

## Appendix B

### Climate Change Science Program Temperature Trends in the Lower Atmosphere Steps for Understanding and Reconciling Differences

#### Members of the Assessment/Synthesis Product Team

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#### Preface

Thomas R. Karl, NOAA; Christopher D. Miller, NOAA; William L. Murray, STG Inc.

#### Executive Summary

Convening Lead Author: Tom M. L. Wigley, NSF NCAR  
Lead Authors: V. Ramaswamy, NOAA; John R. Christy, Univ. of AL (Huntsville);  
John Lanzante, NOAA; Carl A. Mears, Remote Sensing Systems; Ben D. Santer, DOE, LLNL  
and Chris K. Folland, U.K. Met Office

#### Chapters:

1. Why do temperatures vary vertically (from the surface to the stratosphere) and what do we understand about why they might vary and change over time?

Convening Lead Author: V. Ramaswamy, NOAA  
Lead Authors: James W. Hurrell, NSF NCAR and Gerald A. Meehl, NSF NCAR  
Contributing Authors: A. Phillips, NCAR; Ben D. Santer, DOE, LLNL; M. D. Schwarzkopf, Dian J. Seidel, NOAA, Steve Sherwood, Yale Univ.; Peter W. Thorne, U.K. Met Office

2. What kinds of atmospheric temperature variations can the current observing systems measure and what are their strengths and limitations, both spatially and temporally?

Convening Lead Author: John Christy, Univ. of AL (Huntsville)  
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Chris K. Folland, U.K. Met Office, Carl A. Mears, Remote Sensing Systems; Peter W. Thorne, U. K.  
Met Office; John R. Lanzante, NOAA

3. What do observations indicate about the changes of temperature in the atmosphere and at the surface since the advent of measuring temperatures vertically?

Convening Lead Author: John R. Lanzante, NOAA

Lead Authors: Thomas C. Peterson, NOAA; Frank J. Wentz, Remote Sensing Systems; John Christy, Univ. of AL (Huntsville); Chris E. Forest, MIT and Konstantin Y. Vinnikov, Univ. of MD

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4. What is our understanding of the contribution made by observational or methodological uncertainties to the previously reported vertical differences in temperature trends?

Convening Lead Author: Carl A. Mears, Remote Sensing Systems

Lead Authors: Chris E. Forest, MIT; Roy Spencer, Univ. of AL (Huntsville); Russell S. Vose, NOAA and Richard W. Reynolds, NOAA

Contributing Authors: Peter W. Thorne, U. K. Met Office and John R. Christy, Univ. of AL (Huntsville)

5. How well can the observed vertical temperature changes be reconciled with our understanding of the causes of these temperature changes?

Convening Lead Author: Ben D. Santer, DOE LLNL

Lead Author: Joyce E. Penner, Univ. of MI and Peter W. Thorne, U.K. Met Office

Contributing Authors: W. Collins, K. Dixon, T.L. Delworth, C. Doutriaux, Chris K. Folland, U.K. Met Office; Chris E. Forest, MIT; I. Held, GFDL; John Lanzante, NOAA; Gerald A. Meehl, NSF NCAR, V. Ramaswamy, NOAA; Dian J. Seidel, NOAA; M.F. Wehner, and Tom M.L. Wigley, NSF NCAR

6. What measures can be taken to improve the understanding of observed changes?

Convening Lead Author: Chris E. Folland, U.K. Met Office

Lead Authors: David Parker, U.K. Met Office; Richard W. Reynolds, NOAA; Steve Sherwood, Yale Univ.; Peter W. Thorne, U.K. Met Office

## **Appendix**

Appendix A: Statistical Issues Regarding Trends: Tom Wigley, NCAR

Appendix B: Members of the Assessment/Synthesis Product Team: James R. Mahoney, CCSP; Richard H. Moss, CCSP; Thomas R. Karl, NOAA; Christopher D. Miller, NOAA; William L. Murray, STG, Inc.; Sara Veasey, NOAA; Erin McKay, STG, Inc.

## **Glossary & Acronyms, Symbols, Abbreviations**