td>
<td>-0.05 W/m²</td>
<td>-0.05 W/m²</td>
<td>-0.05 W/m²</td>
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</tr>
</tbody>
</table>

The Solar Cycle Influence

- The 2016 HadSST3 temperature drop per the now combined F10.7cm-TSI-SST3 model was predicated on the now combined F10.7cm-TSI-SST3 model was predicated on the SWPC predicted 12 month change in F10.7cm flux, high to low range, from Dec 2015 to Dec 2016.

Tsunami detection and cooling changes in the ocean and atmosphere by a changing air concentration, are driven by changes in solar forcing, not CO2!

Ocean supersensitive to Solar Mean Field, CDR TSI change

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2015 ‘16 predictions based on typical solar cycle TSI change

- The first successful year of 2015, particularly from December, showed the second highest average TSI in the 21st century. This investigation found the events driven by changes in solar forcing, not CO2!

The Sun causes warming, cooling, and extreme events, not CO2!
Climate change is fundamentally reducible to daily TSI, not CO₂!