**中国海洋大学行远书院课程《大海洋》**

**报名表**

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| 姓名 |  | 性别 |  | （一寸照） |
| 出生年月 |  | 学号 |  |
| 学院 |  | 专业 |  |
| 联系电话 |  | 电子邮箱 |  |
| 一、为何要选修大海洋（500字以内） |
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| 二、你认为全球变暖是否导致了强台风的增加和台风潜在破坏力的增强?（内容如有引用请标注出处。500字左右） |
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| 三、请简要翻译下文。Global mean surface temperature change over the past 120 years resembles a rising staircase: the overall warming trend was interrupted by the mid-twentieth-century big hiatus and the warming slowdown since about 1998. The Interdecadal Pacific Oscillation has been implicated in modulations of global mean surface temperatures, but which part of the mode drives the variability in warming rates is unclear. Here we present a successful simulation of the global warming staircase since 1900 with a global ocean–atmosphere coupled model where tropical Pacific sea surface temperatures are forced to follow the observed evolution. Without prescribed tropical Pacific variability, the same model, on average, produces a continual warming trend that accelerates after the 1960s. We identify four events where the tropical Pacific decadal cooling markedly slowed down the warming trend. Matching the observed spatial and seasonal fingerprints we identify the tropical Pacific as a key pacemaker of the warming staircase, with radiative forcing driving the overall warming trend. Specifically, tropical Pacific variability amplifies the first warming epoch of the 1910s–1940s and determines the timing when the big hiatus starts and ends. Our method of removing internal variability from the observed record can be used for real-time monitoring of anthropogenic warming. Global mean surface temperature (GMST) has increased since the nineteenth century by nearly 1℃. The observed warming is not monotonic but accompanied by notable interdecadal modulations, forming the global warming 'staircase'. |
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