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# **Study Monsoon Precipitating Cloud-Covered Regions Using Results From Various CMIP Climate Models**

**Jianbo Liu**

# Content

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- Introduction to Precipitation
- Design Philosophy
- Preliminary Results
- Future Research

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# Introduction

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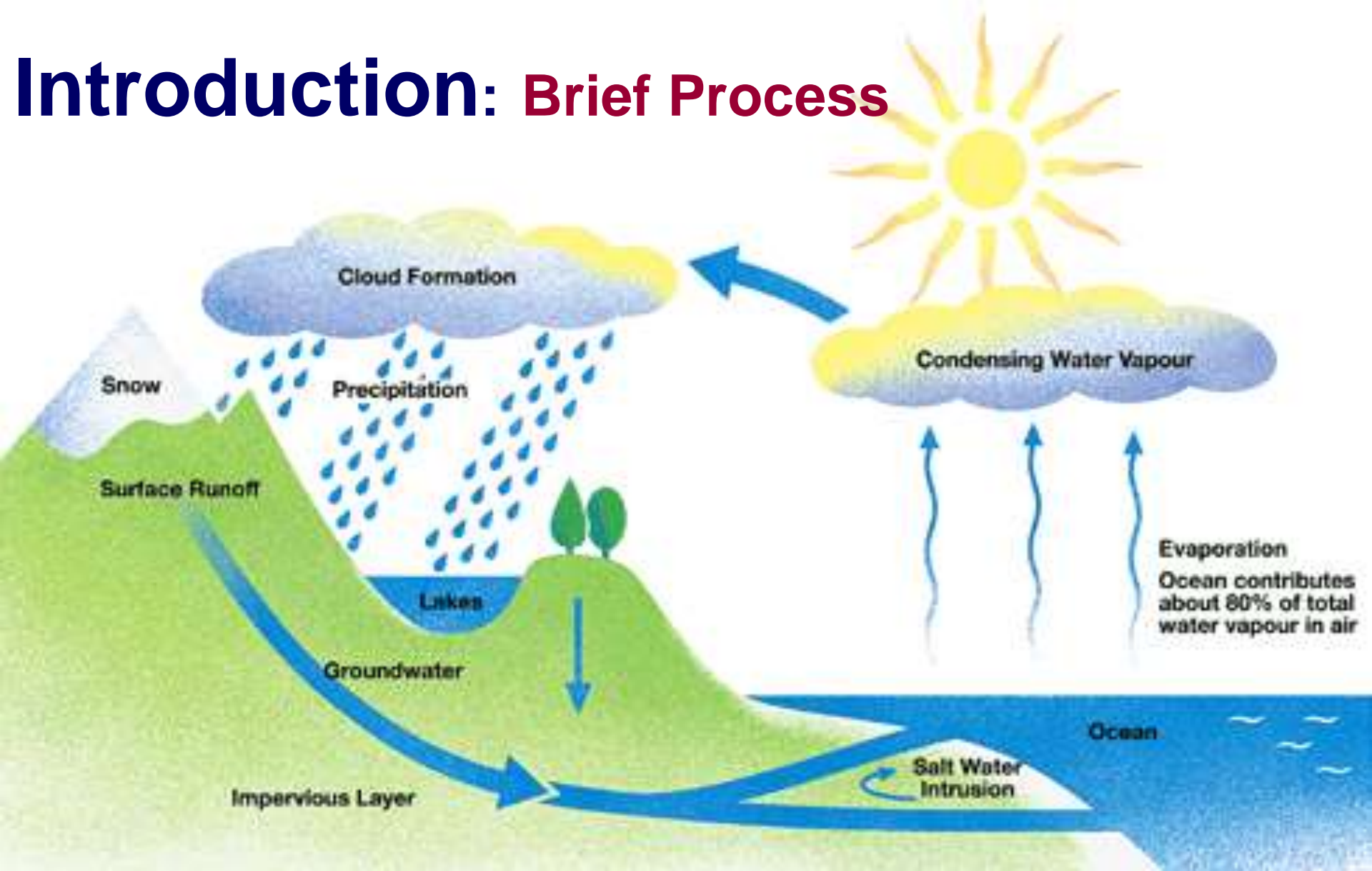
- General Raining Process
- Asian-Australian Monsoon
- CMIP Climate Models

# Introduction

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- **General Raining Process**
- Asian-Australian Monsoon
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# Introduction: Brief Process



Source: <http://www.sawater.com.au/SAWater/Education/OurWaterSystems/The+Water+Cycle.htm>, revised by Jianbo Liu

# Introduction

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- General Raining Process
- **Asian-Australian Monsoon**
- CMIP Climate Models



Source: [http://disc.sci.gsfc.nasa.gov/oceancolor/additional/sciencecus/locus/images/Asian\\_Monsoon\\_warm\\_phase.jpg](http://disc.sci.gsfc.nasa.gov/oceancolor/additional/sciencecus/locus/images/Asian_Monsoon_warm_phase.jpg)



# Introduction

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- General Raining Process
- Asian-Australian Monsoon
- **CMIP Climate Models**

# Introduction: CMIP

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- The Coupled Model Inter-Comparison Project
- Consist of global **coupled ocean-atmosphere** circulation models
- Provide various **multi-dimensional** atmospheric parameters with **different resolutions** under **different scenarios**

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# Philosophy

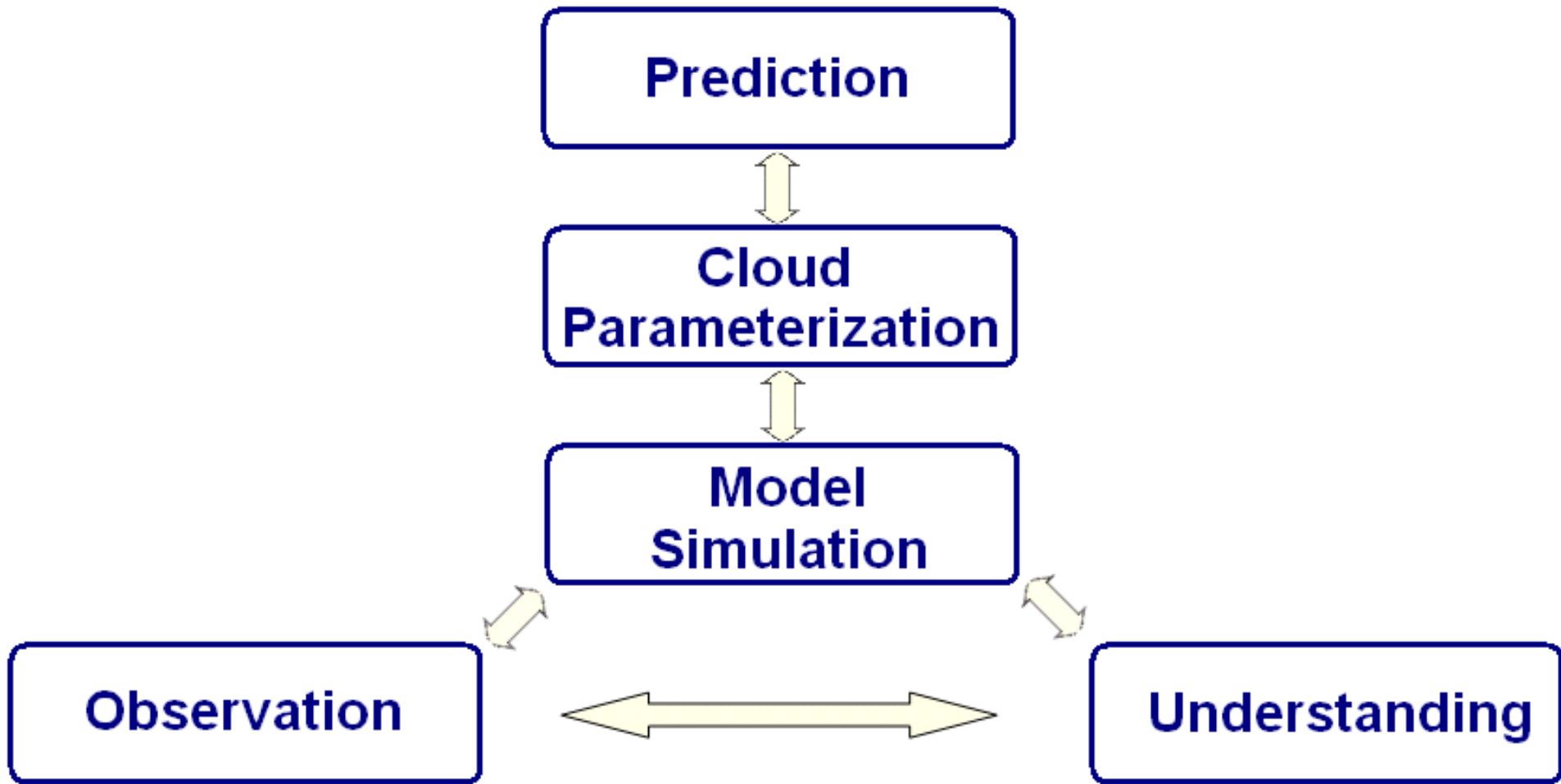
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- Overview
- Methodology

# Philosophy

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- **Overview**
- Methodology



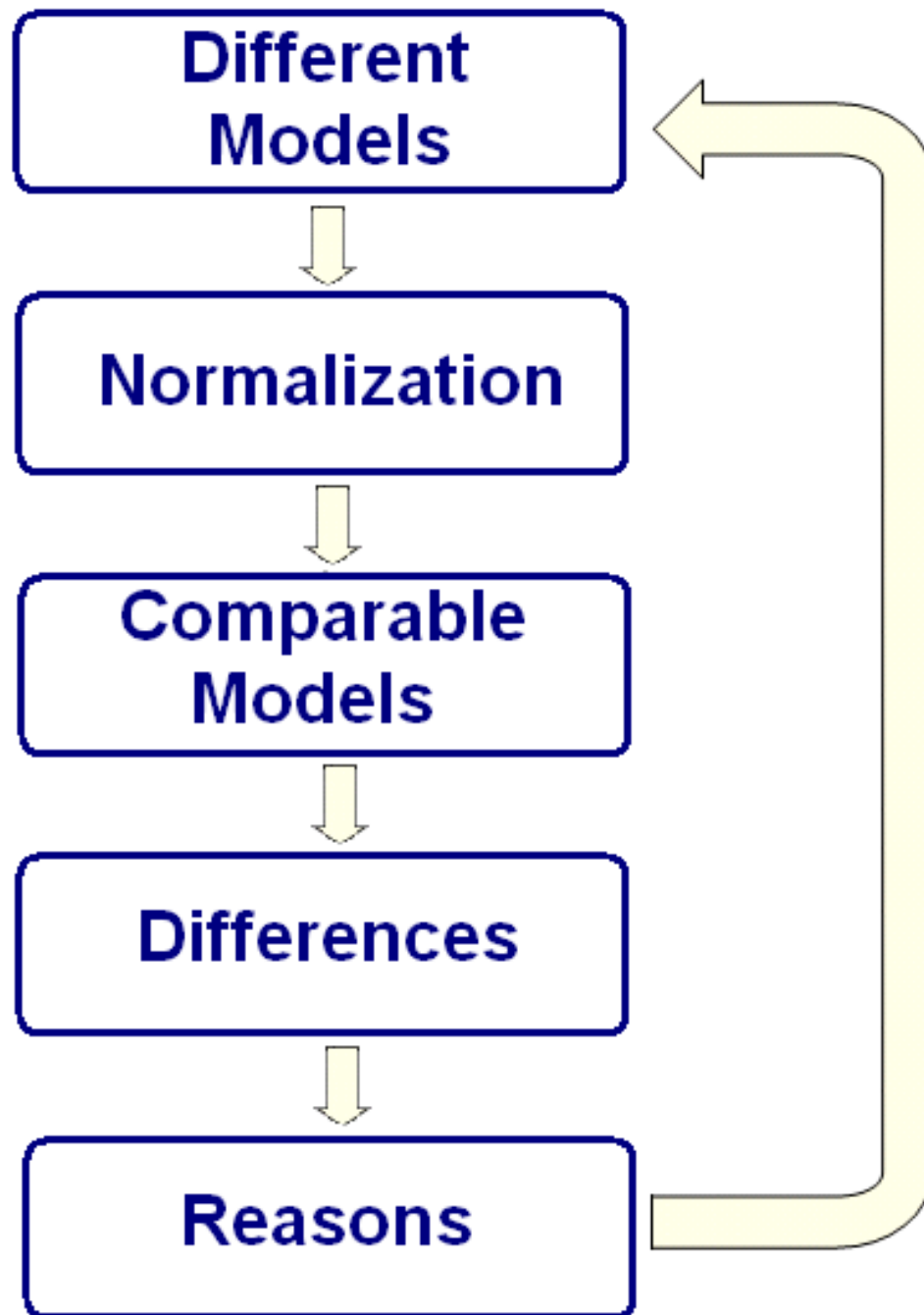
(Zhen Wang, 2011)

# Philosophy

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- Overview

- Methodology

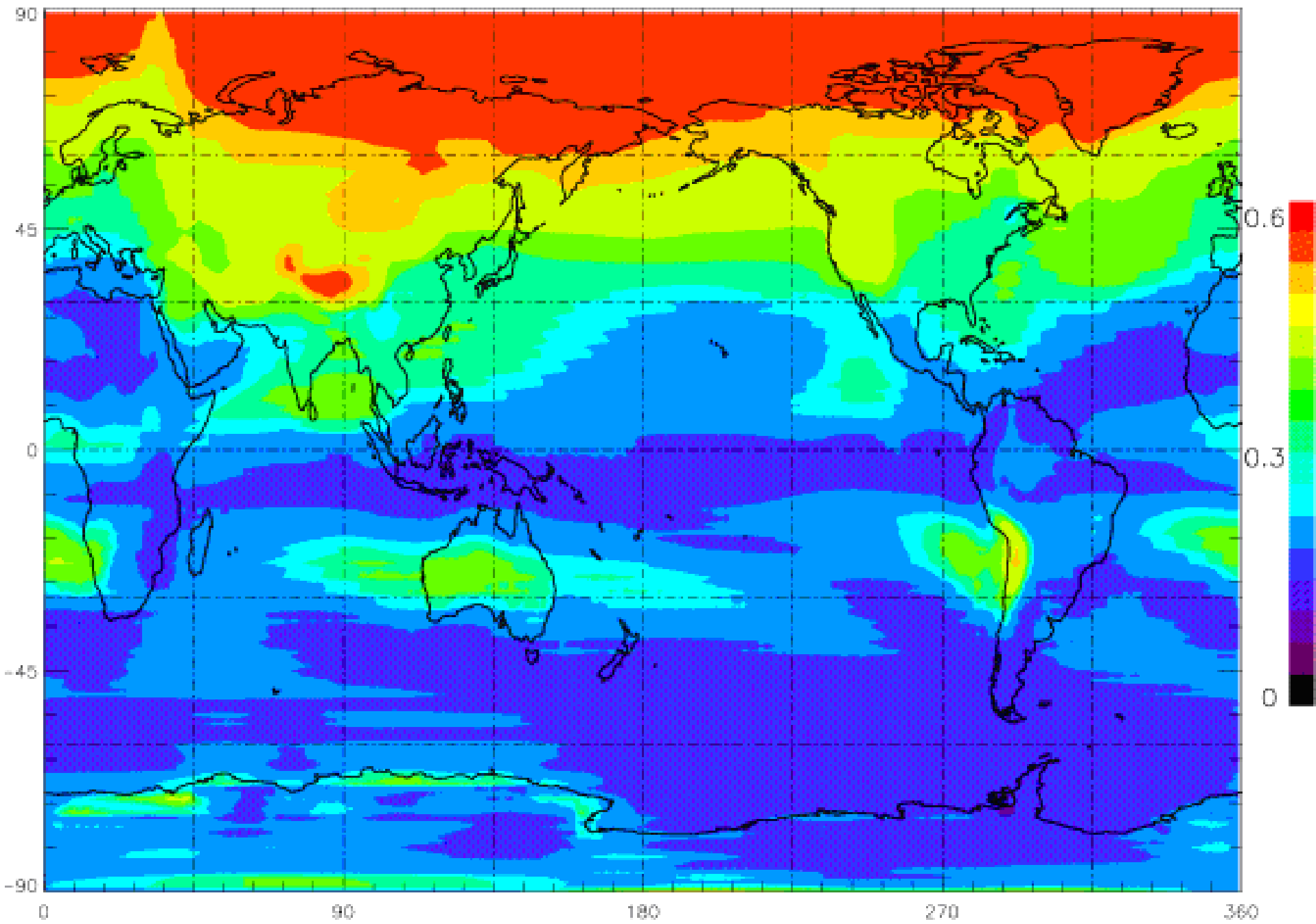




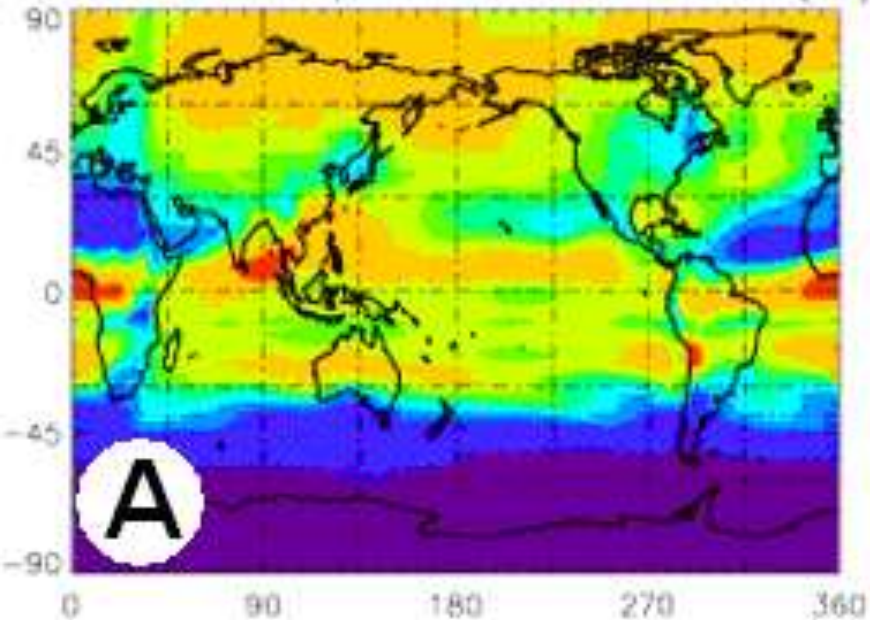
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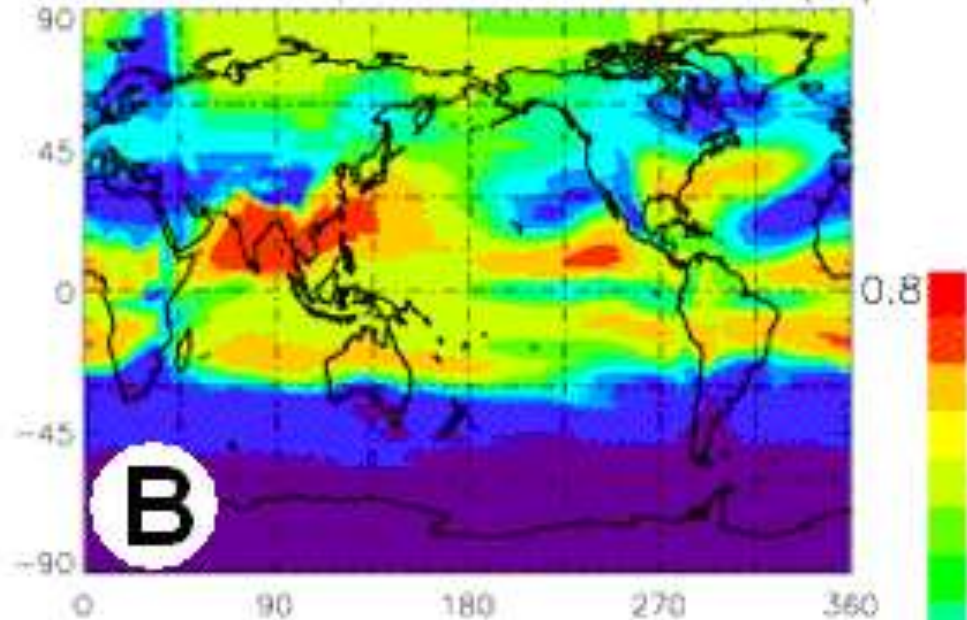
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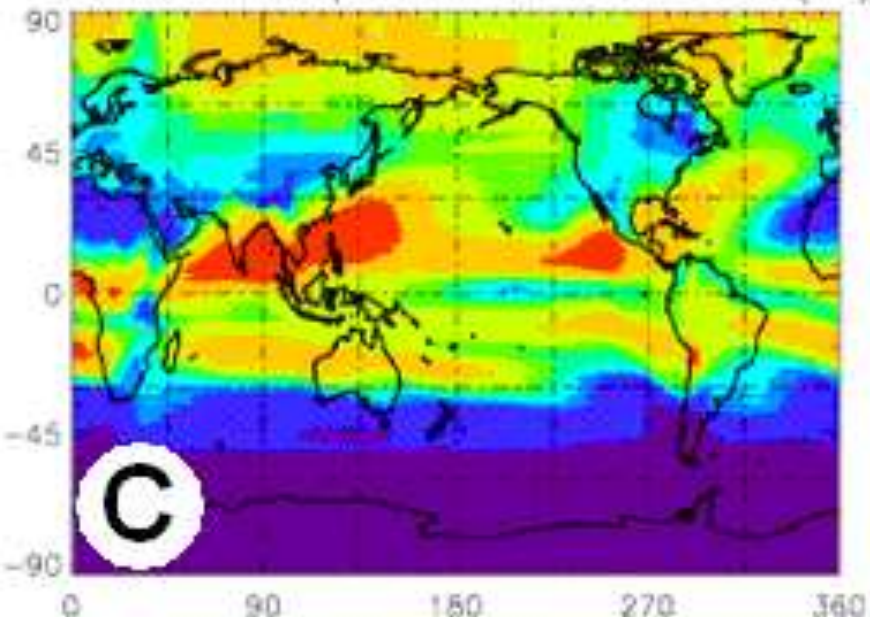
MAM Mean Precipitation DIV 1970-1999 (15)



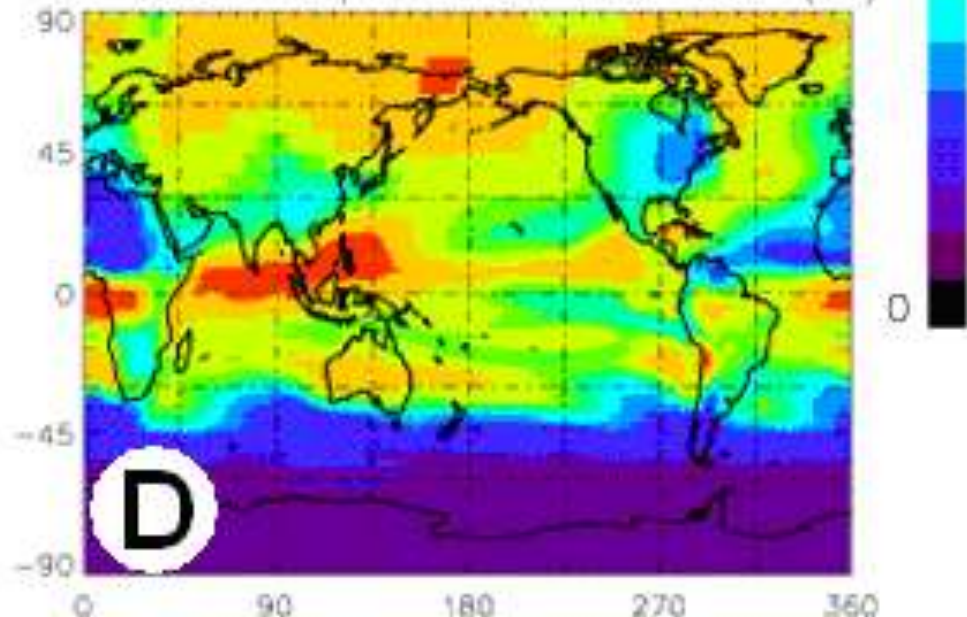
JJA Mean Precipitation DIV 1970-1999 (15)



SON Mean Precipitation DIV 1970-1999 (15)



DJF Mean Precipitation DIV 1970-1999 (15)



0.8

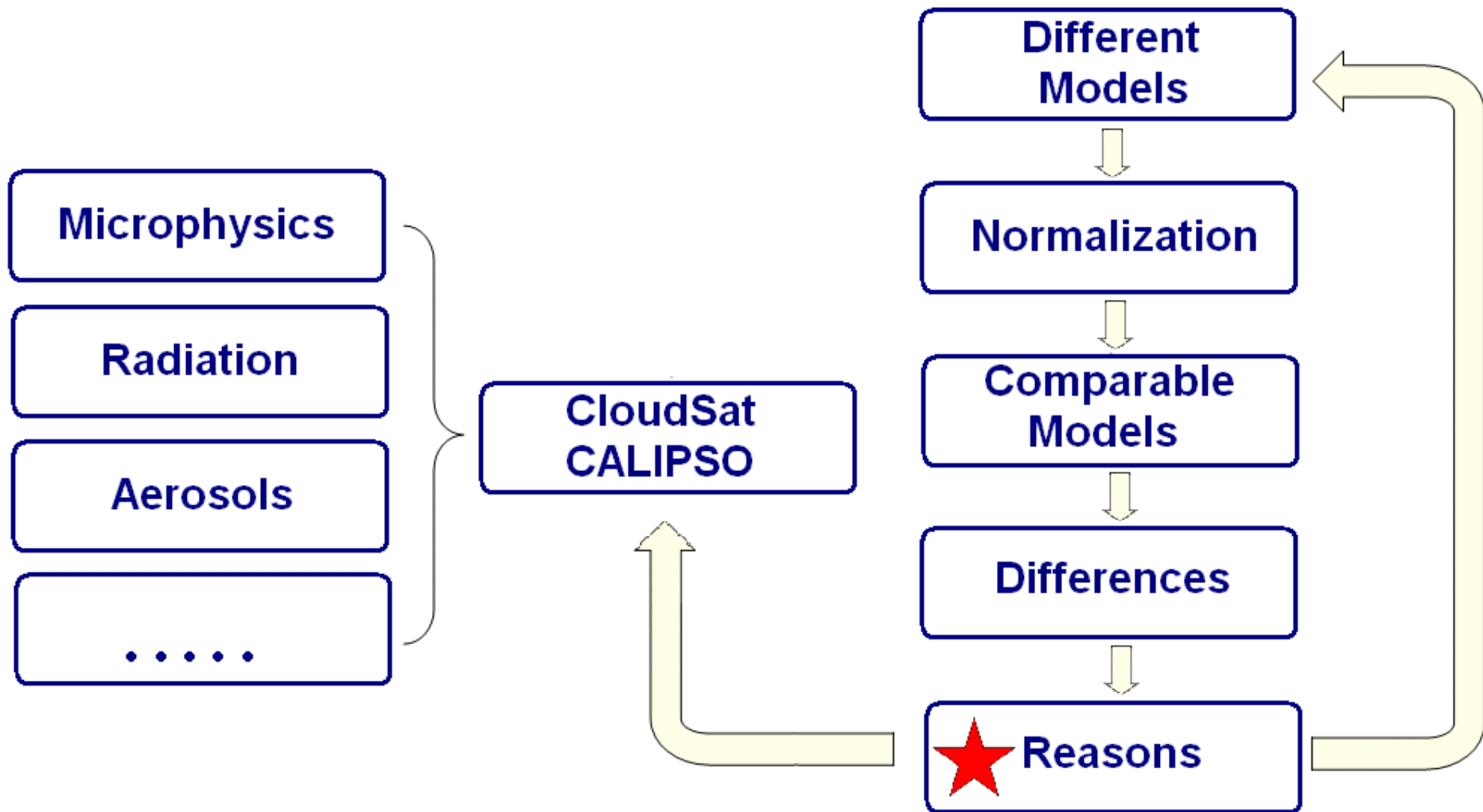
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# References

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# Thank You

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