

Talk #144, 10/2/24

144th meeting of The Lyncean Group of San Diego

Date: Wednesday, 2 October 2024

Location: Southwestern Yacht Club
2702 Qualtrough Street, San Diego, CA 92106 (Point Loma)

Speaker: Dr. Ian Eisenman
Professor, Climate, Atmospheric Sciences, and Physical Oceanography at Scripps Institute of Oceanography, University of California San Diego (UCSD).



Source: UCSD

Topic: Changes in the Arctic and Antarctic sea ice covers and implications to global climate

Speaker bio: Dr. Eisenman received a BA in Philosophy and Physics from Williams College in 1999, a Masters in Physics from UC Santa Barbara, another Masters in Applied Mathematics from Harvard, and a PhD in Earth and Planetary Sciences from Harvard in 2008. He has been at Scripps since 2012 and has held the title of Professor since 2021.

His research focuses on ocean and climate dynamics, including sea ice, climate feedbacks, large-scale circulations of the ocean and atmosphere, icebergs, and paleoclimate. He and his team use physical modeling and

mathematical methods in conjunction with observations to improve our understanding of these topics and their implications, if any.

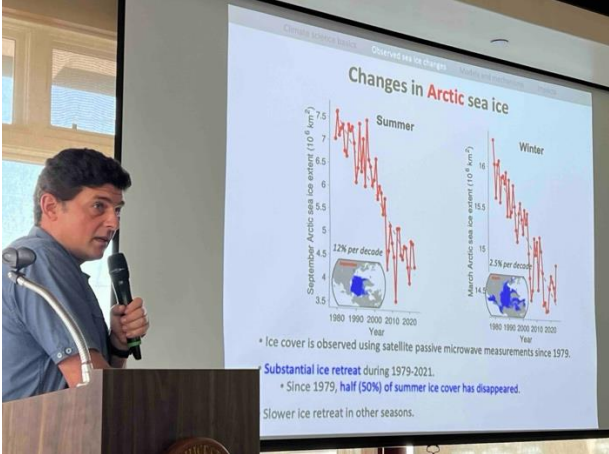
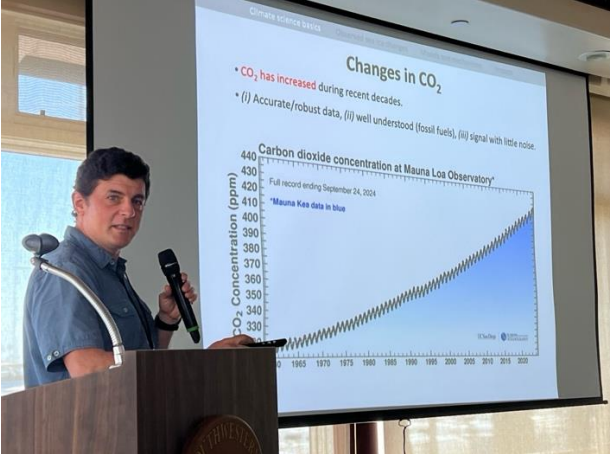
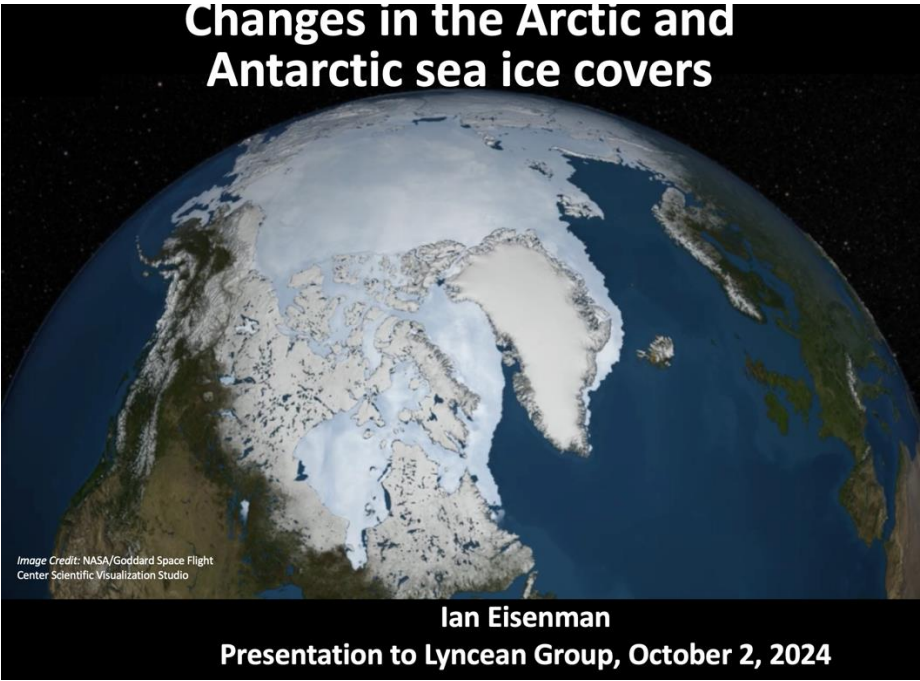
As he modestly states in his [online CV](#), his research does not directly involve field work, but there have been occasional opportunities to take part in research in the field as shown in these photos. On the left is Ian and a person whose job it is to protect researchers from polar bears.



Abstract: Much of the ocean near both polar regions is covered by several feet of sea ice, similar to the ice on lakes during the winter in high-latitude parts of the US. Arctic sea ice has retreated dramatically during recent decades, and it is projected to continue to retreat in the future. Antarctic sea ice, by contrast, has expanded during most of the satellite record (although not during the past few years), which is enigmatic because the globe has warmed overall. In this presentation, I will begin by discussing the observed changes in carbon dioxide and global temperatures, which provides context for the polar changes. Then, I will discuss the observed changes in sea ice at both poles. This will be followed by a discussion of the computer simulation models that are used to explain past climate changes and to predict future climate changes. Time permitting, I will discuss some of my own research group's work to explain the observed Antarctic sea ice expansion. Lastly, I will discuss the impacts of sea ice changes at both poles.

The Lyncean Group meeting slides are available for download [here](#).

Dr. Eisenman's presentation slides are available [here](#).



After his presentation, Dr. Eisenman listened to the tale of Lord Percy's Lyncean-funded, but ill-fated Antarctic Expedition of 1824.



This (supposedly) is the 200-year old Lyncean coin recently found in an Antarctic ice core taken during Lord Percy's Expedition of 1824.



The rapidly melting, ice encrusted coin is presented to Dr. Eisenman in appreciation for his presentation (and for putting up Lyncean antics).



The (supposedly) 200-year old Lyncean coin is revealed.



Many thanks to Dr. Eisenman for handling a long Q & A session very well and staying afterwards to continue several discussions.