



Chemical & Physical Sciences

UNIVERSITY OF TORONTO

MISSISSAUGA

COLLOQUIUM SEMINAR SERIES

WHAT MAKES A SUPERCONTINENT 'SUPER'?



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What puts the 'super' in supercontinent? It is a simple enough question that should have a simple enough answer. If all of the continental material on the surface becomes attached through plate tectonic processes, then the landmass would obviously be classified as a supercontinent, right? That would be true, but the most recent supercontinent (Pangea) didn't have 100% of all the available continental landmass as one contiguous unit. So, what makes it super? Generally, a supercontinent is considered to reflect the assembly of all, or most, of the Earth's continental lithosphere. Exactly how much is up for debate (50%? 80%? 90%?). Previous studies have also used geological, atmospheric and biogenic 'geomarkers' to supplement supercontinent identification. What is surprising is that there is no formal supercontinent definition of how much continental material is required to be assembled, or indeed which geomarkers need to be present. In this talk, I'll outline these points above in more detail and describe some open questions on plate tectonics and mantle dynamics classifications.

Colloquium Seminar Series

Wednesday, April 4, 2022

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