

How Tibetan Plateau Determines the Formation of AMOC

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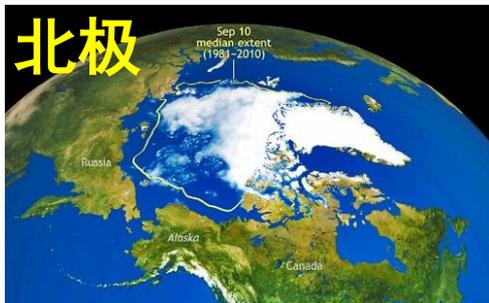
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青藏高原：世界第三极

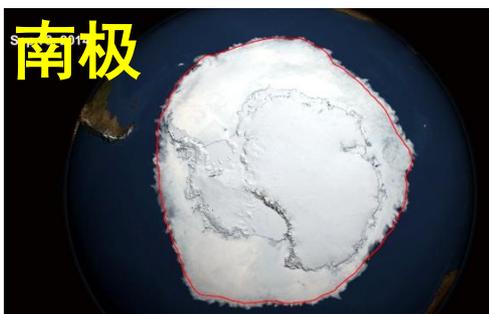
总面积250万km²，平均海拔4000m



“有”或“没有”是个根本问题！



- 格陵兰岛陆冰全部融化将导致海平面升高**7**米



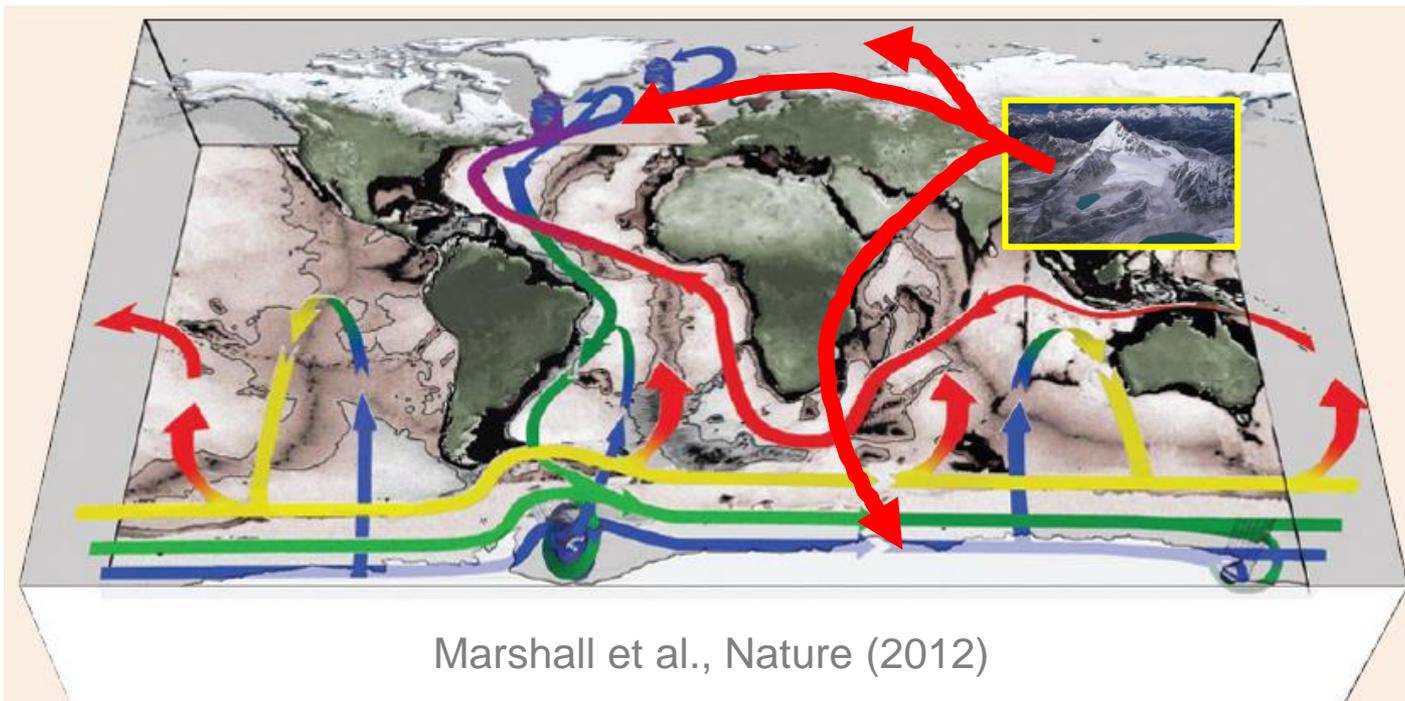
- 70%的淡水，90%的冰，全部融化将导致海平面升高**61**米



- “**没有**”青藏高原，冰川融化将导致海平面升高？地球基本气候态？

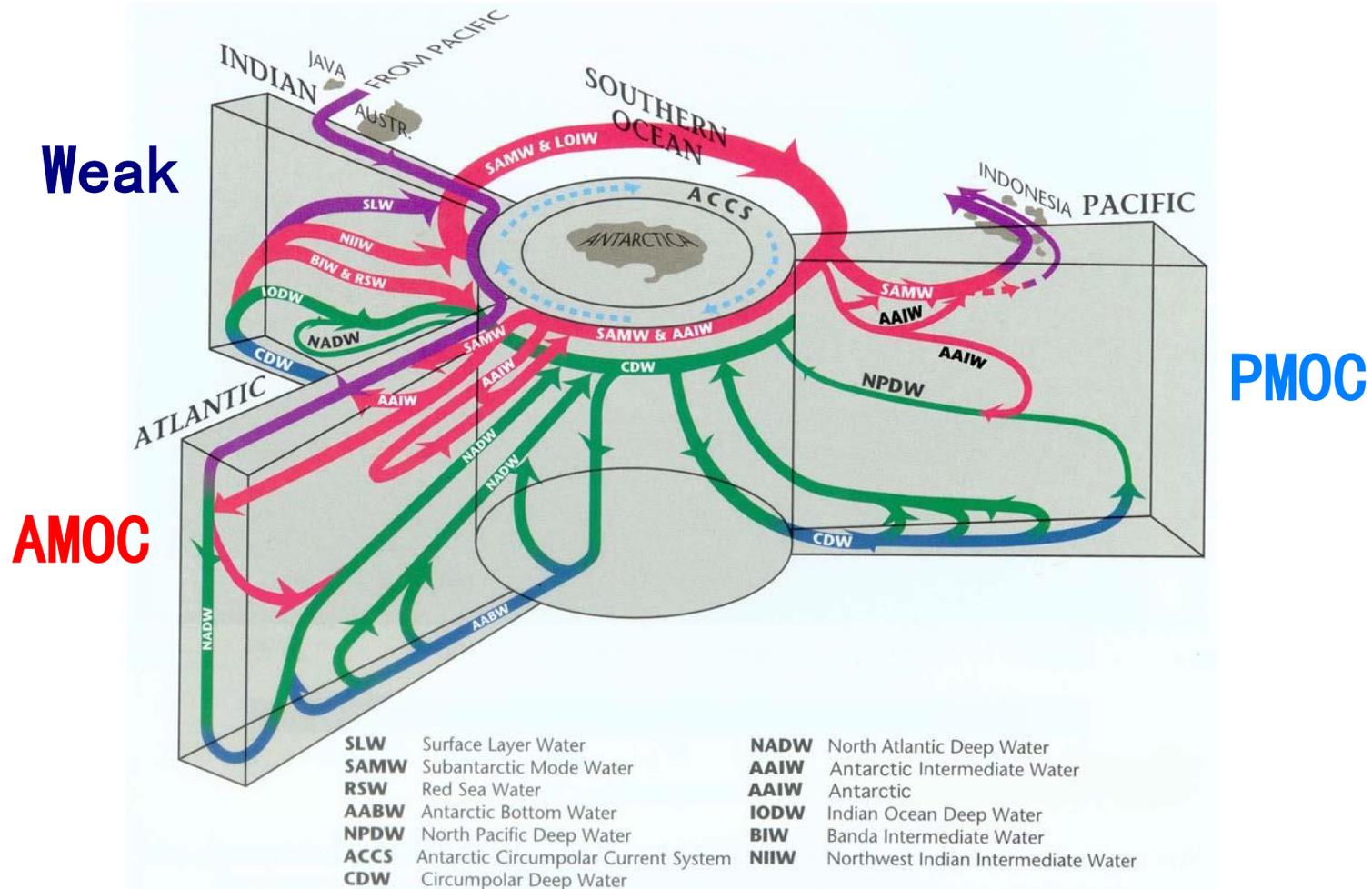
青藏高原的全球视角

难点：如何影响？多大影响？



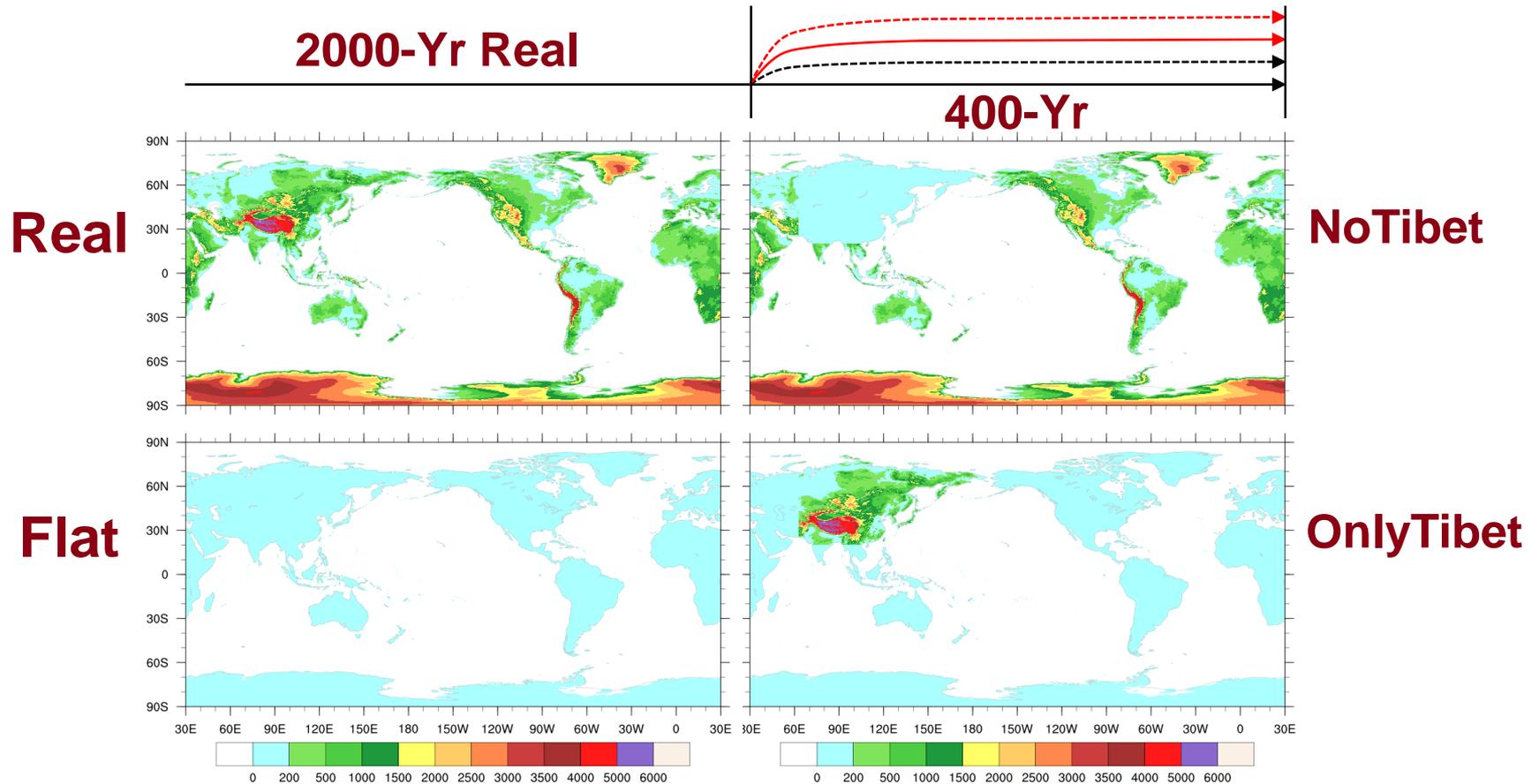
全球海洋经圈环流

维系着整个星球的能量与淡水平衡



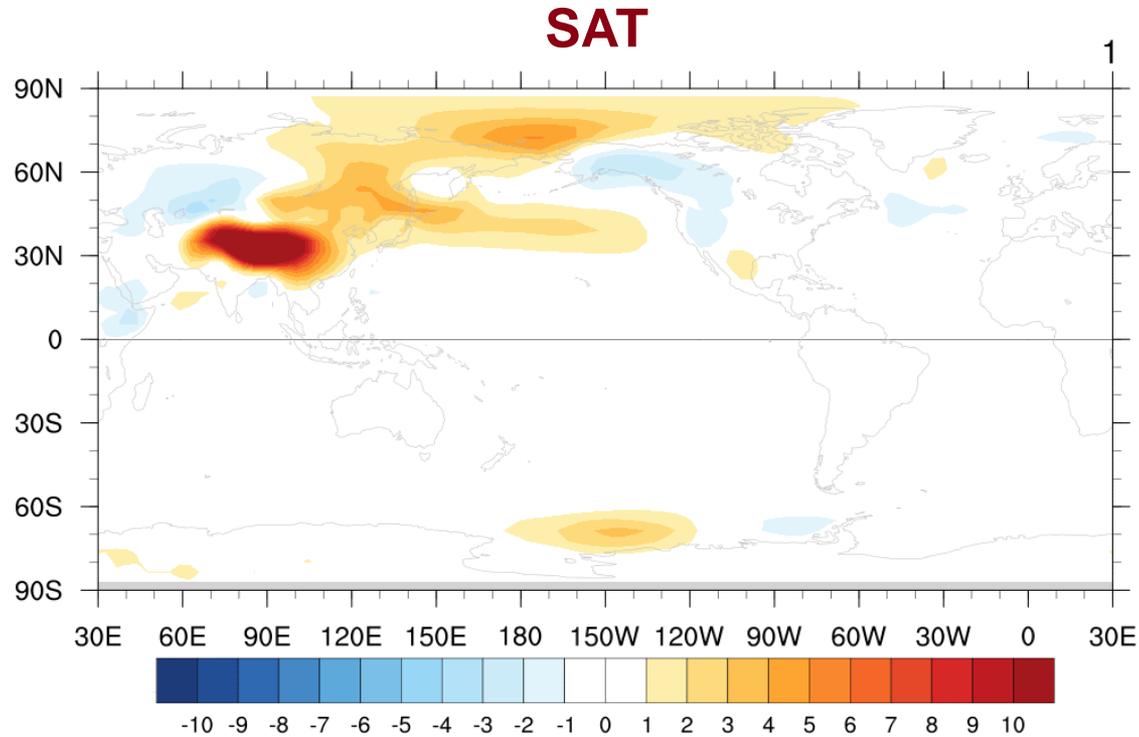
Schmitz (1997) Overturning circulation: Southern Ocean View

Coupled Earth System Model

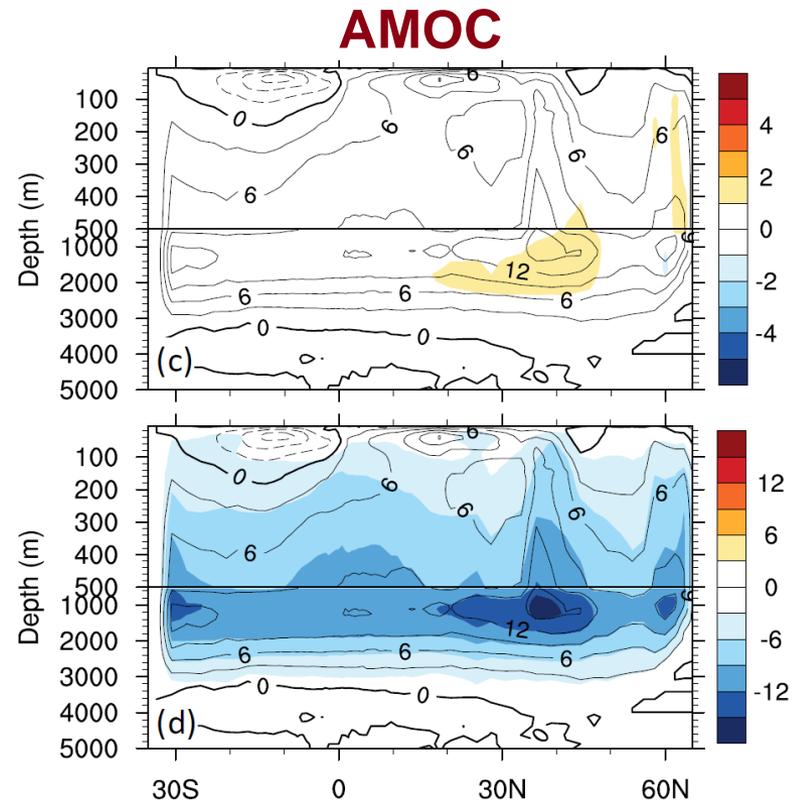
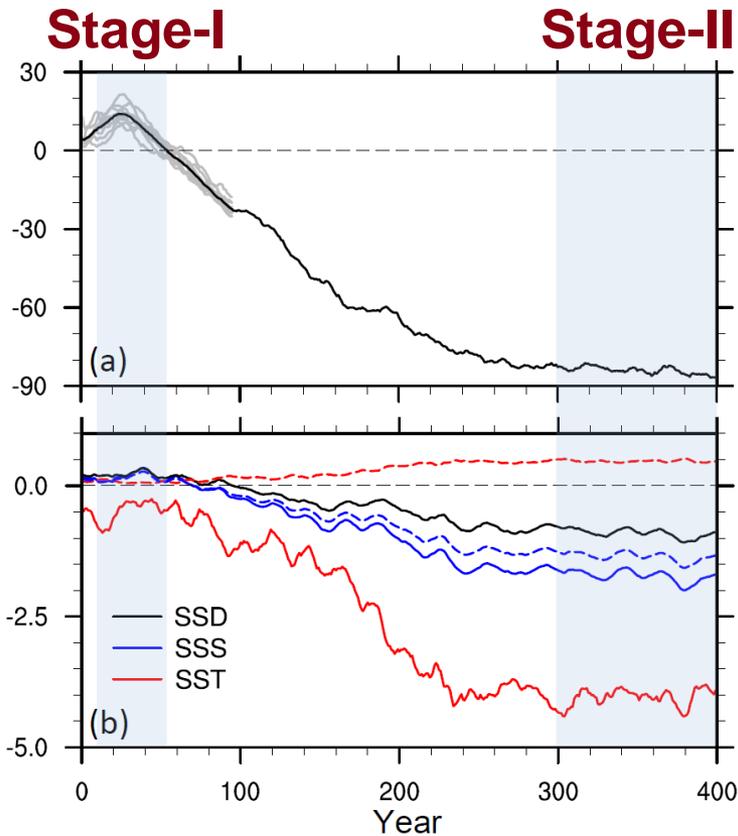


NCAR CESM1.0: CAM5 / POP2 / CLM4 / CICE4 / Glimmer-CISM

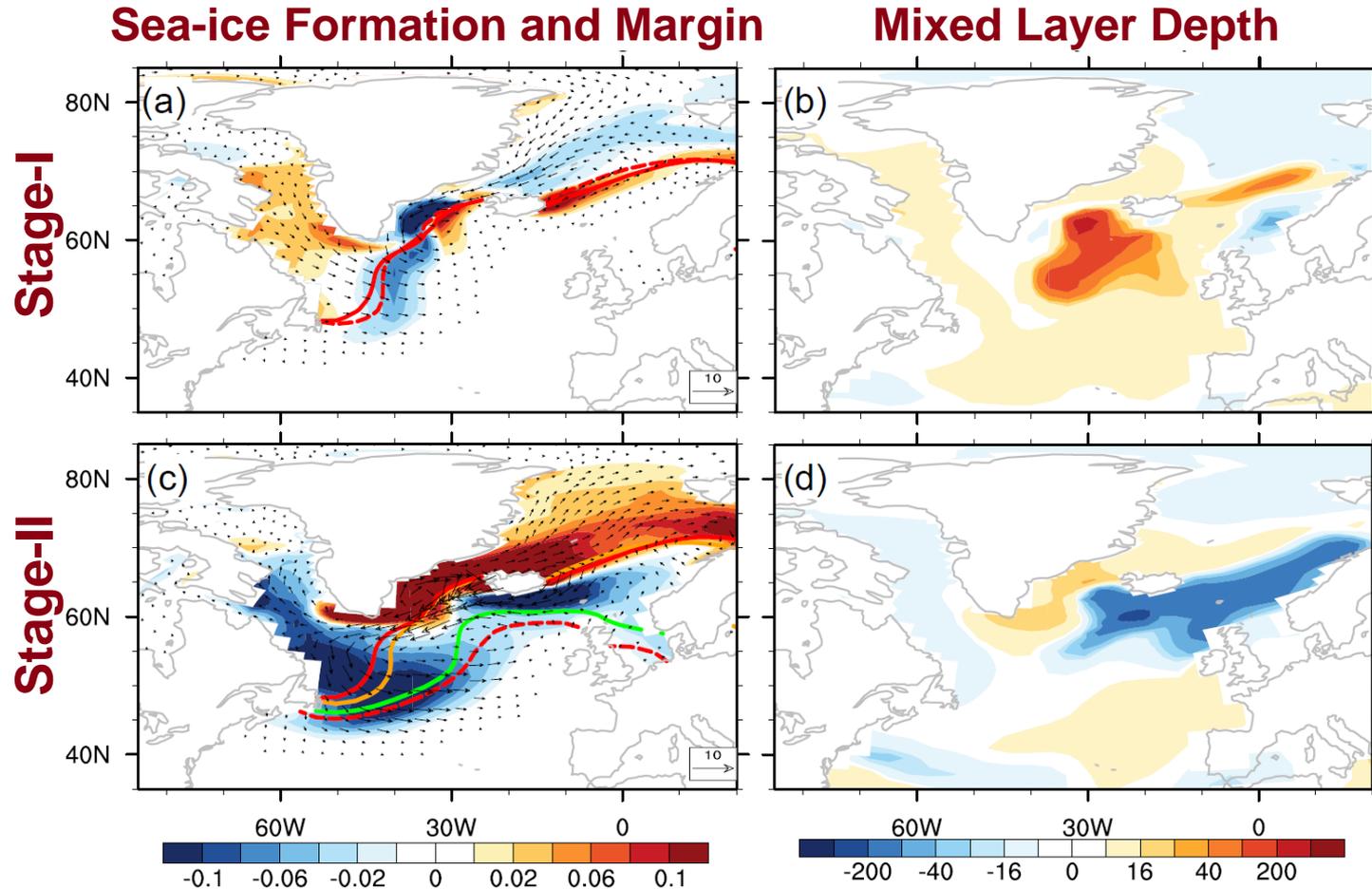
SAT Evolution w/o TP



AMOC Evolution w/o TP

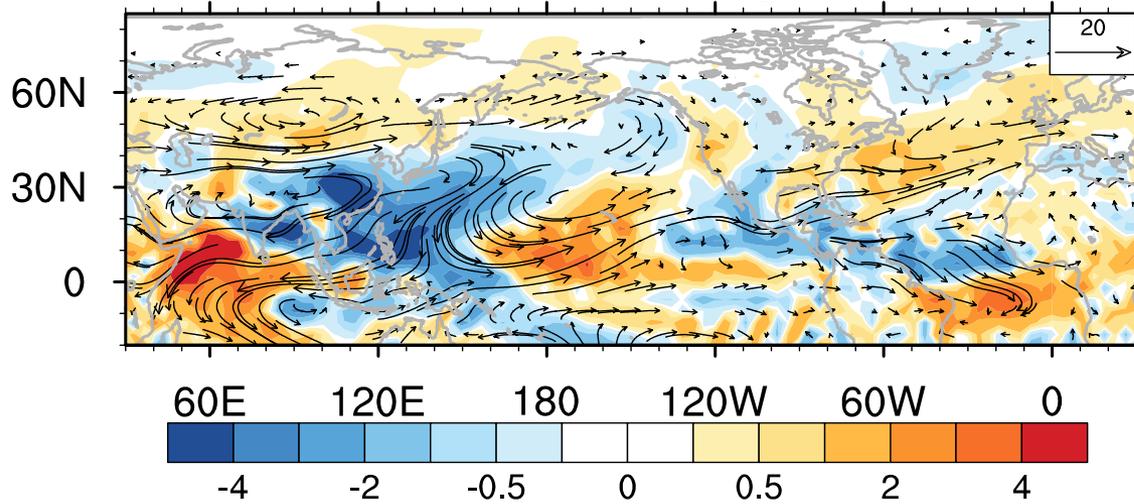


Mechanism for *Salinity* Change

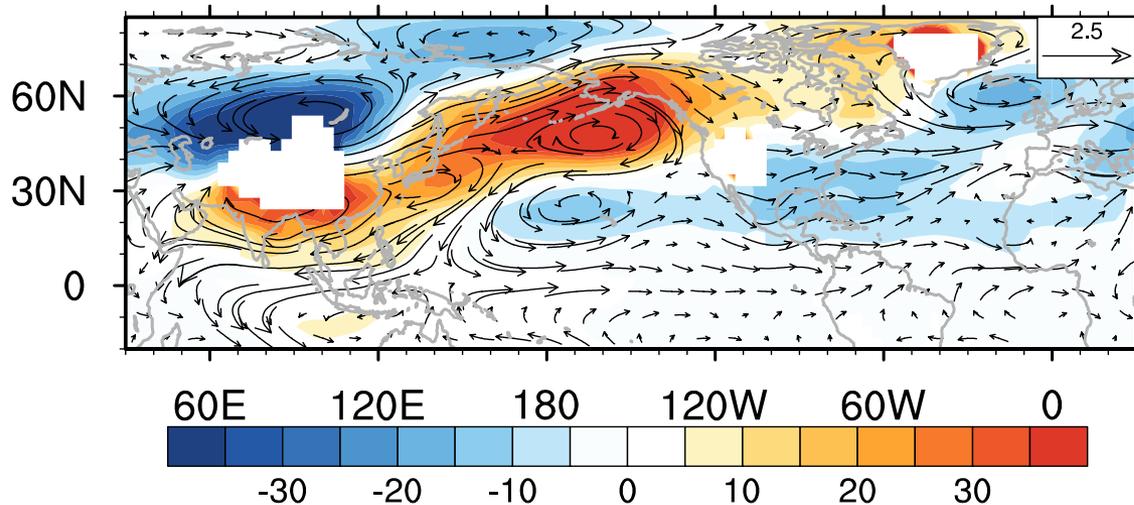


Teleconnection: From *TP* to *Atlantic*

Moisture Transport



850 hPa GH and Wind



Summary

**Critical to AMOC, PMOC,
Energy and moisture transport
in / between SH and NH**



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谢谢