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Sea Surface Temperature Rises Shift Migration Patterns Due to Ecosystem Changes


Alexia Skrbic

Chapman University, skrbi101@mail.chapman.edu

Hesham el-Askary

Chapman University, elaskary@chapman.edu

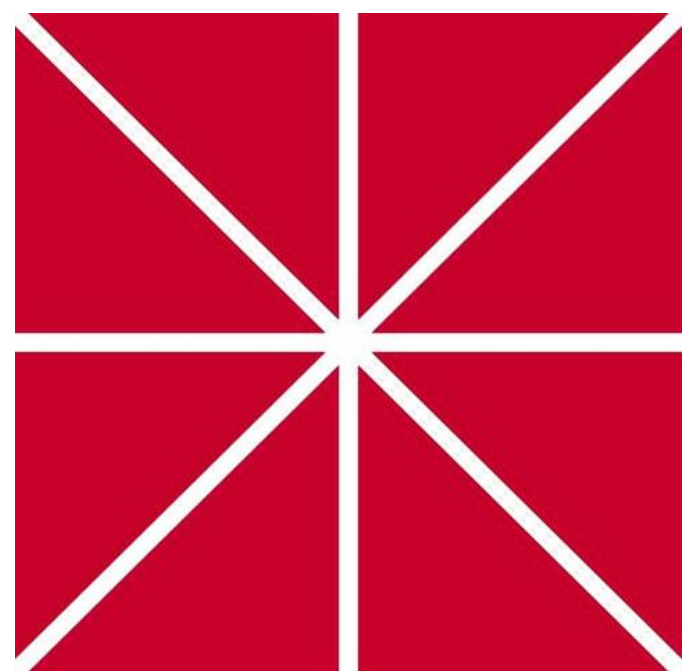
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Skrbic, Alexia., El-Askary, Hesham

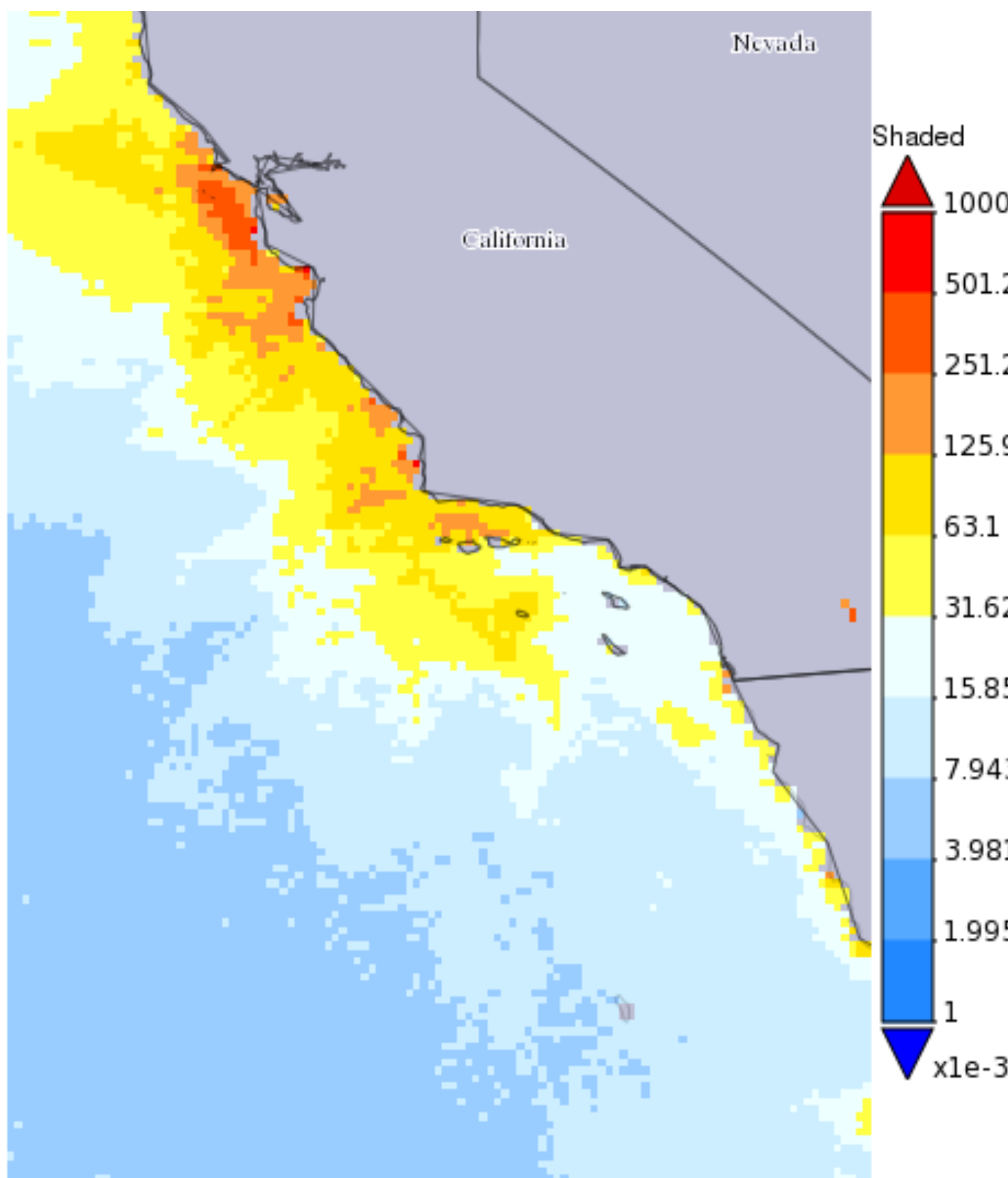
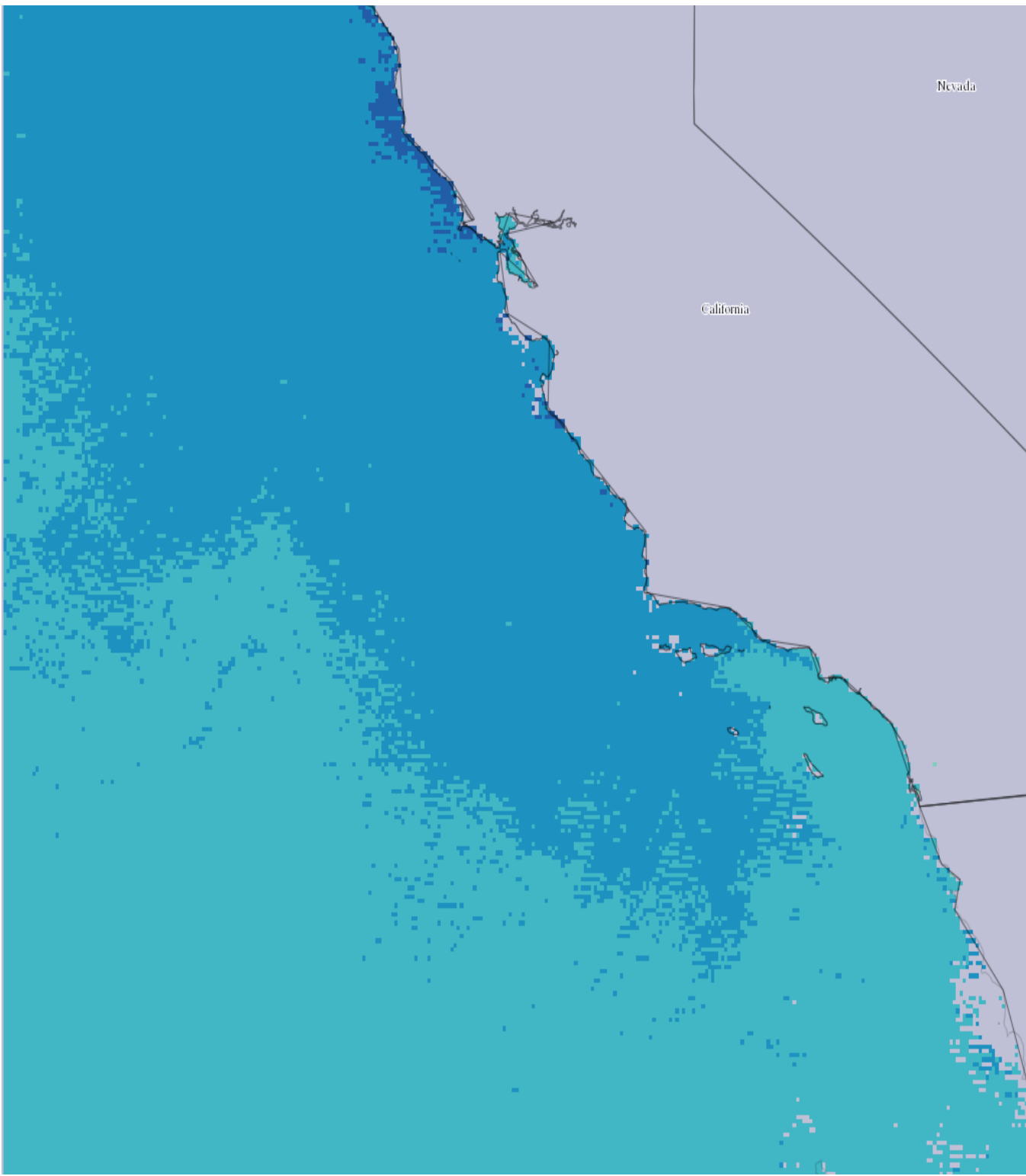
Current Research

- Climate change is negatively impacting ecosystems, specifically oceans which are declining and food webs are being altered by the increase of greenhouse gases.
- Increase of the carbon dioxide and other greenhouse gases is increasing sea surface temperature of the world's oceans.
- Several marine animals like sharks that filter feed on these on phytoplankton and zooplankton which are directly affected by the warming.
- In recent years, an increase in shark sighting near shores on the coast of California have given rise to questions on why this is occurring.
- The images show the coast of California using the program Giovanni looking at time averaged maps of sea surface temperature and phytoplankton absorption and the program SeaDas looking at seasonal climatology and chlorophyll content.
- The results so far have shown that there is a direct relationship in the sea surface temperature increases and the receding closer to shores of phytoplankton in the last 10 years (2006-2016) and similarly with SST and chlorophyll content from 2000-2016.

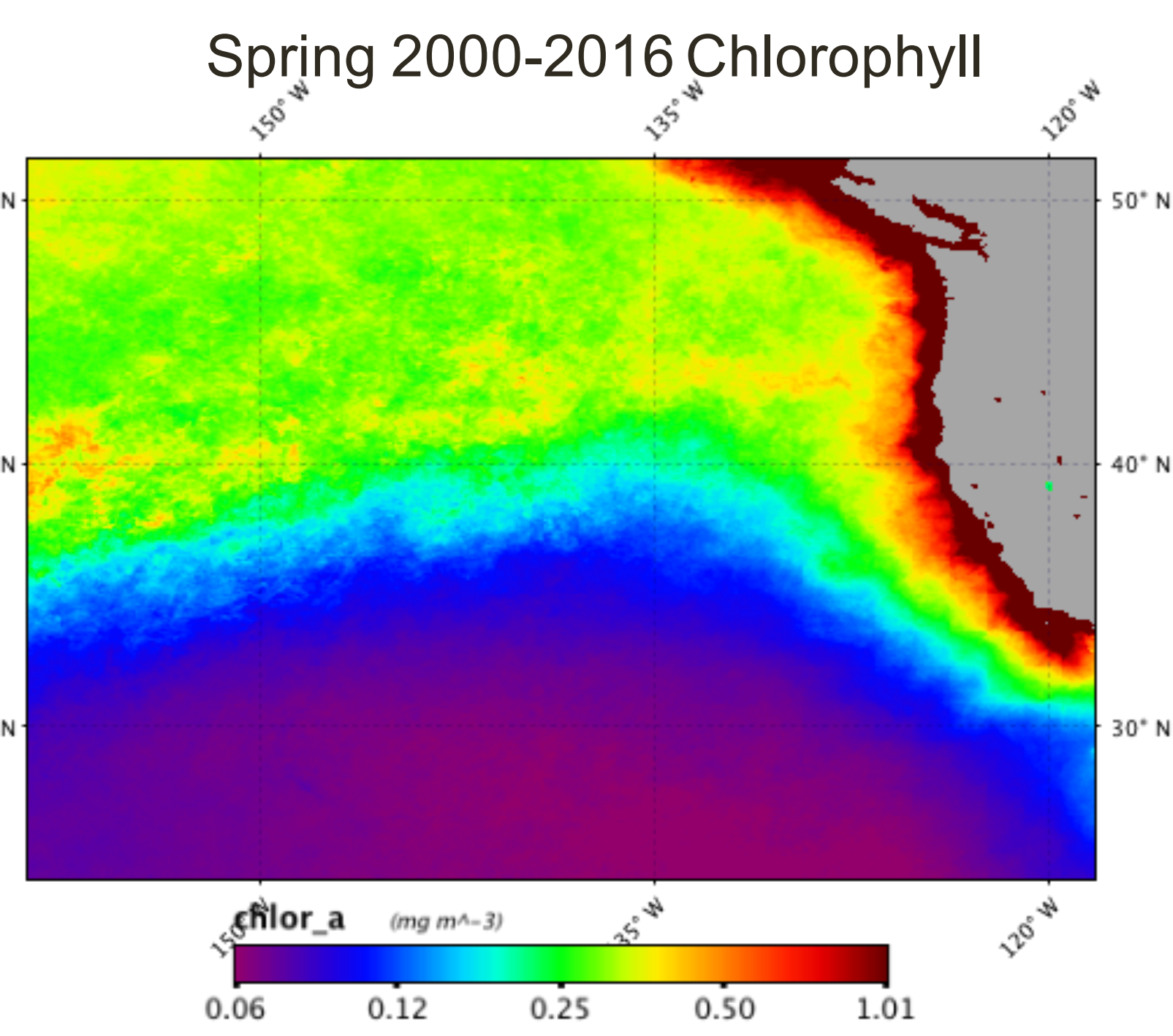
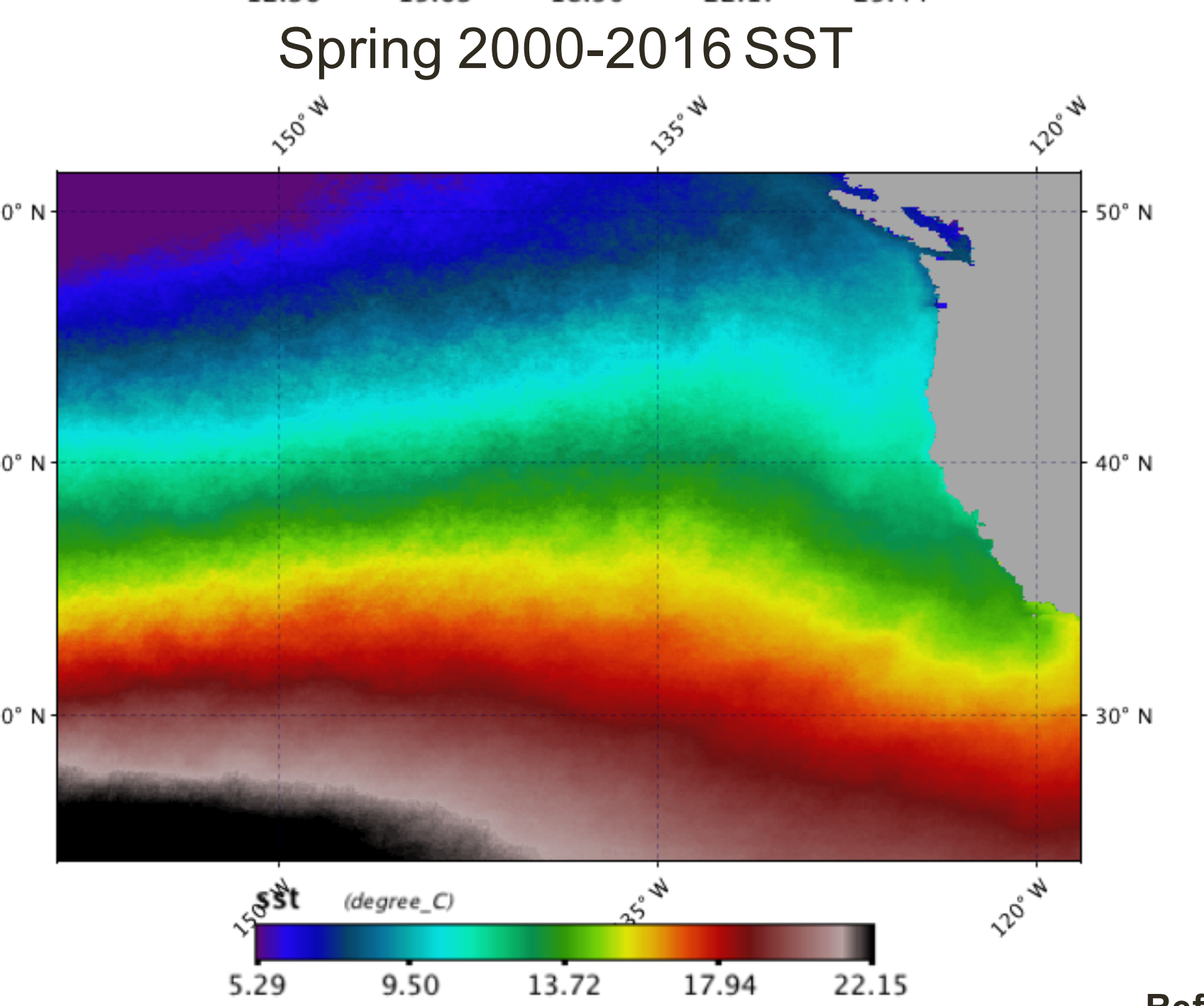
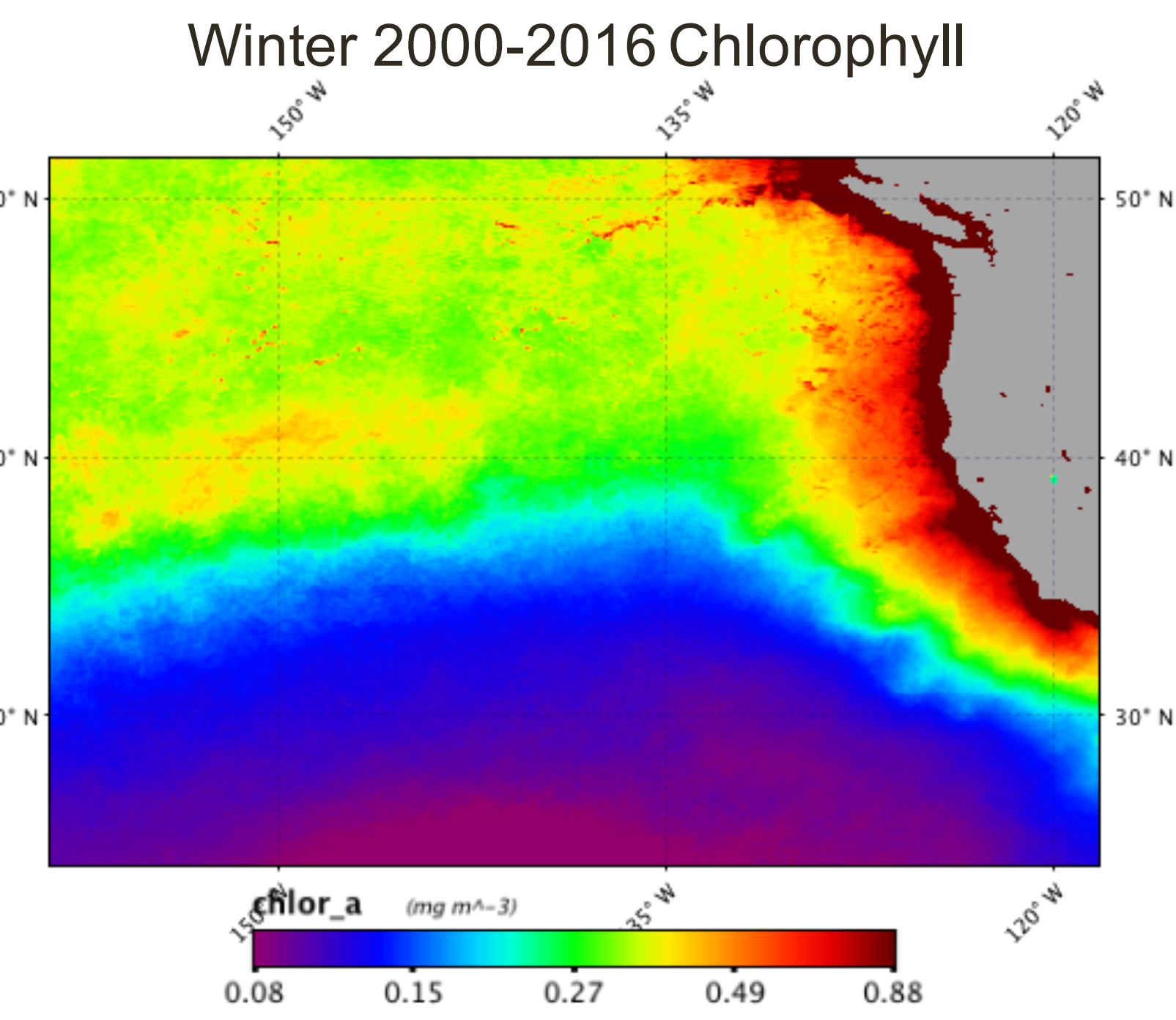
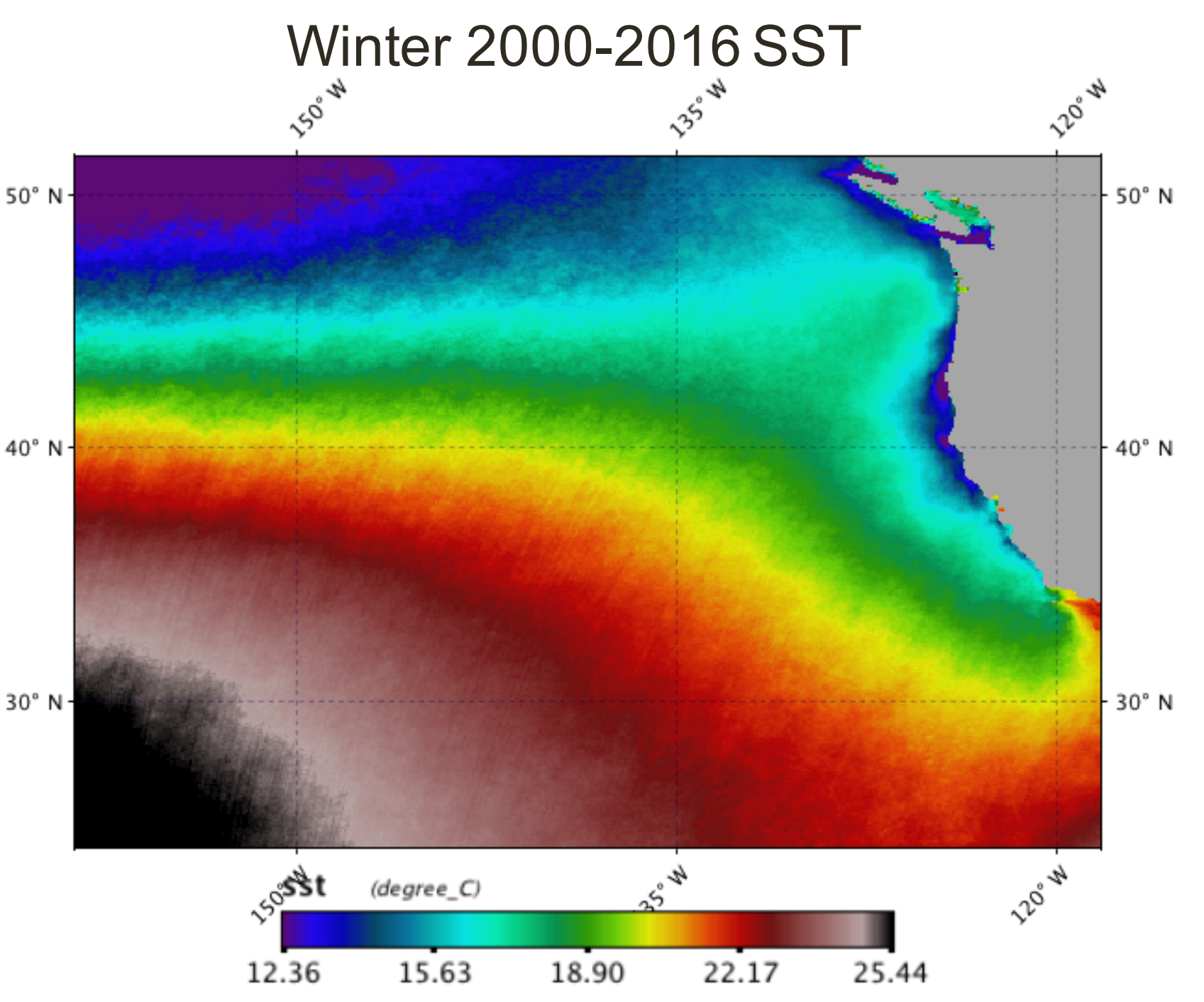
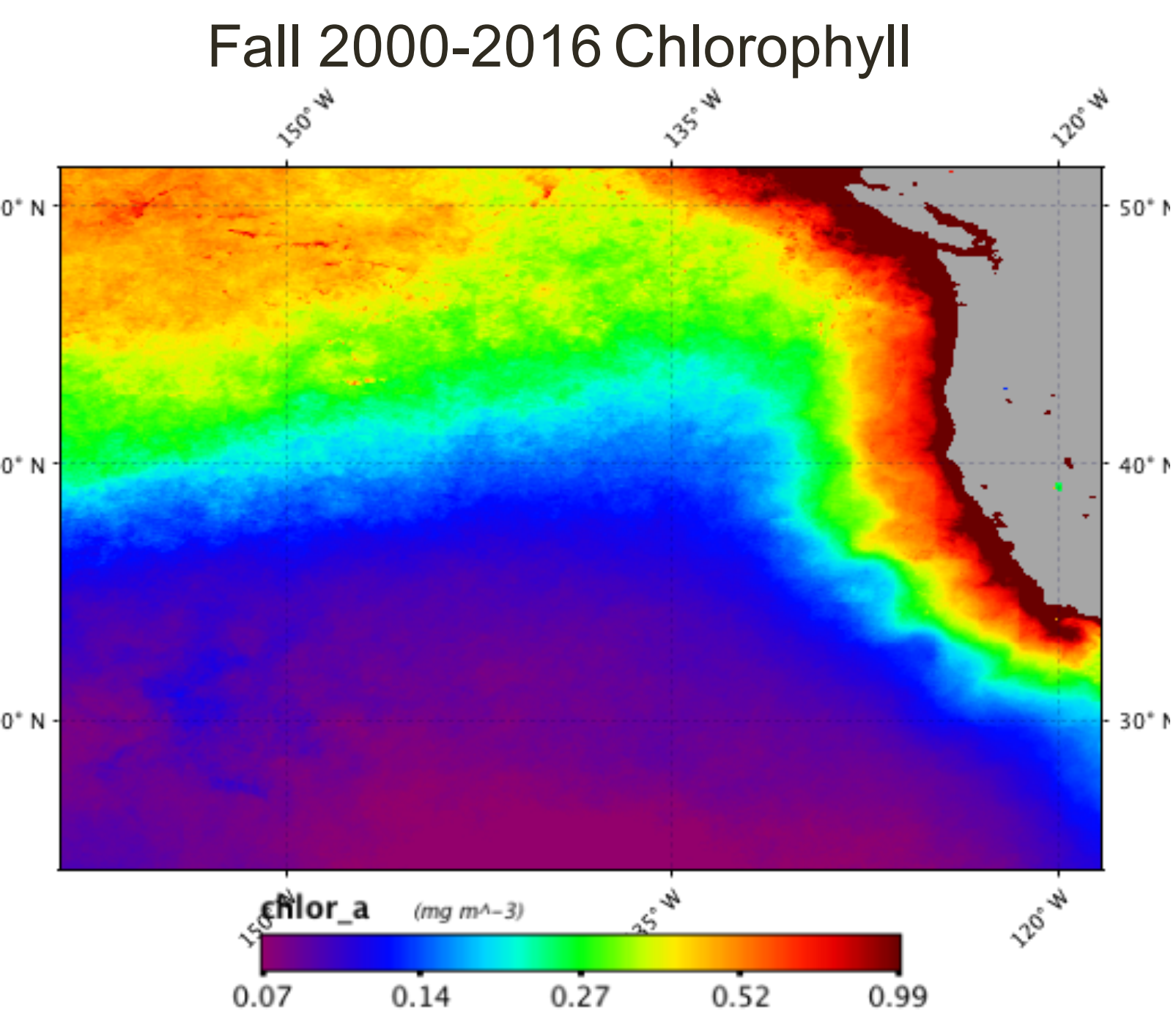
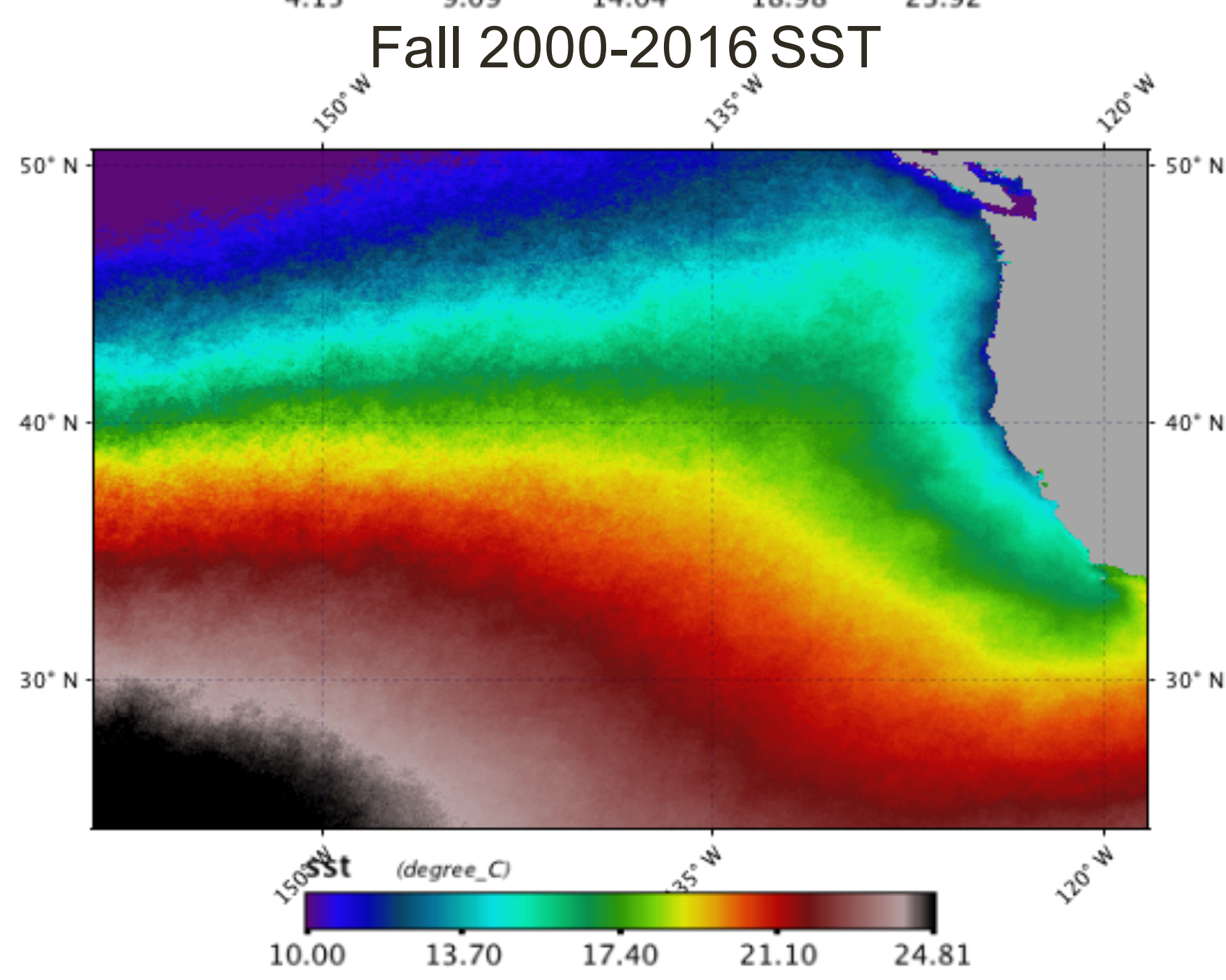
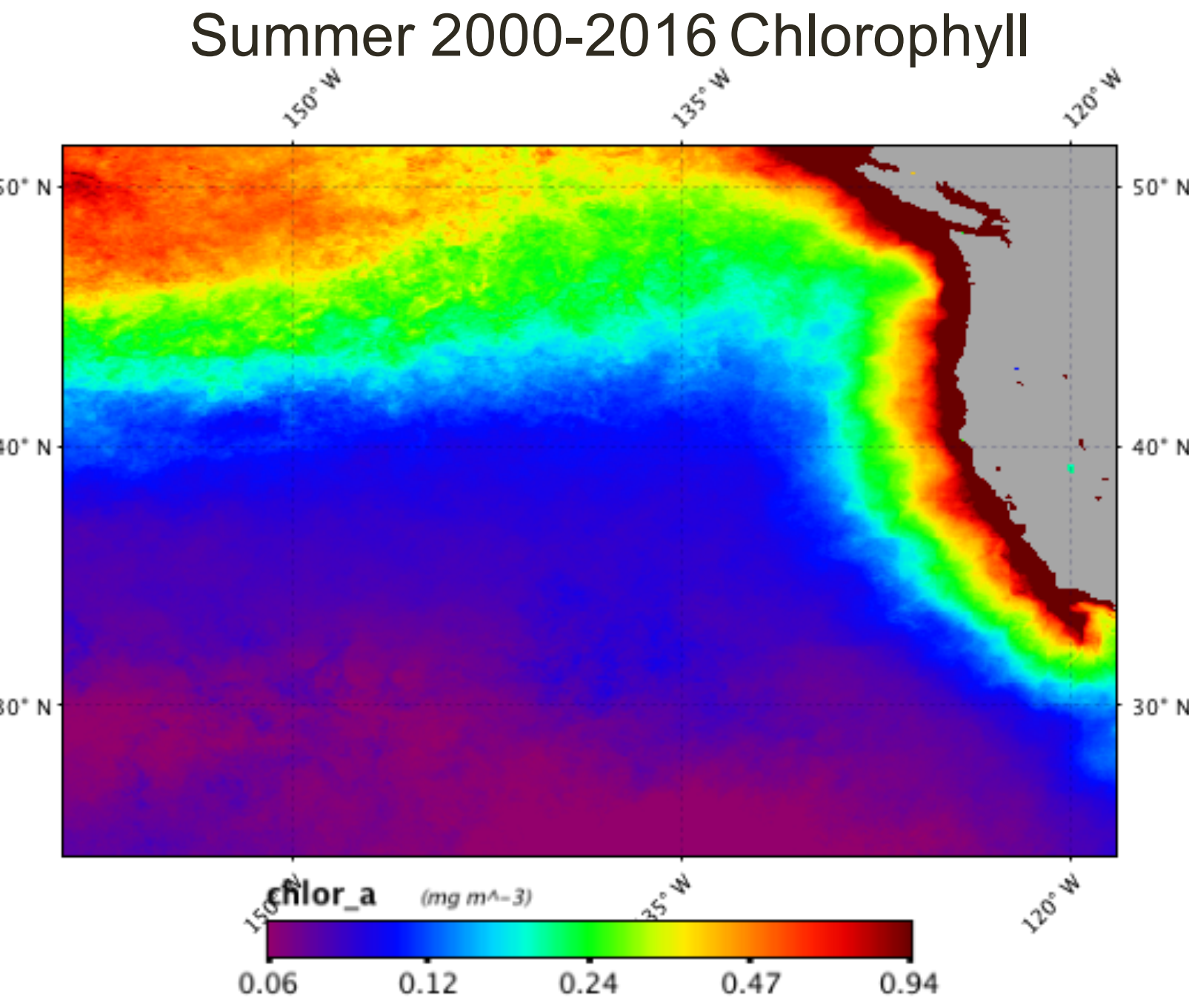
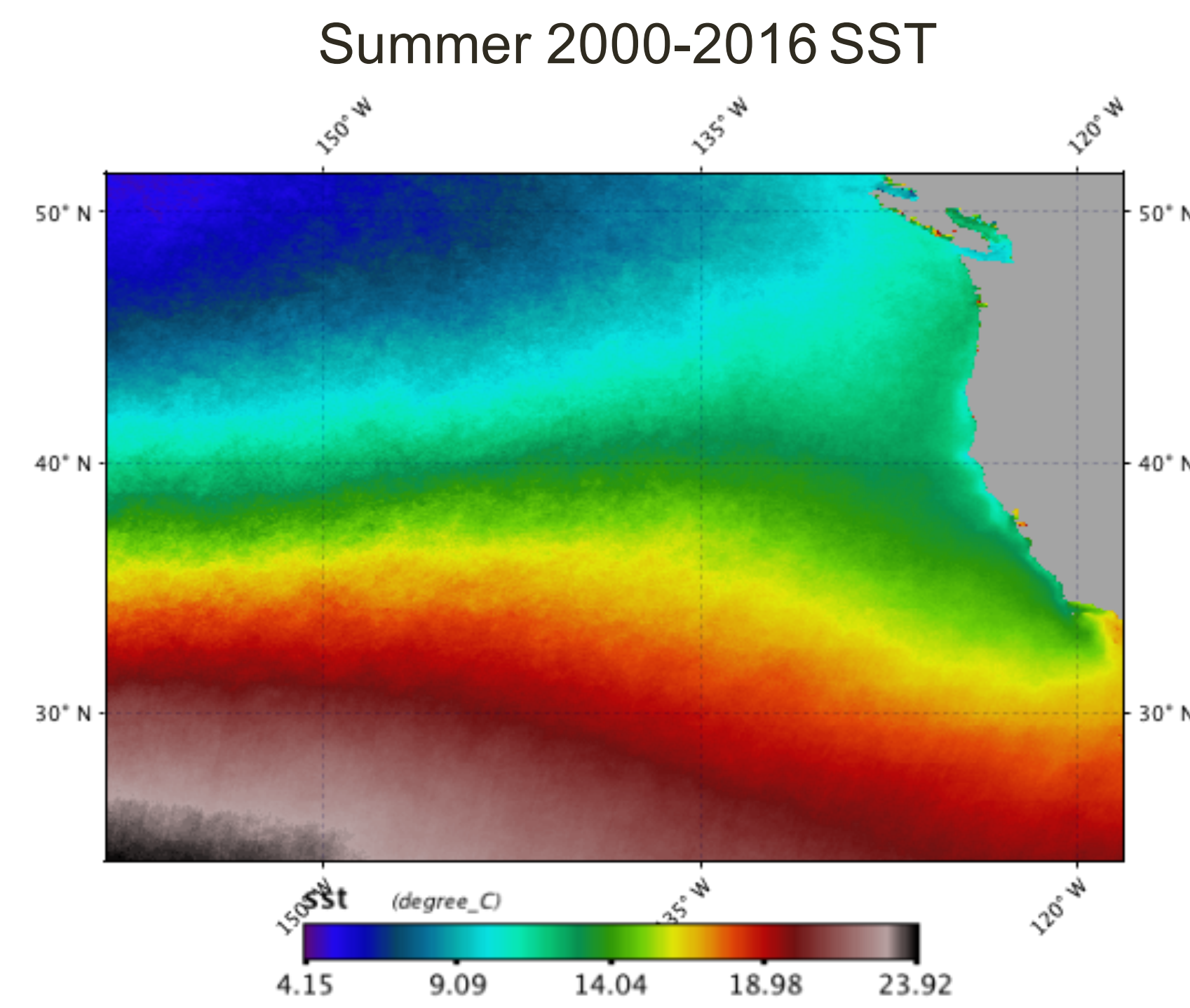
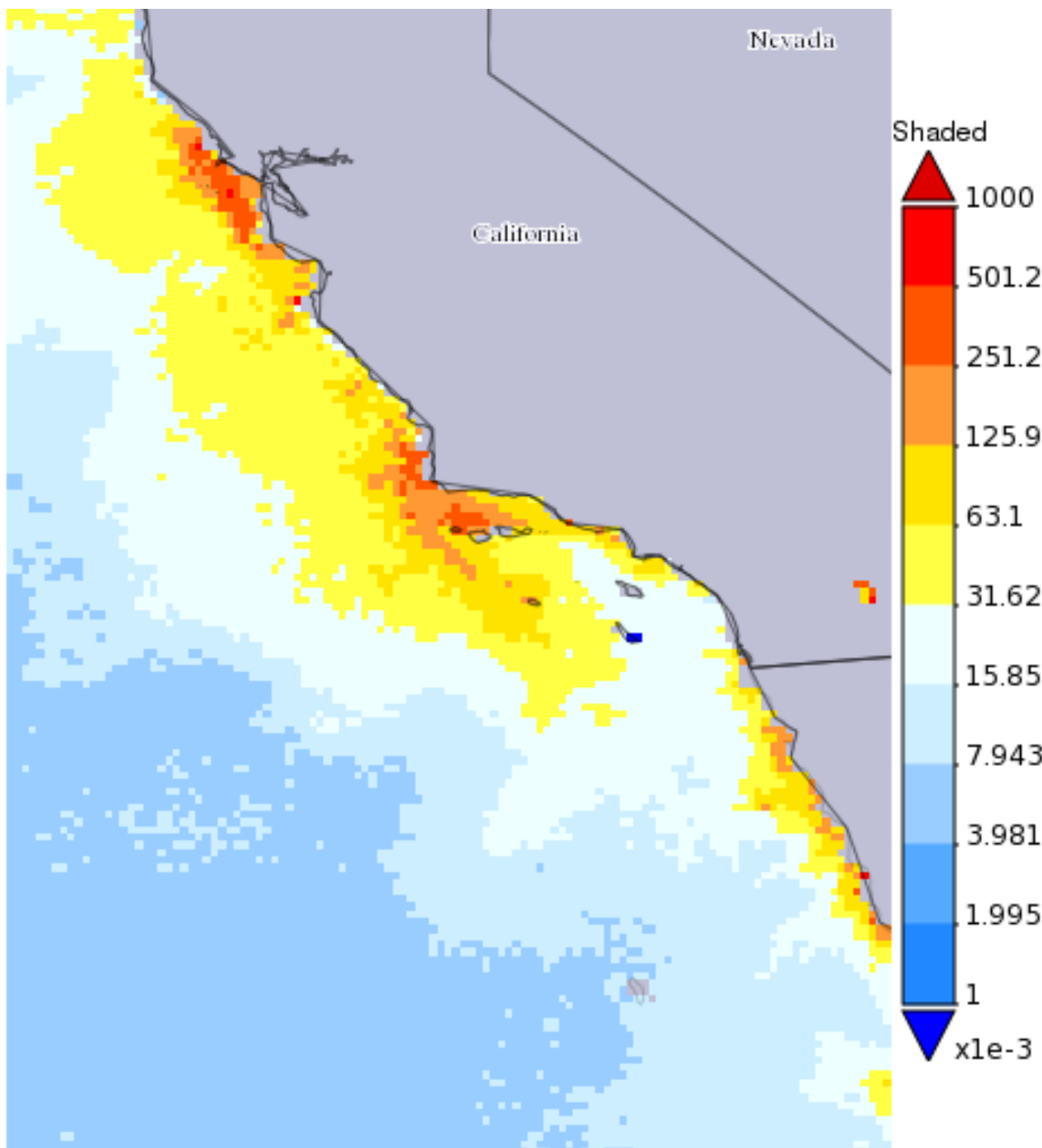
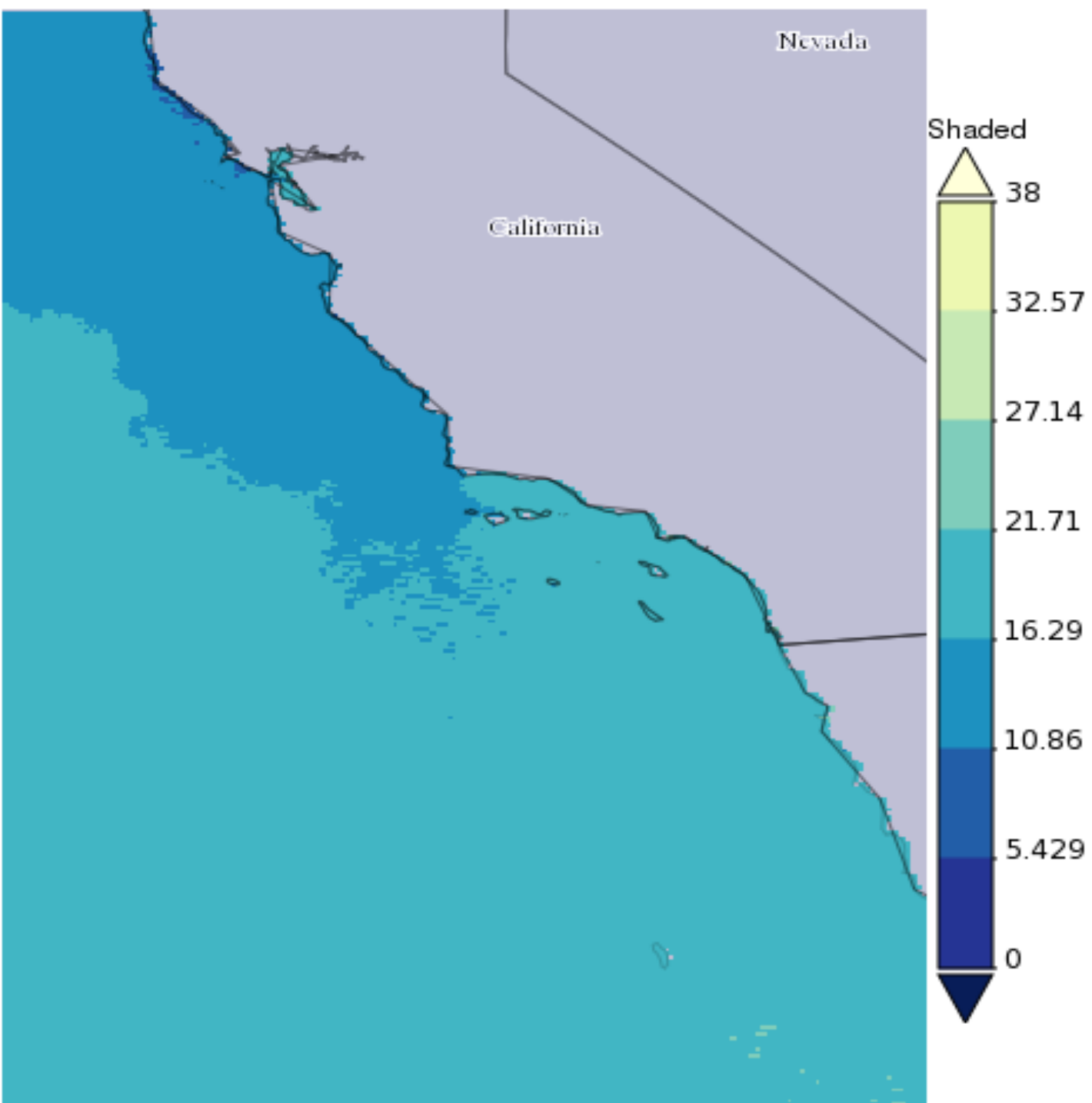
Future research

- Looking into these patterns and its direction relationship to the exact migration patterns of sharks
- How these relationships are applicable to other areas and marine organisms in the world oceans.

June – September 2006



June – September 2016



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