

# **Time Series Project: Land Average Temperature Series**

## **Response to Comments**

### **Section 11**

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#### **Part 1. Introduction and Overview**

- Add fit sample and hold-out sample.
- Re-plot main series and its distribution boxplot.
- Delete plots of other involved series.
- Explain the definition of anomalies.
- Move data source to appendix at the end of the report.
- Add table and figure number and refer in the text.

#### **Part 2. Univariate Time-series Model**

##### **2.1 Deterministic Time Series Models**

- Delete all the unneeded plots in Part 2.1.
- Add a seasonal dummy with first difference error model of the series.
- Add a table that highlight Top 15 periodogram values for cyclical model.
- Modify the interpretation of the cyclical model with error model.
- Delete the unnecessary model estimate equation.
- Add table and figure number and refer in the text.

##### **2.2 Seasonal ARIMA Models**

- Correct Seasonal ARIMA Models by adding the first non-seasonal differencing and re-estimate the model.
- Delete all the unneeded plots in Part 2.2.
- Add table and figure number and refer in the text.

##### **2.3 Model Comparison**

- Add model evaluation with fit period.
- Change the format of model comparison to tables.
- Add table and figure number and refer in the text.

### **Part 3. Multivariate Time-series Models**

- Add the first non-seasonal difference to the dependent variable (Land Average Temperature) to make it stationary.
- A new TF model is defined between Land Average Temperature and Global Land Temperature Anomalies.
- Recheck the TF model between Land Average Temperature and Global Ocean Temperature Anomalies.
- Add outputs for contemporary regression models.
- Add table and figure number and refer in the text.