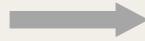
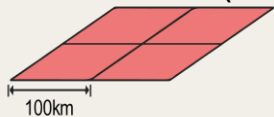
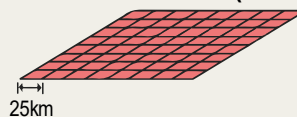


# ENSO simulation sensitivity to horizontal resolution

FGOALS-f3-L (~100 km)



FGOALS-f3-H (~25 km)



*Deterministic pathway*

**Meridional structure of equatorial zonal wind stress**

**Thermocline response**  
stronger in f3-L

**TH and ZA feedbacks**  
BJ index less negative in f3-L

**ENSO amplitude**  
overestimated in f3-L

*Stochastic pathway*

**Tropical cyclone activity**  
frequency and intensity

**HF westerly wind activity**  
weaker in f3-L

**Stochastic forcing (noise)**  
NSR smaller in f3-L

**ENSO irregularity**  
too regular in f3-L

signal

**Improved ENSO simulation in f3-H**