

2014



Jan

Feb

Mar

Apr

May

Jun

Jul

Aug

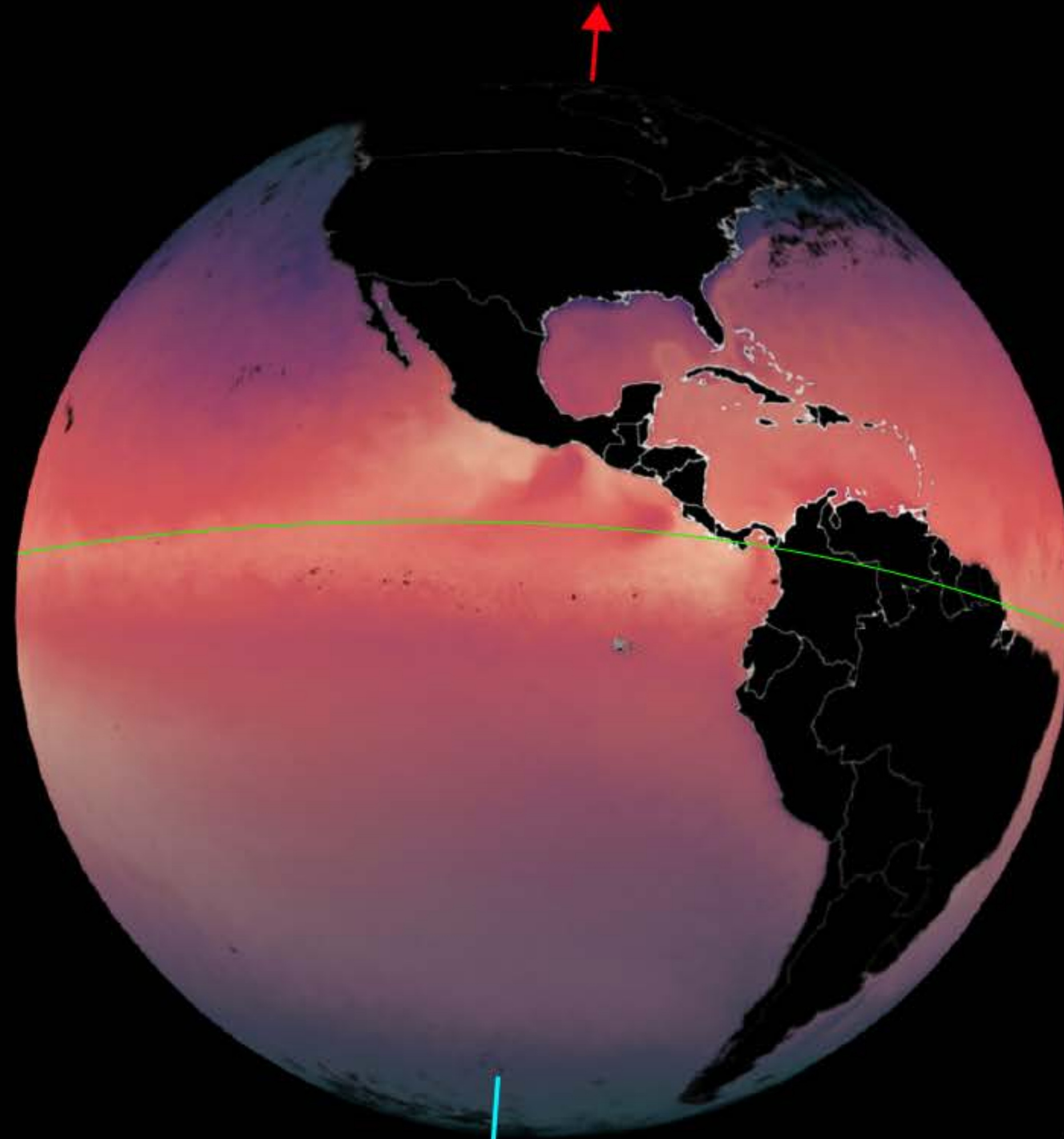
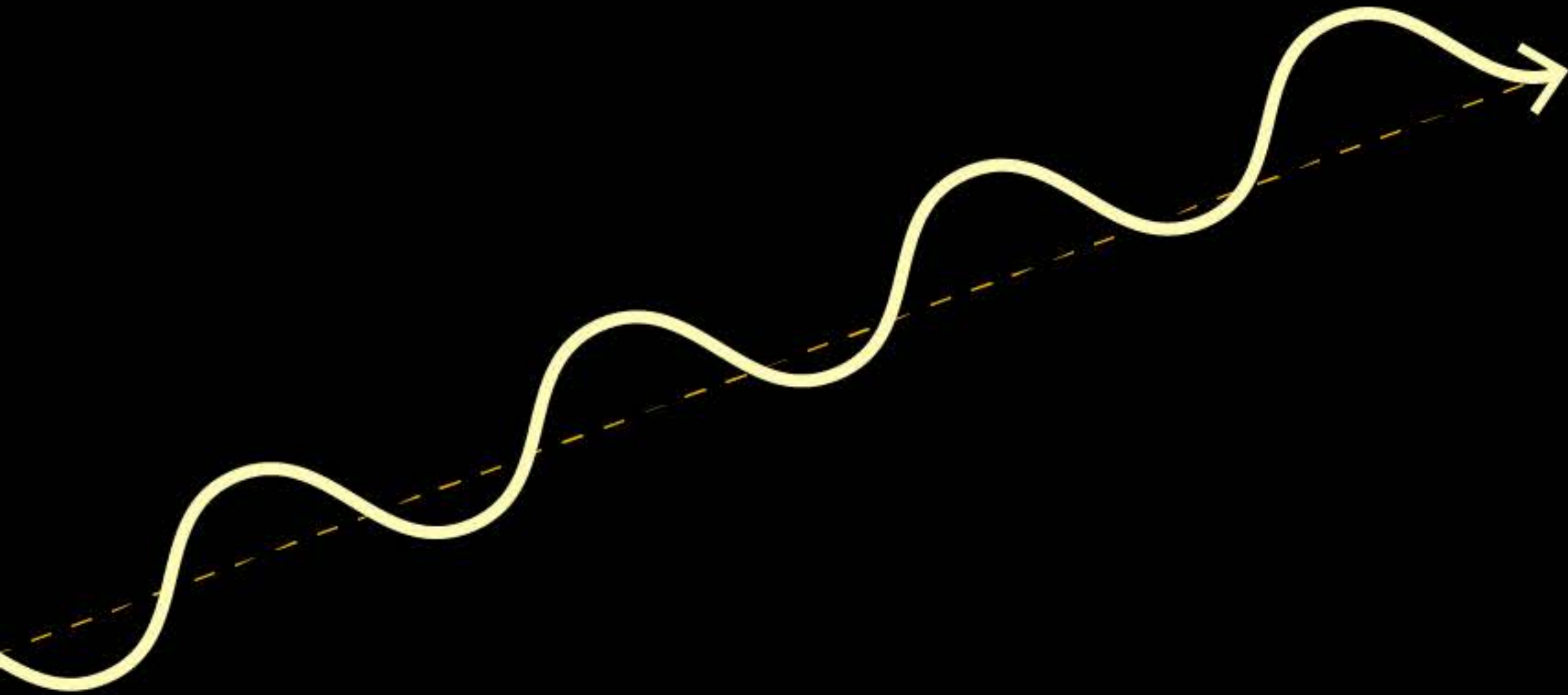
Sep

Oct

Nov

Dec

The ocean receives most of its heat along the equator from incoming direct radiation from the **sun**.



Sea surface temperature

cooler

hotter

2014

Jan

Feb

Mar

Apr

May

Jun

Jul

Aug

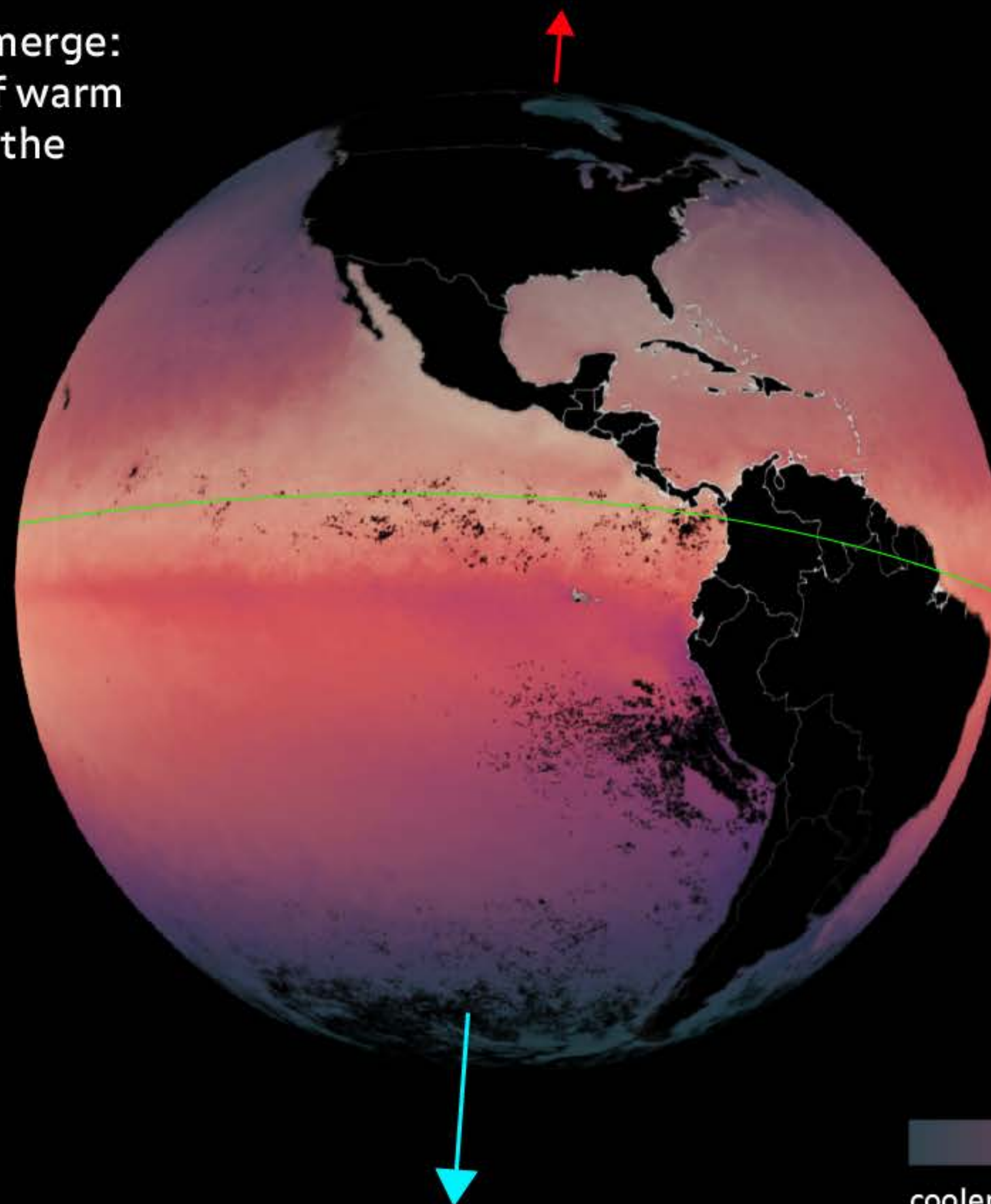
Sep

Oct

Nov

Dec

Over time, **seasonal patterns** emerge:
due to the **Earth's tilt**, a band of warm
water shifts north and south as the
Earth revolves around the sun.



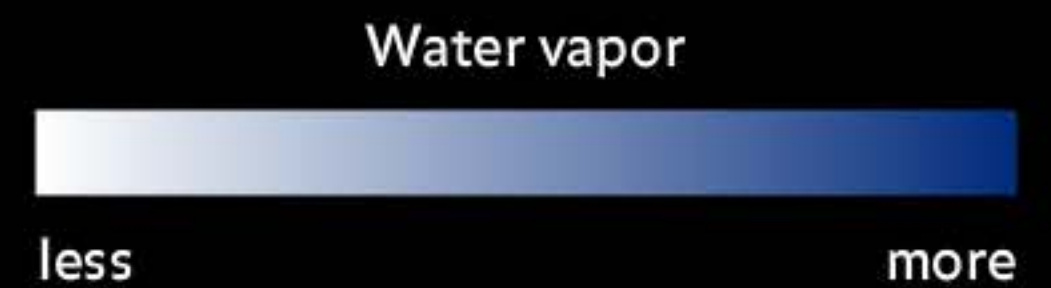
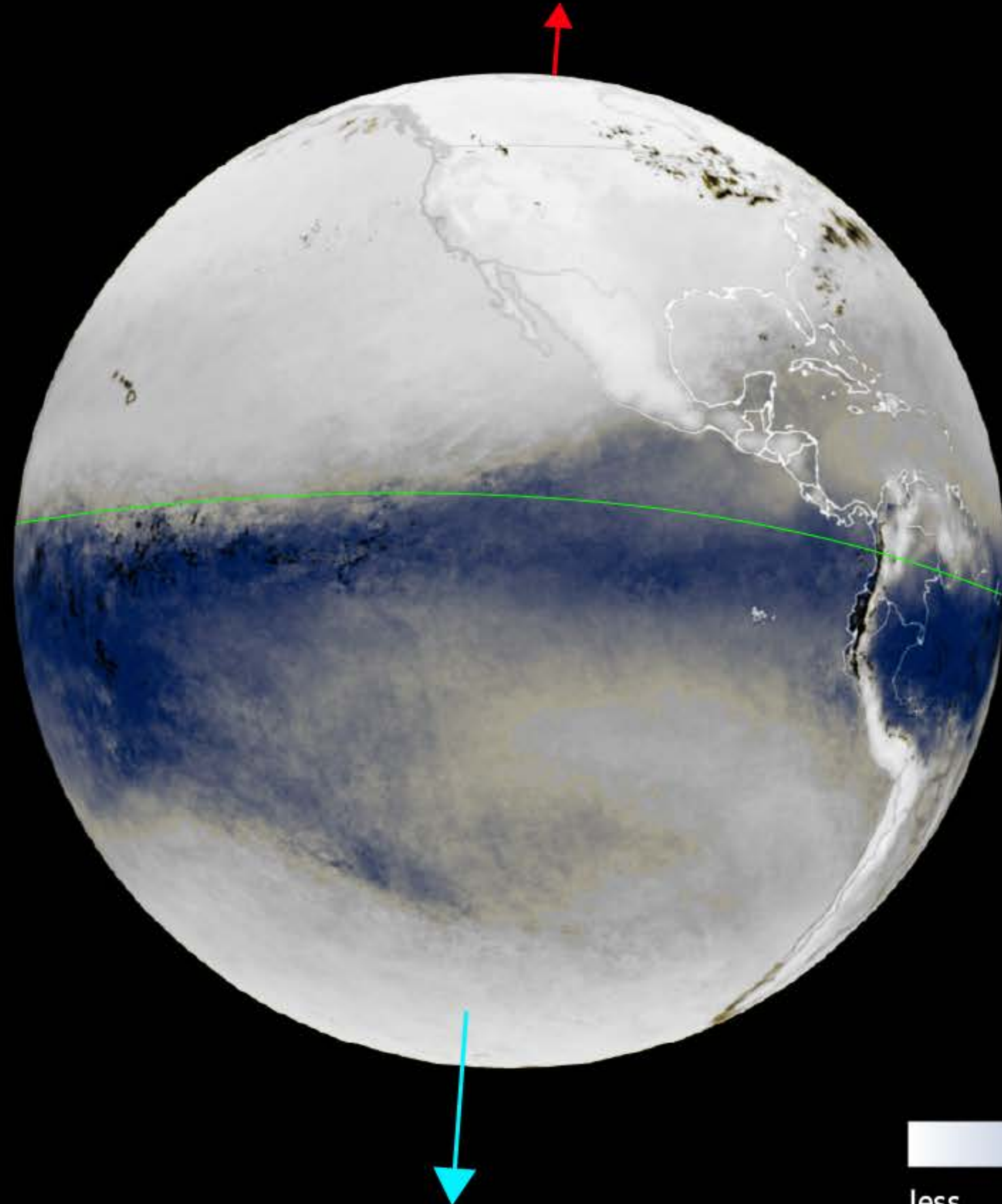
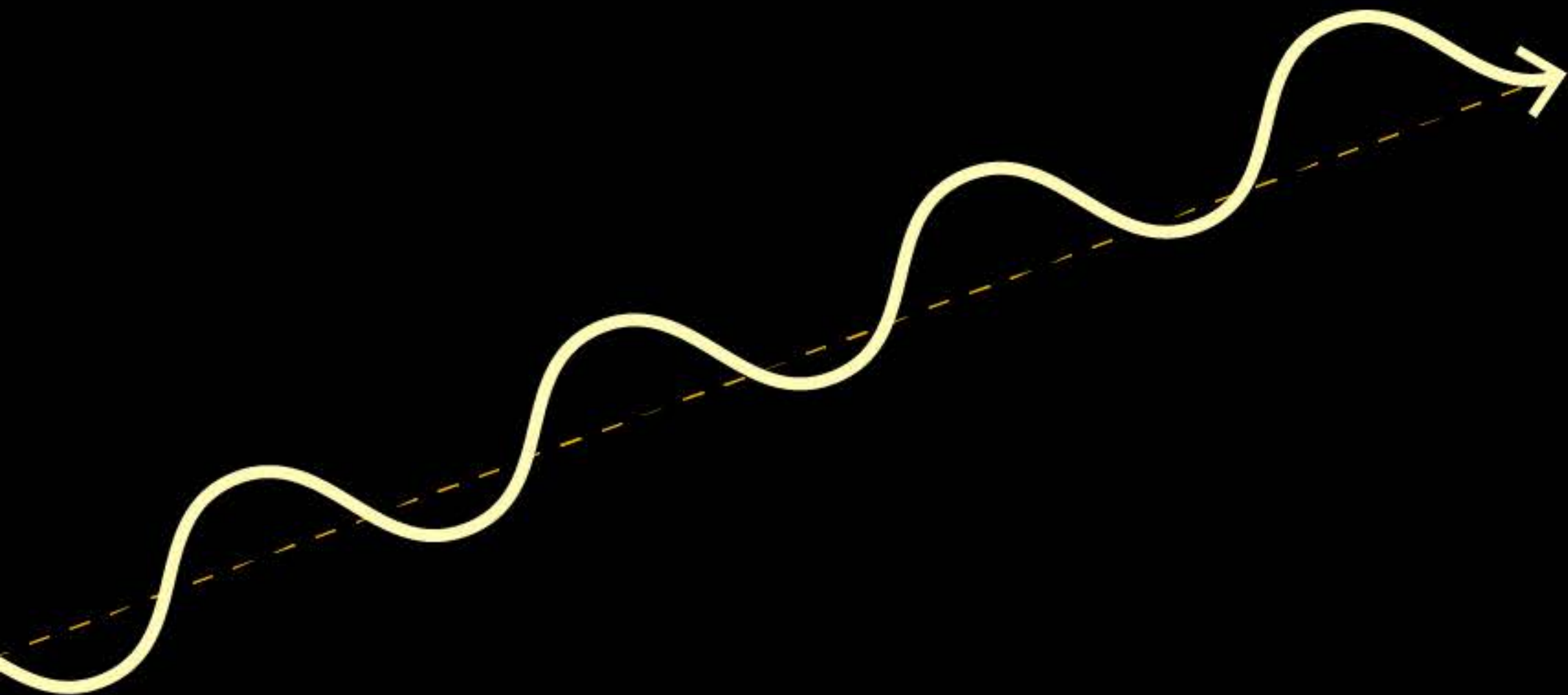
Sea surface temperature

cooler

hotter

2016 ↓ Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

Heat escapes the ocean as
water vapor and rises to warm
the overlying atmosphere.



2016

Jan

Feb

Mar

Apr

May

Jun

Jul

Aug

Sep

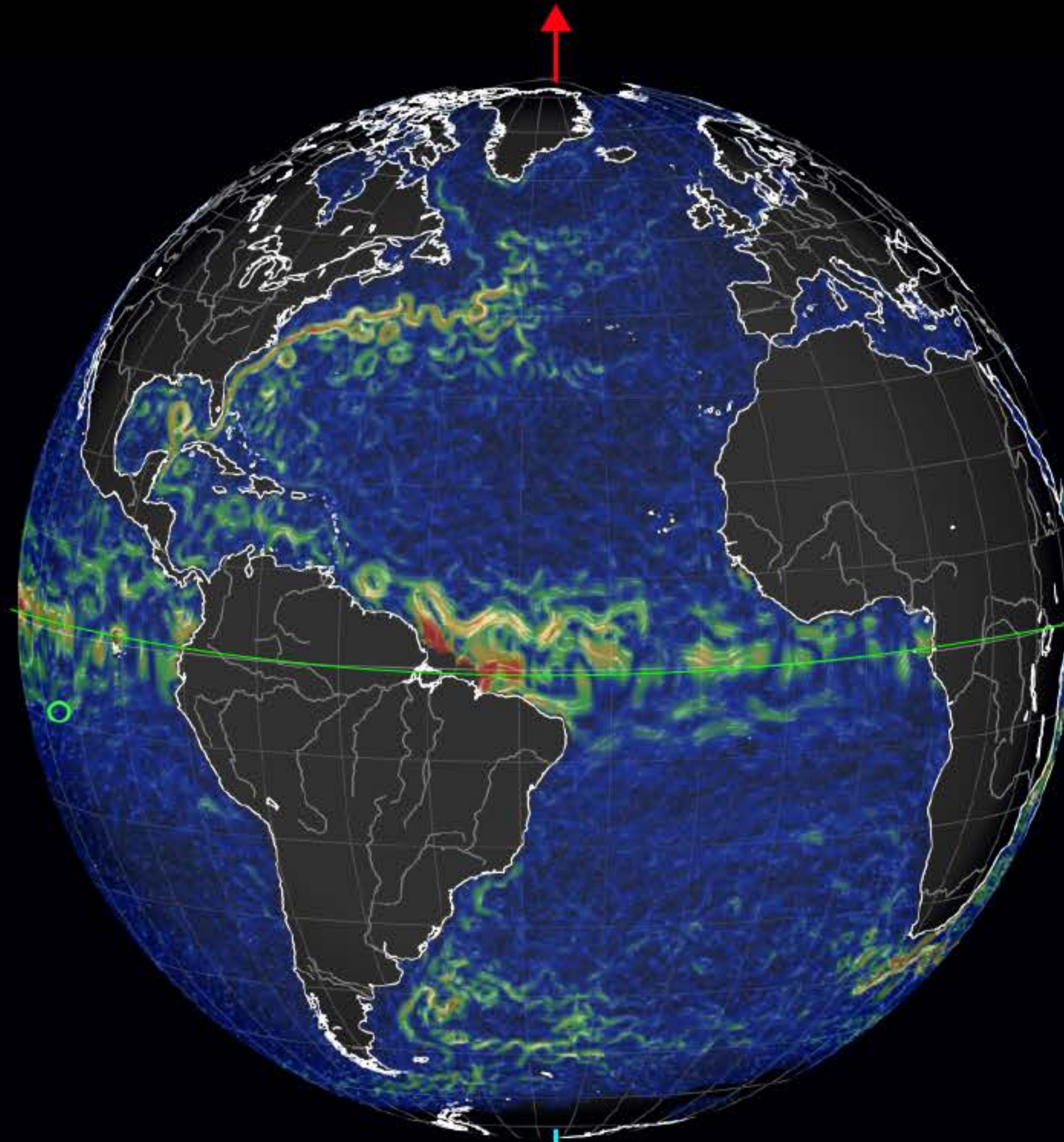
Oct

Nov

Dec



Warm air creates air temperature gradients making wind that drives ocean **current patterns**.



Wind speed



weaker

stronger