

# **Review on Scientific Impacts of Scatterometer -in association with microwave radiometer**

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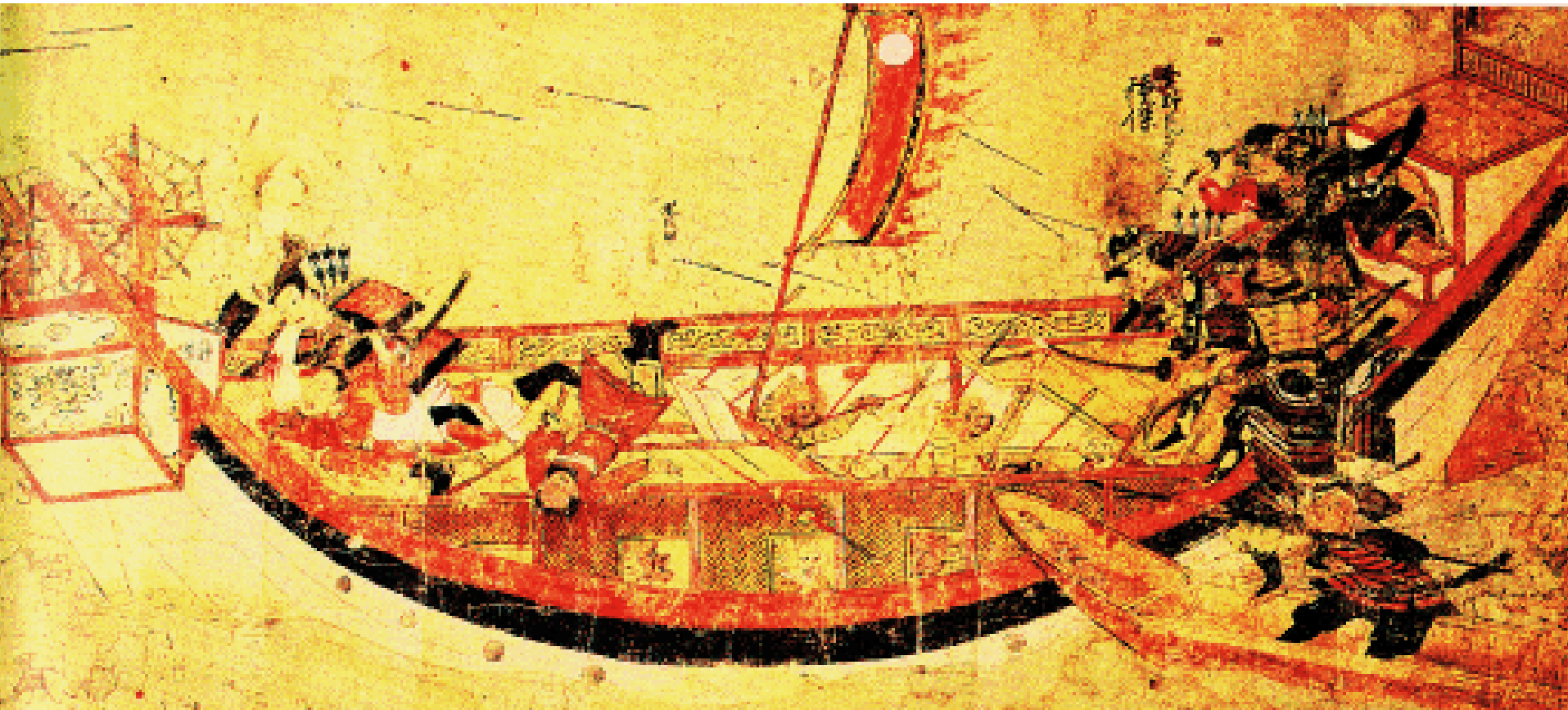
**Jet Propulsion Laboratory  
California Institute of Technology**

Scatterometer measures ocean surface wind/stress

散射仪



Kamikaze 神風 repelled the mongols



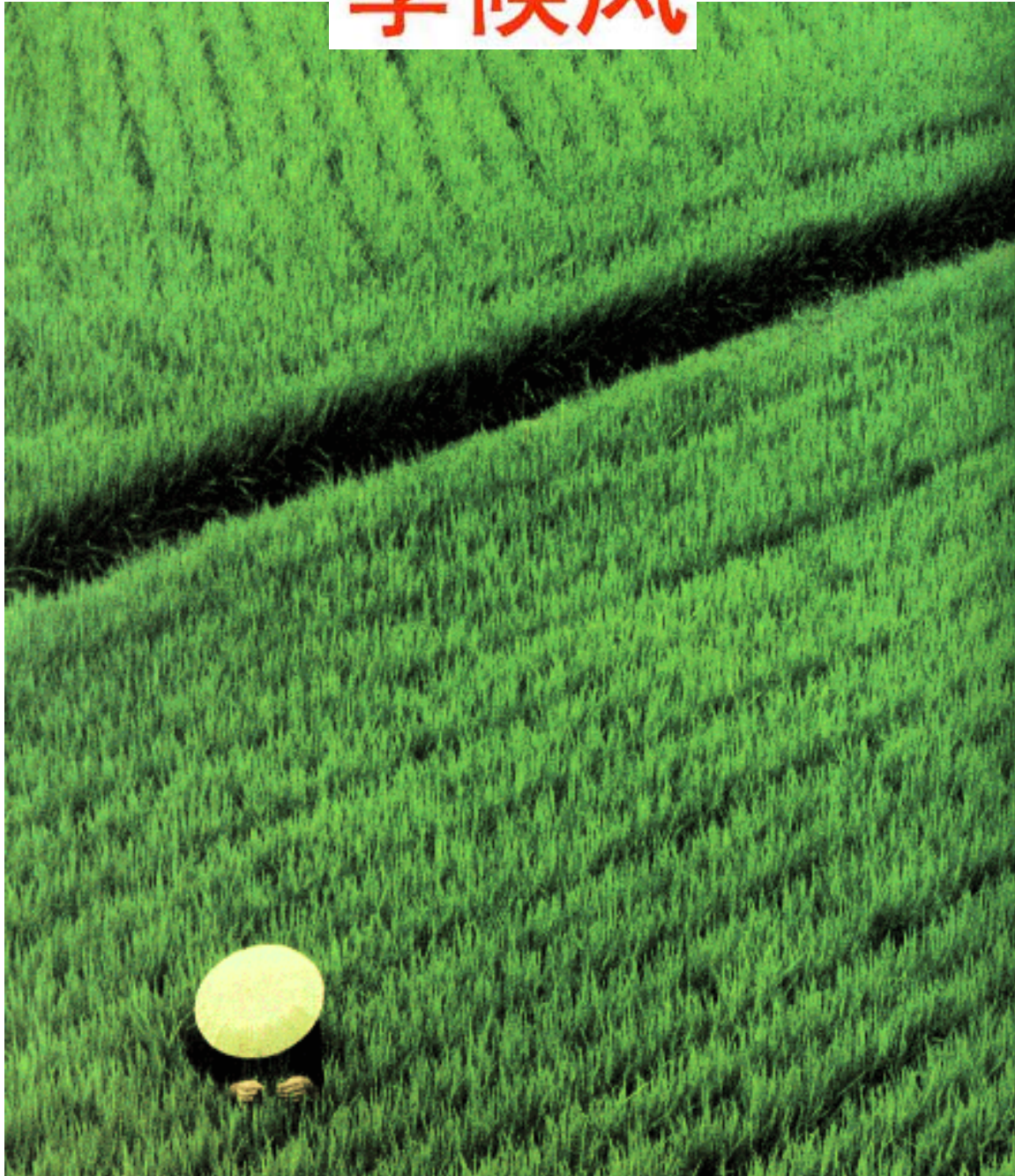


Trade winds 貿易風 brought Commodore Perry





Monsoons 季风 bring rain



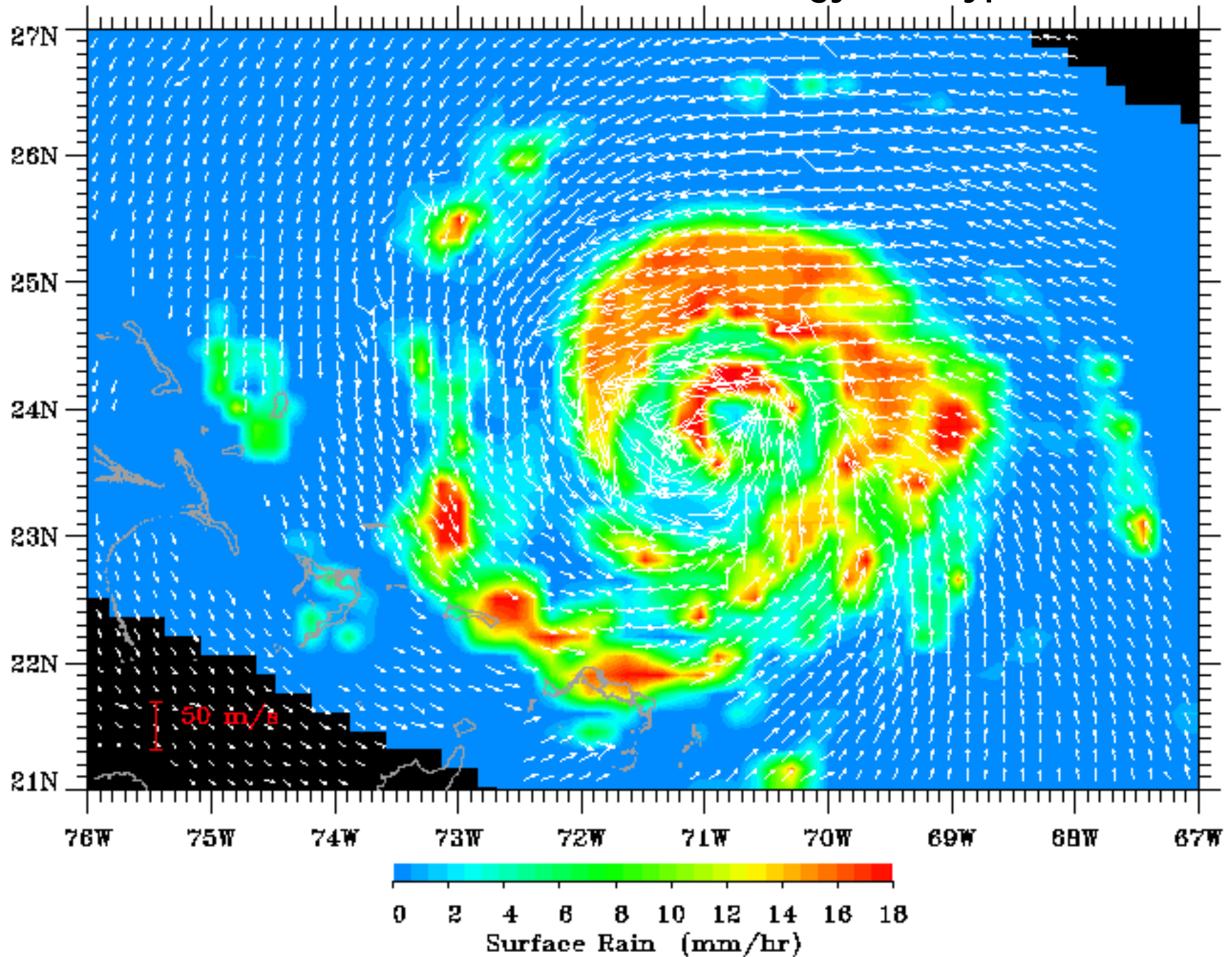
Typhoons

颶風

cause devastation



# Surface winds feed moisture and energy into Typhoon

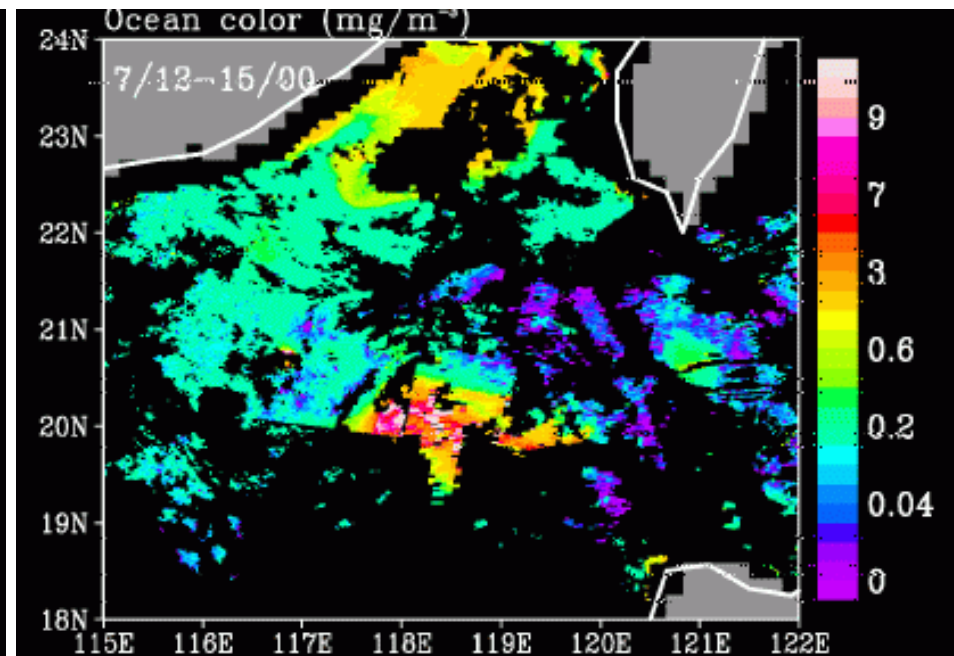
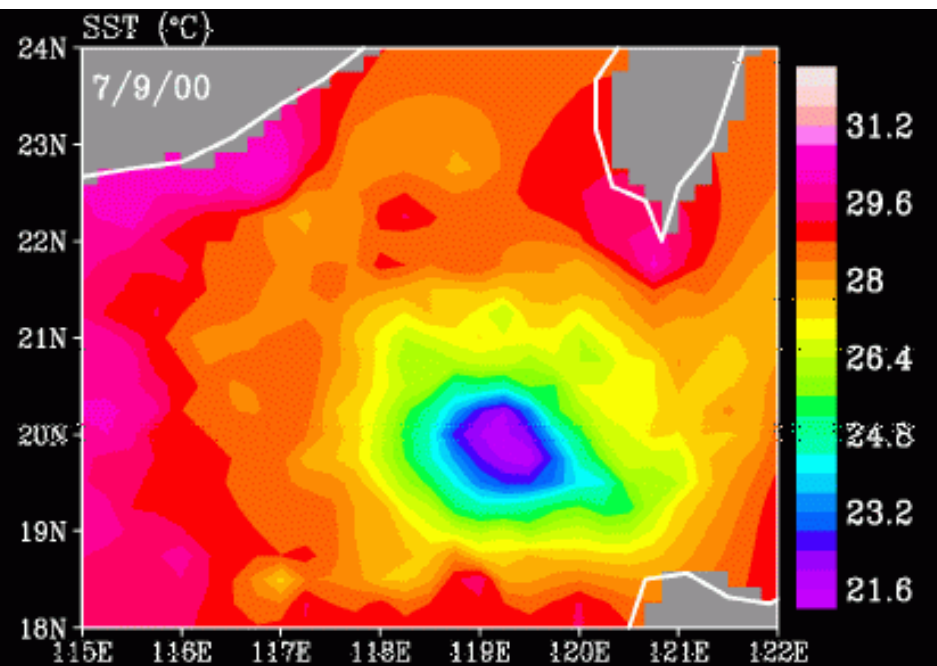
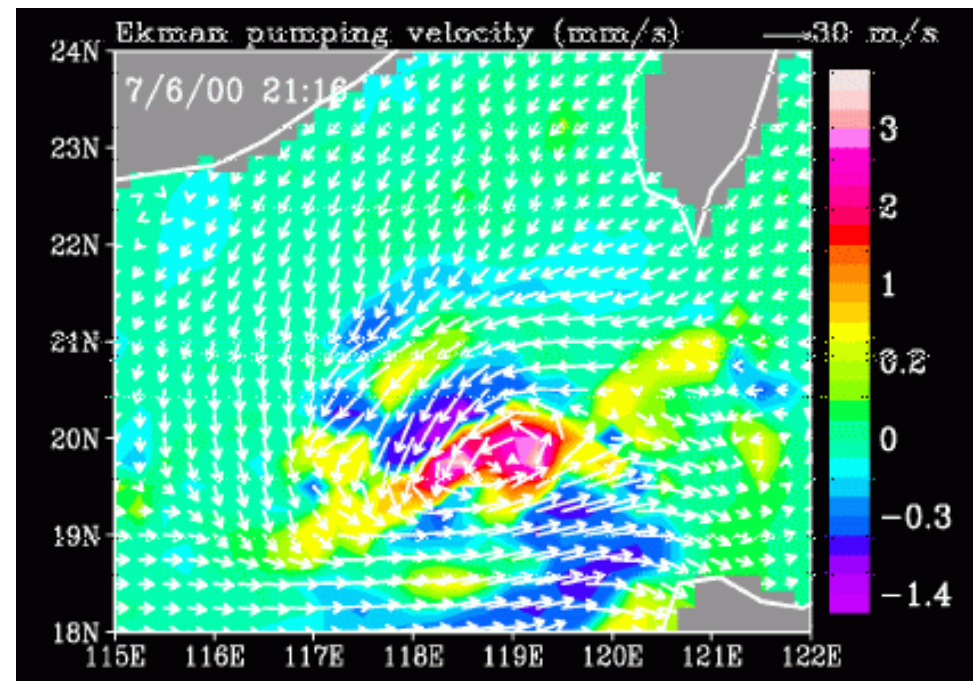




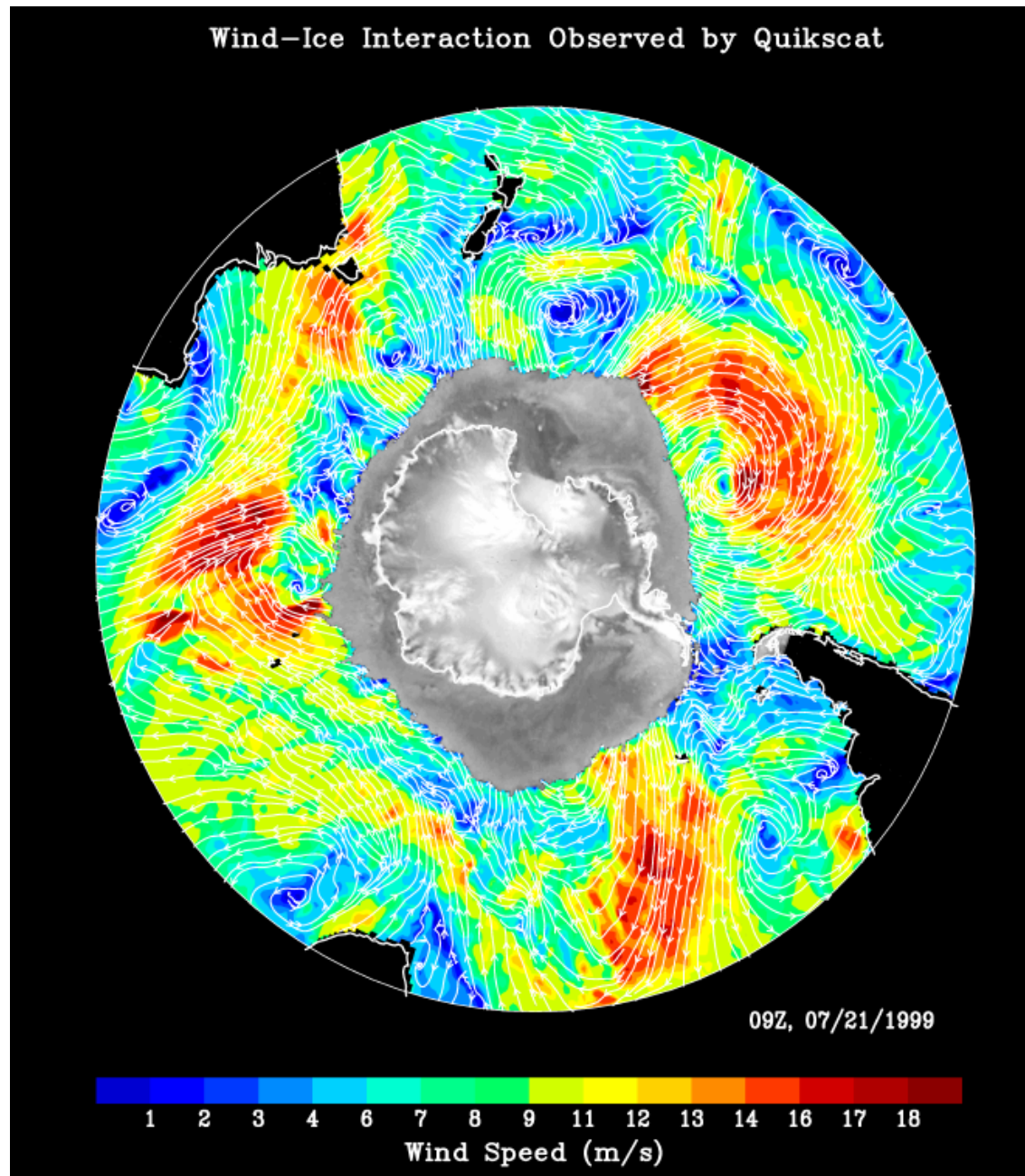
# Biology & Carbon

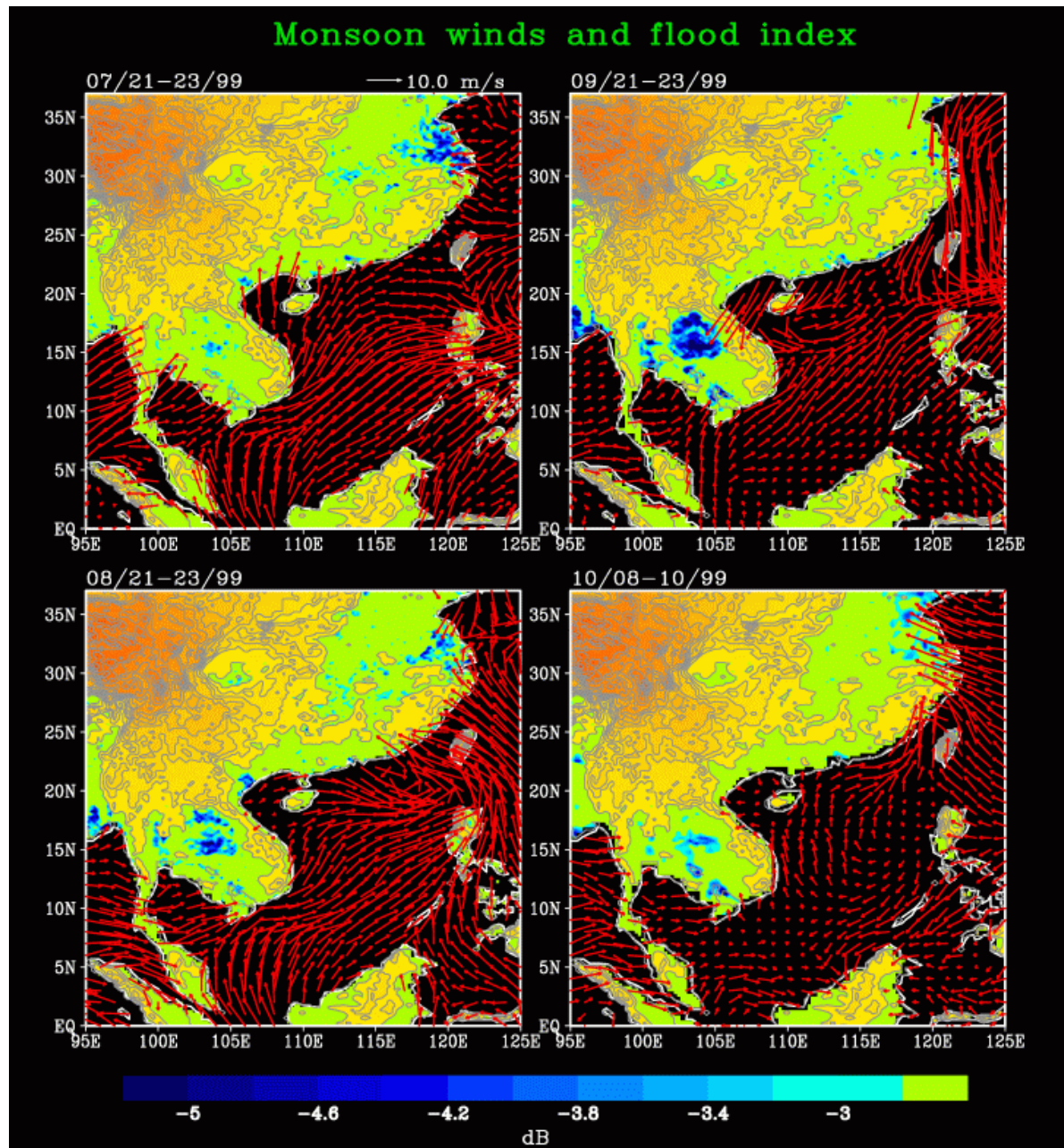
Liu & Lin, 2003

Proc. 12 Conf Sat. Met. & Ocean, AMS

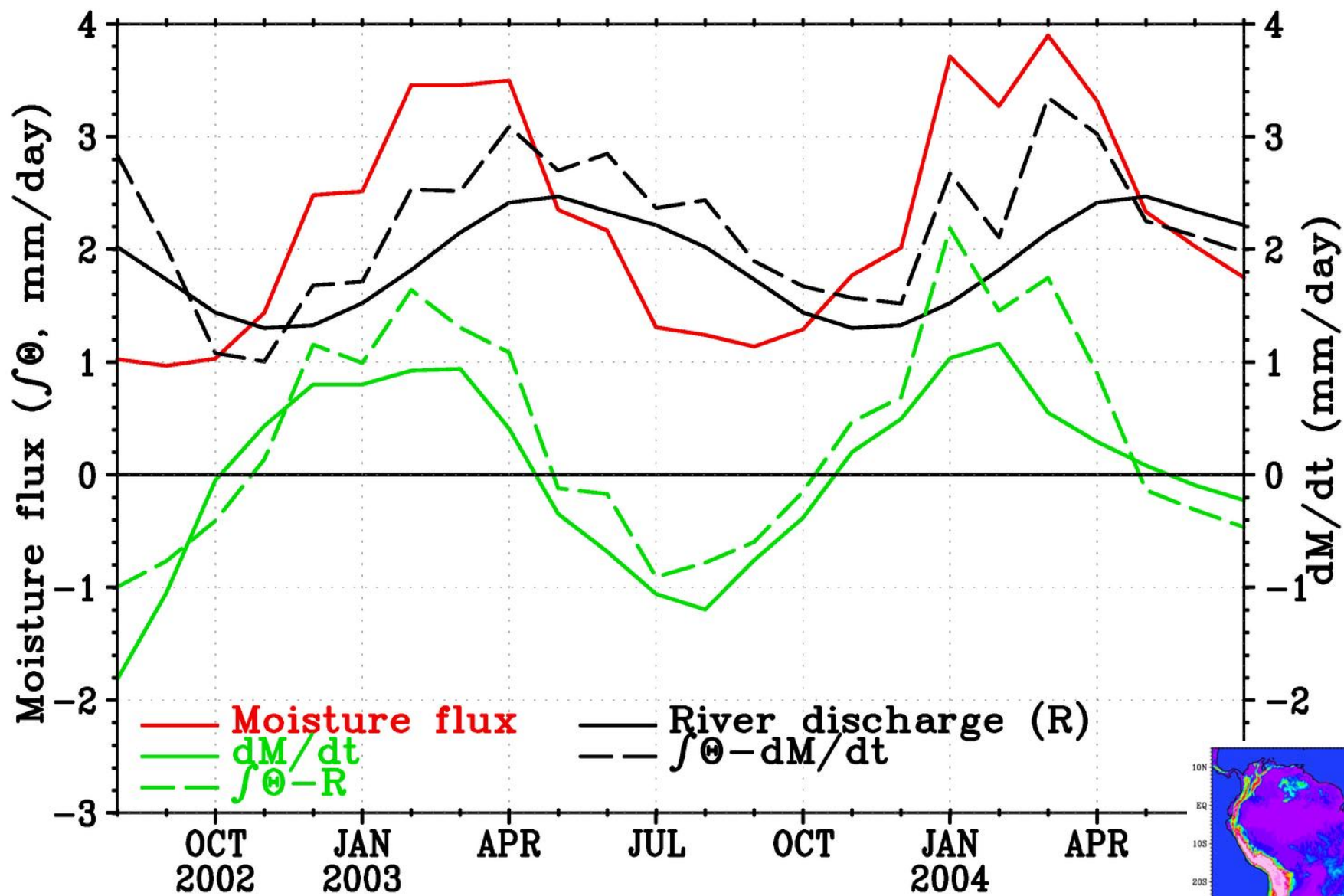






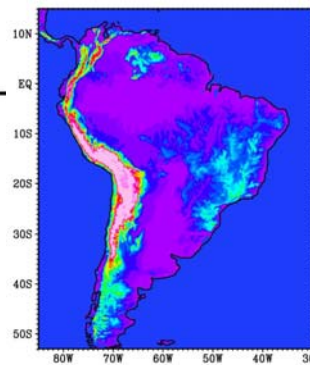


# Water Balance of South America



$$\frac{dM}{dt} = \int \Theta dl - R$$

$$\int \Theta dl = P - E$$





Evaporation (E), precipitation (P), and moisture advection ( $\Theta$ ) over ocean were independently derived from space

E-P and  $\nabla \cdot \Theta$  show similar geographic patterns

