



THE UNIVERSITY OF CHICAGO

COMPUTATIONAL AND APPLIED MATHEMATICS STUDENT SEMINAR

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Global Energetic Constraint on the Seasonality of Extratropical Storm Track Intensity and Position

THURSDAY, November 29, 2018, at 1:00 PM
Jones 226, 5747 South Ellis Avenue

ABSTRACT

Extratropical storm tracks are synoptic scale cyclones that dominate the midlatitude of Earth's atmosphere. These storm tracks preferably exist near ~ 45 degree latitude in both hemispheres. However, under certain conditions, storm tracks shift their latitudinal position and vary in intensity. We have developed an energetic framework that connects the energetic perturbations in the atmosphere to the storm track position and intensity. My talk will particularly focus on the seasonal variation. I will first first apply the framework to observational products using Reanalysis datasets and identify the dominant physical process responsible for storm track variation. Finally, I will show some results from idealized model experiments to illustrate the causal role of surface fluxes in seasonal variation of longitudinally symmetric storm track.