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

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Scatterometer measures ocean surface wind/stress
Kamikaze 神风 repelled the mongols
Trade winds 贸易风 brought Commodore Perry
Monsoons bring rain
Typhoons cause devastation
Surface winds feed moisture and energy into Typhoon
Biology & Carbon

Liu & Lin, 2003
Proc. 12 Conf Sat. Met. & Ocean, AMS
Polar Ice

Liu, 2002, Backscatter, Vol 12, #2, 10-14

Wind-Ice Interaction Observed by Quikscat

09Z, 07/21/1999

Wind Speed (m/s)
Water Balance of South America

\[
\frac{dM}{dt} = \int \Theta \, dl - R \quad \int \Theta \, dl = P - E
\]
Evaporation (E), precipitation (P), and moisture advection (Θ) over ocean were independently derived from space. E-P and ∇•Θ show similar geographic patterns.