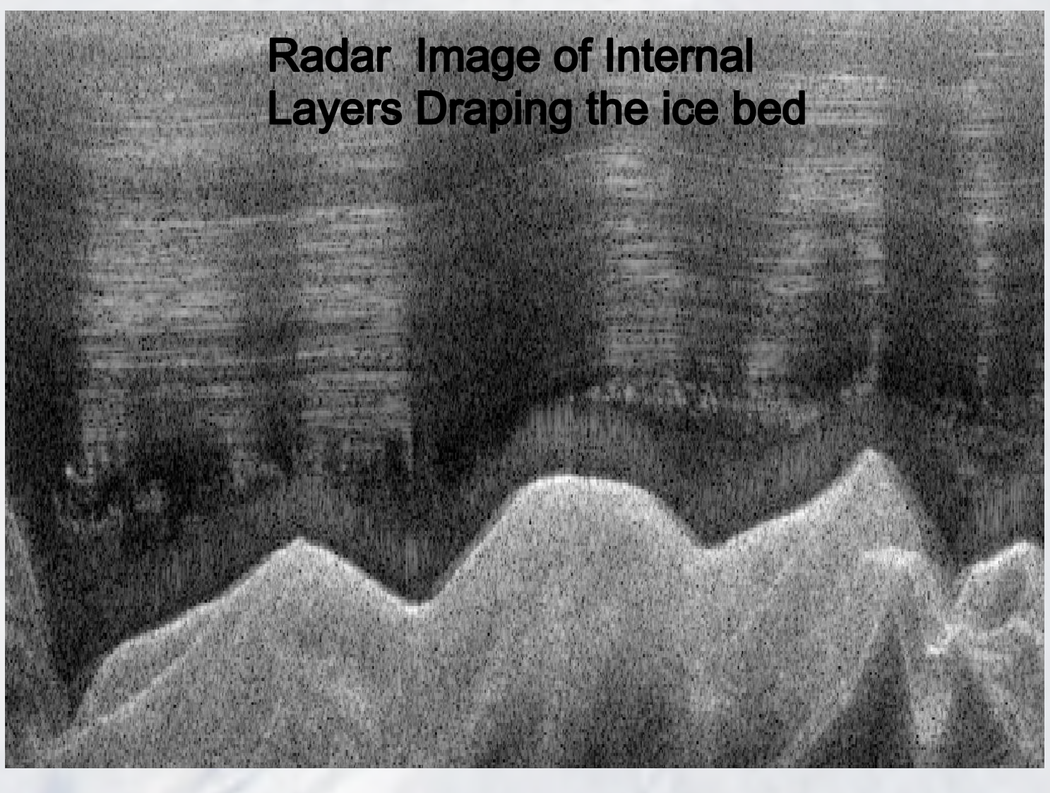
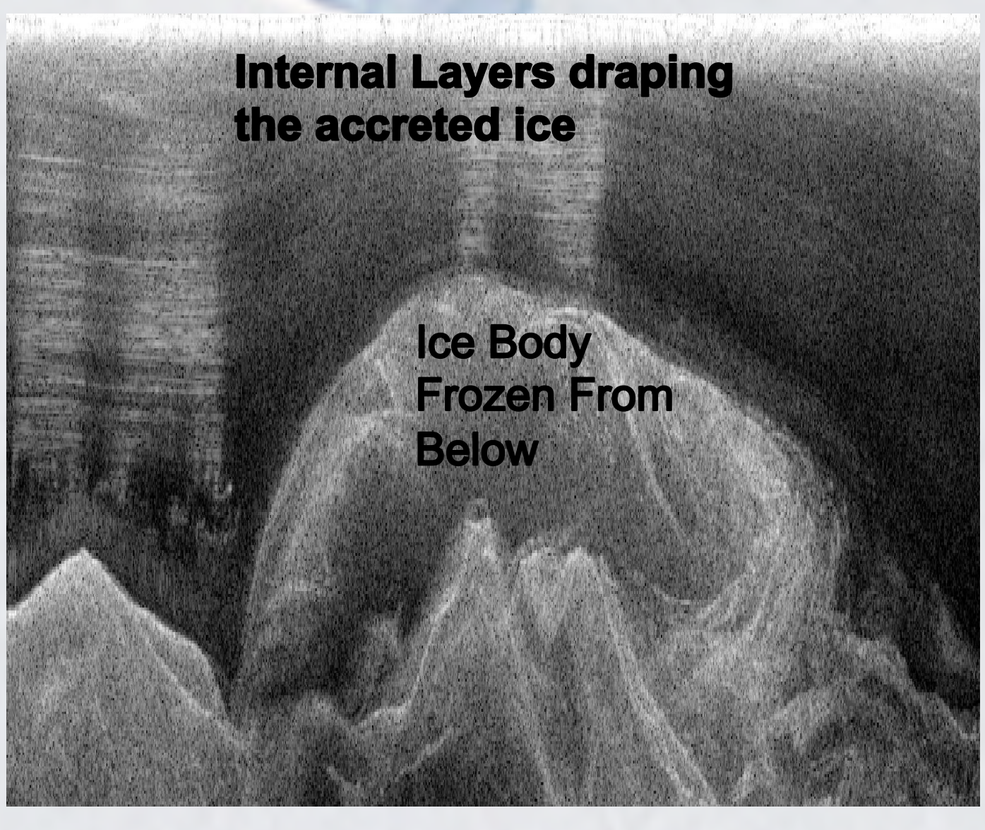
Ice at the Bottom of the Ice Sheets is Melting, Flowing Uphill & Refreezing by Supercooling!

TODAY! Be a physicist and make water flow uphill under a (r)ice sheet! Then try to instantly freeze the water! HOW? We will super cool the water and then change the pressure causing instant ice!

SUPERCOOLING!

Did you know there is liquid water deep under the Antarctic ice sheet where it melts from geothermal heat and pressure from the overlying ice? Lamont Scientists found this water refreezes to the bottom of the ice sheet when there is a drop in pressure. This newly refrozen ice is as much as half the total ice thickness in some areas and changes the whole ice structure where it occurs. This same process appears to also be found in the Greenland Ice Sheet. This finding changes our understanding of how ice sheets form and where to look for the oldest ice.





Radar Images of the Gamburtsev Mountain, East Antarctica

Supercooling by chilling pressurized water to below freezing. Once cooled a sudden change in pressure causes freezing to occur almost instantly.