University of Washington - Department of Earth and Space Sciences / Atmospheric Sciences

Dynamics of Snow and Ice Masses - ESS 533 / ATMS 512

Instructor: Professor Ed Waddington

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1 Class summary

The main concepts of understanding and how to find downward velocity in an ice sheet (u(z)) were discussed. The most simple flow structure is with the Nye model which assumes a constant velocity through the profile. Next the Dansgard Johannessen method was discussed and compared to the method of Nye and the full Stokes approach which is the most complex. The DJ method uses two profiles where the first part is from the bottom of the ice sheet to an elevation of "h" with a slope (u/h) while the second part is from "h" to the surface ("H") an is straight line. DJ is better than Nye. This is important to have when ice

**Date:** May 1, 2018

cores are dated.

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