Tools for analyzing climate model output II: practical examples

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Local Notes

• To use provided m-files, enter the following commands:
  – mkdir ~/matlab
  – cp /project/colloquium/util/m/startup.m ~/matlab

• help lindsay_utils
Tutorial Examples

• example1.m
  – Extract field from CMIP5 atmos output, make map

• example2.m
  – Same, but for ocean output
  – Use specialized POP plotting tool
Tutorial Examples

• example3.m
  – Extract 20 years of monthly surface intpp
  – Compute mean over Nino 3.4 region
  – Plot resulting timeseries
  – Do same for SST
  – Combine plots & compute correlation coeff
  – Do same for monthly anomalies
  – Correlate intpp monthly anoms w/ SST Nino 3.4
Tutorial Examples

• example4.m
  – Compute and display 1\textsuperscript{st} EOF of fgco2 monthly anomalies across North Pacific
  – Plot reconstruction using 1\textsuperscript{st} EOF at a few point
  – Show how much variance is explained