#### The Big Questions that Remain

### **Changelings Mission**

To pool our collective vision and our interdisciplinary resources to help answer the toughest questions about abrupt climate change; to catalyze new research and fieldwork in basic science by leveraging paleoclimate problems to inform and guide current climate science, and to empower and mentor the next generation of climate scientists.

**COMER CLIMATE CONFERENCE 2021** 

The Big Questions that Remain

#### **2020 Changelings Meeting**

What are the big climate questions that we can address by

leveraging paleoclimate studies?

**COMER CLIMATE CONFERENCE 2021** 

# How much warming can we expect from a given amount of carbon dioxide?



IPCC AR5 Range

CMIP5 models

CMIP6 models



#### How will rainfall patterns change ?

![](_page_3_Picture_1.jpeg)

## What will happen to water availability in the coming century?

![](_page_4_Picture_1.jpeg)

![](_page_4_Picture_2.jpeg)

### What are the connections between wildfire and climate?

![](_page_5_Picture_1.jpeg)

![](_page_5_Picture_2.jpeg)

## How strong will the climate-carbon feedbacks be?

![](_page_6_Picture_1.jpeg)

![](_page_6_Picture_2.jpeg)

# How will ice sheets and sea-level respond to global warming?

![](_page_7_Picture_1.jpeg)

![](_page_7_Picture_2.jpeg)

## How will the ocean be impacted by climate change?

![](_page_8_Picture_1.jpeg)

![](_page_8_Figure_2.jpeg)

### Can we increase carbon storage in the ocean?

![](_page_9_Figure_1.jpeg)

![](_page_9_Figure_2.jpeg)

The Big Questions that Remain

#### **Changelings Mission**

To pool our collective vision and our interdisciplinary resources to help answer the toughest questions about abrupt climate change; to catalyze new research and fieldwork in basic science by leveraging paleoclimate problems to inform and guide current climate science, and to empower and mentor the next generation of climate scientists.

**COMER CLIMATE CONFERENCE 2021**