



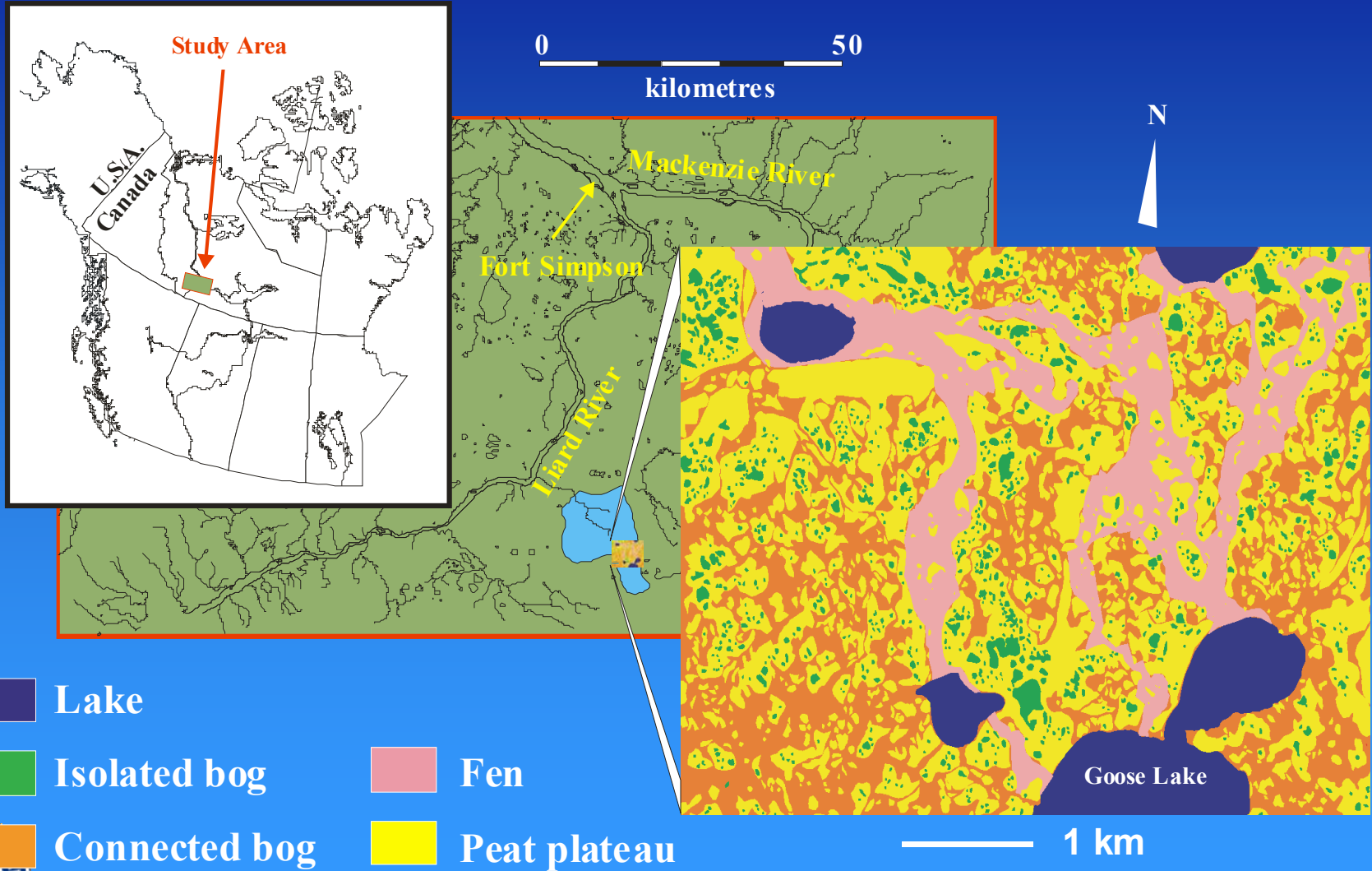
# Processes and Parameterisation: Wetlands, lakes, and permafrost

*IP3 Users/Stakeholders Community Workshop, 18-19 March 2008, Canmore, Alberta*

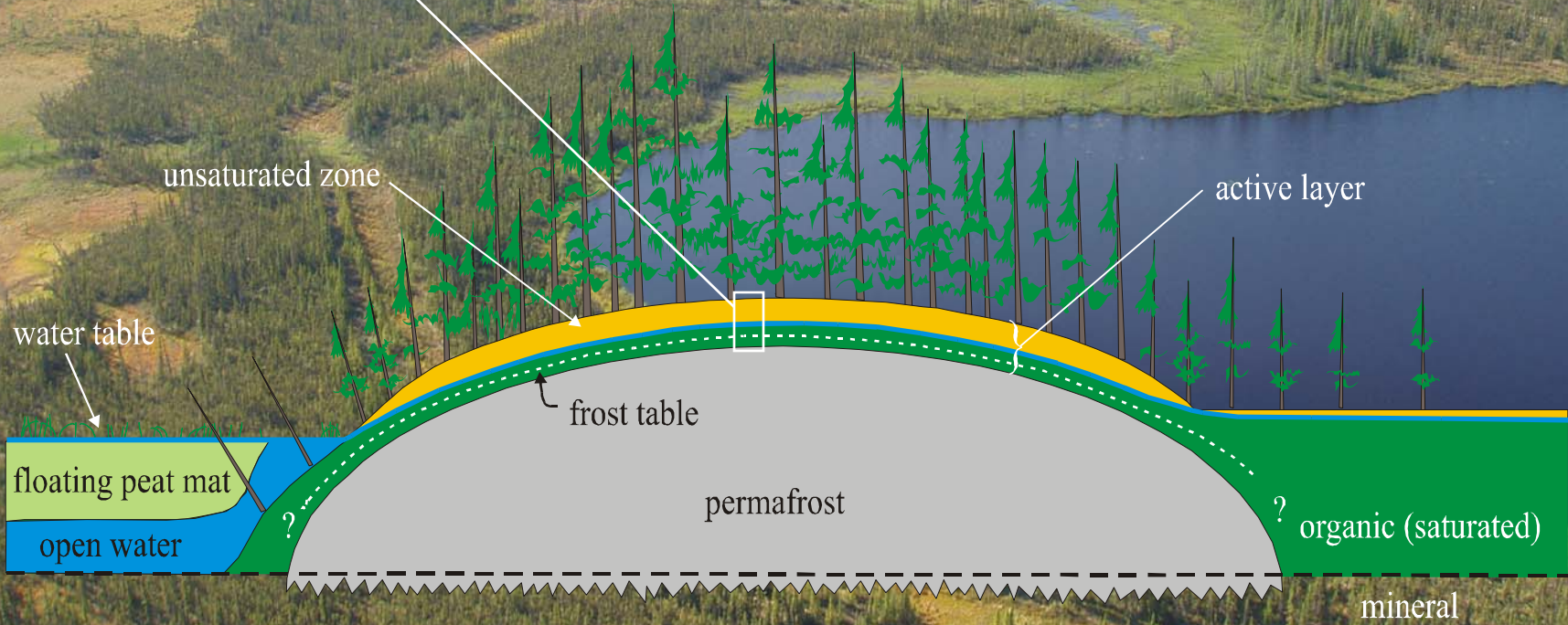
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# Scotty Creek, NWT, Canada:

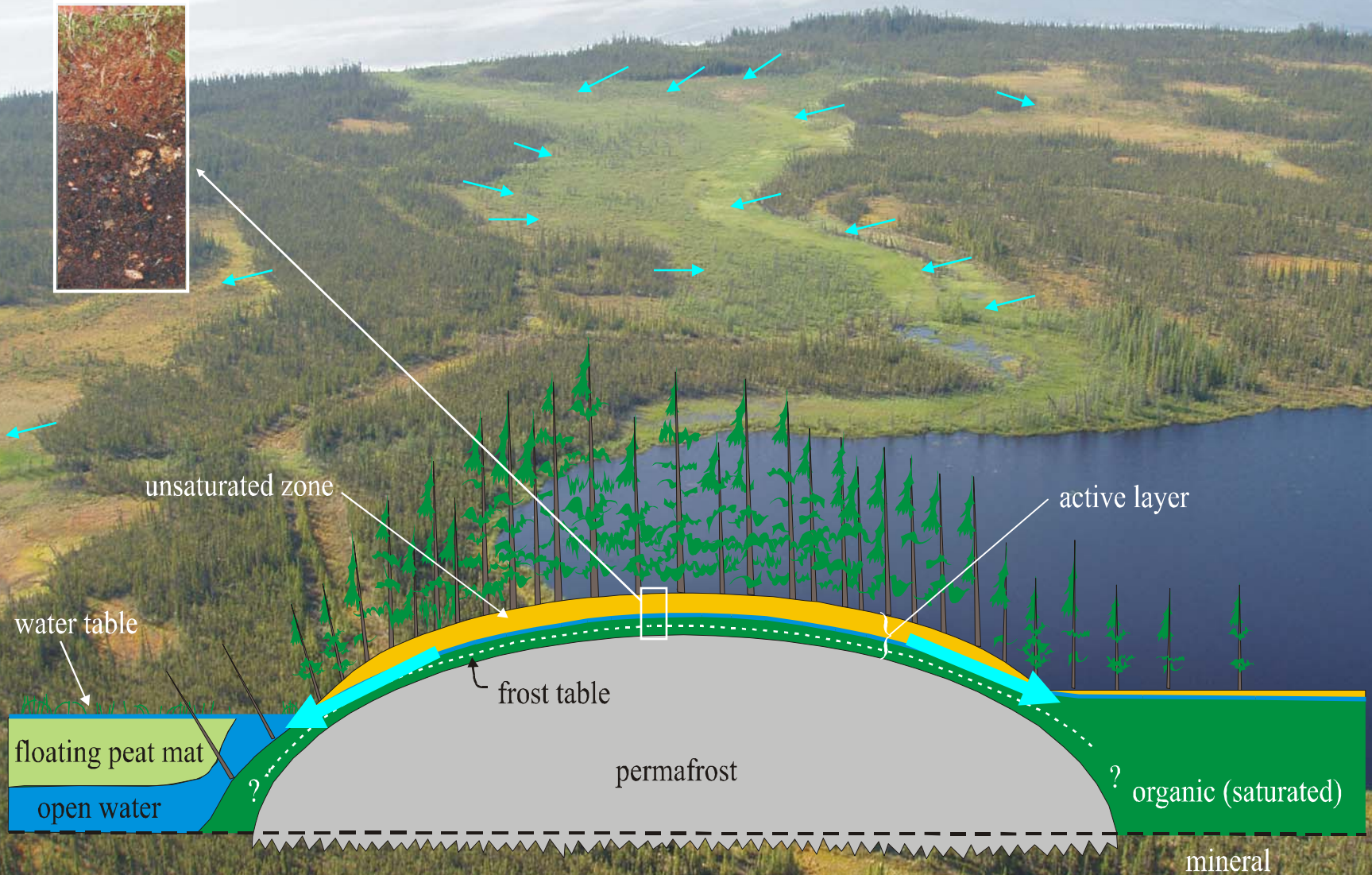


# Hillslope Runoff:

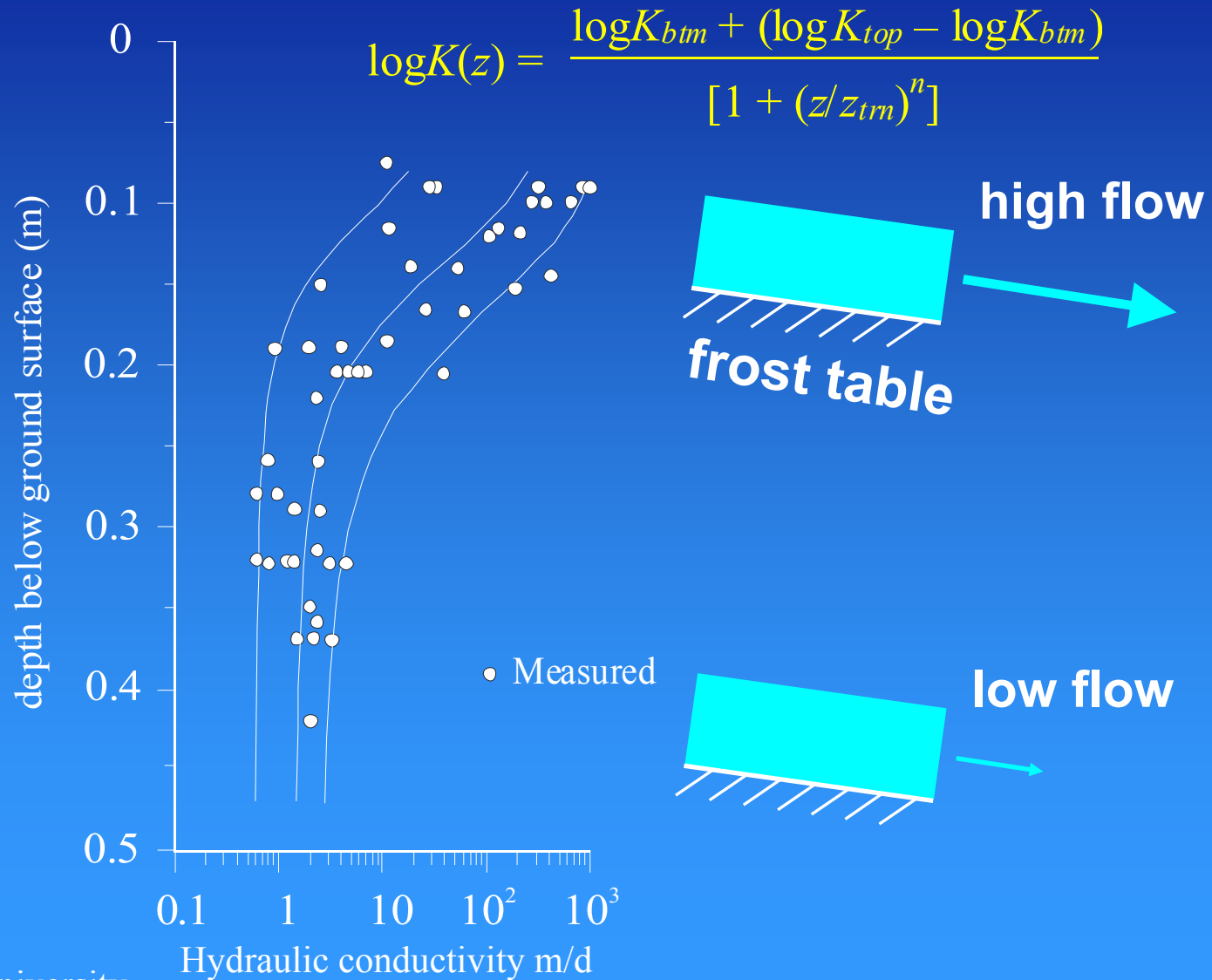




# Hillslope Runoff:

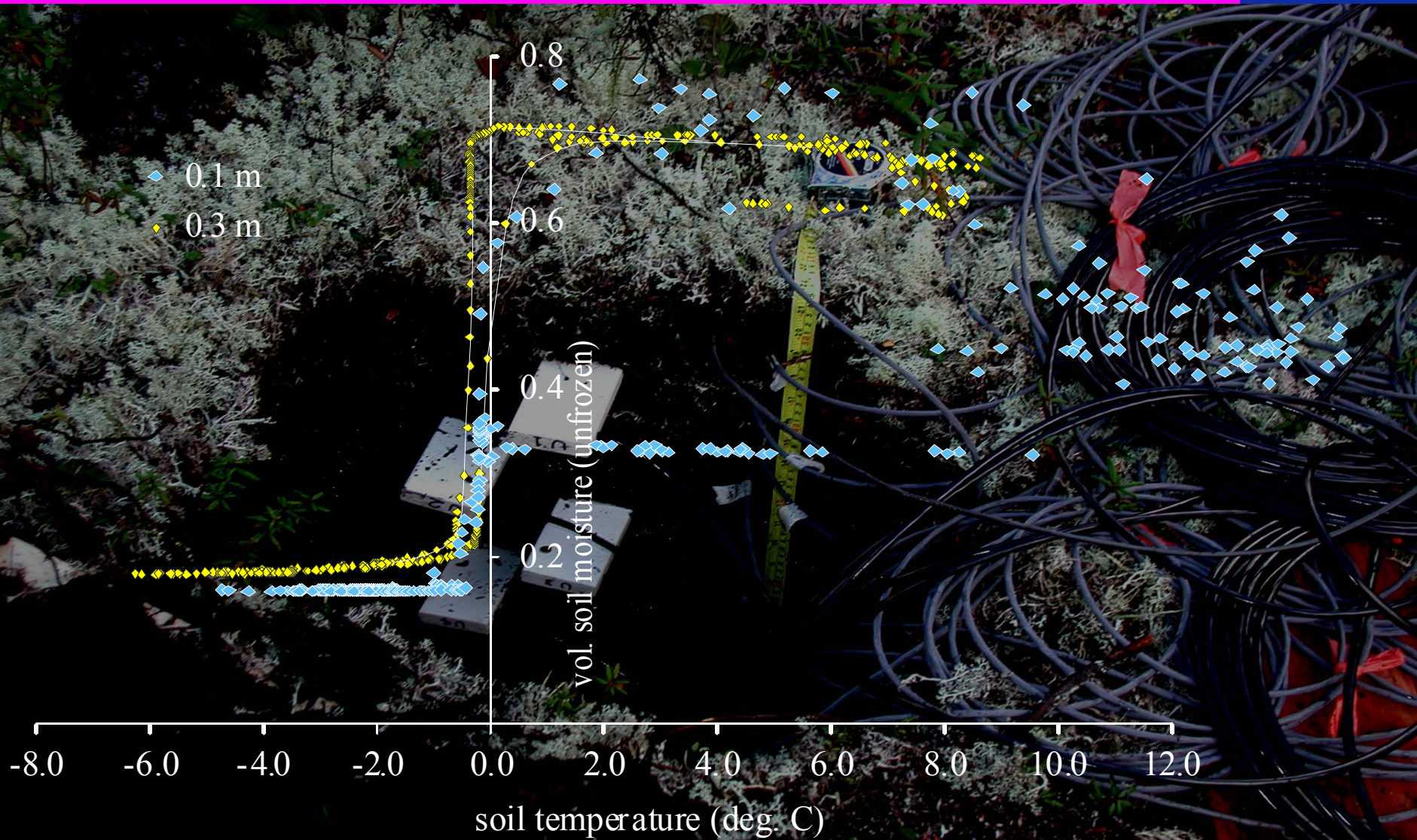


# Subsurface drainage:



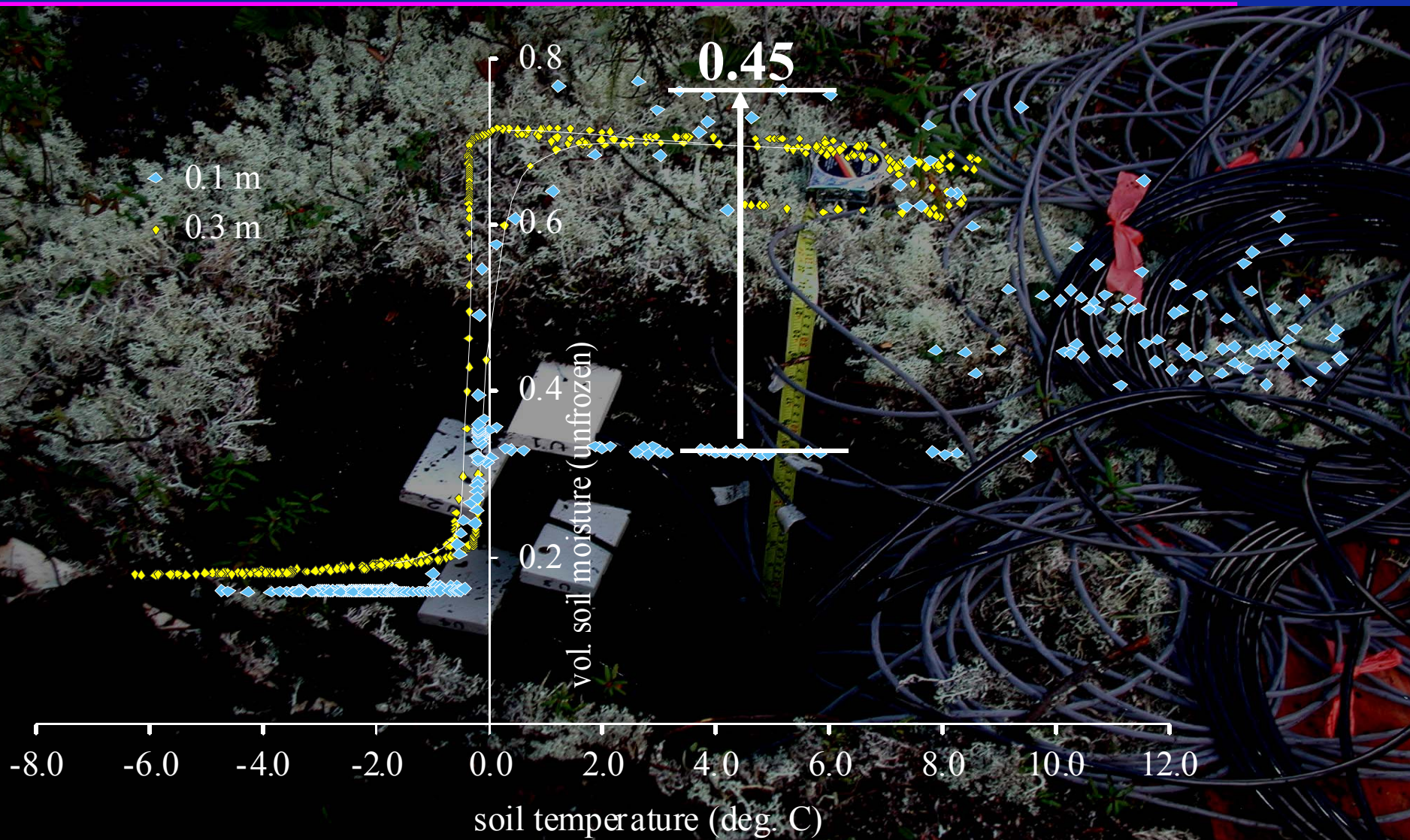


# Over-winter water flows:



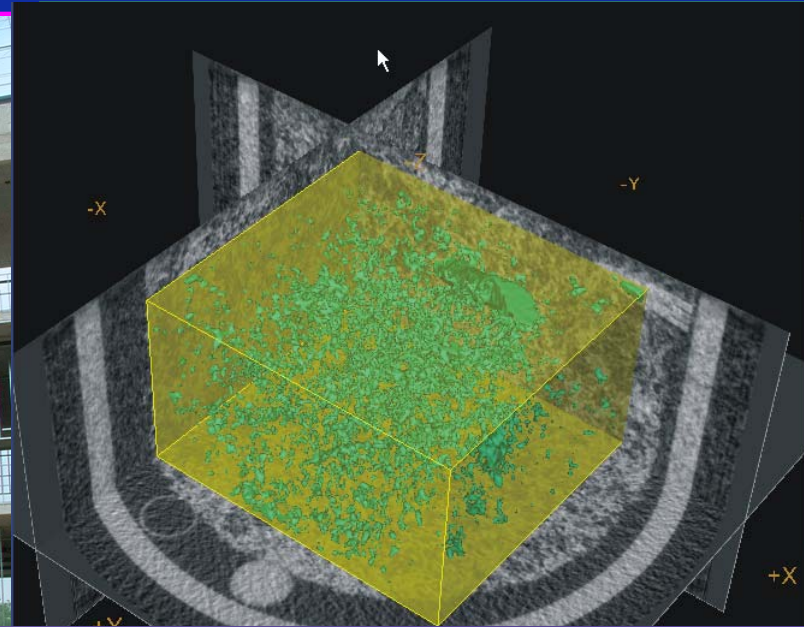


# Over-winter water flows:





# Lab studies: internal moisture cycling



Environmental  
Innovation

Biotron plants seeds for the future





bandsaw  
blade

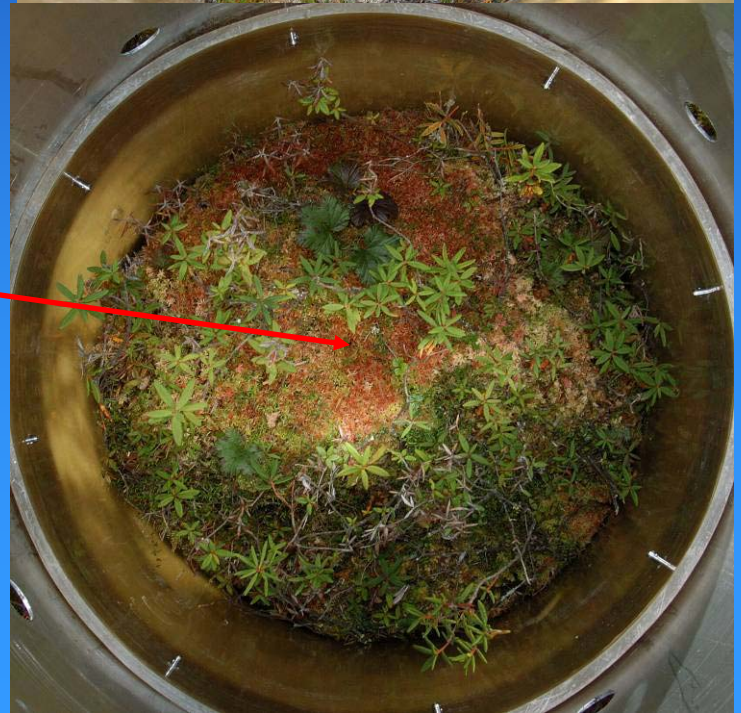
clean  
undisturbed  
break on  
bottom



Lichen,  
Labrador Tea



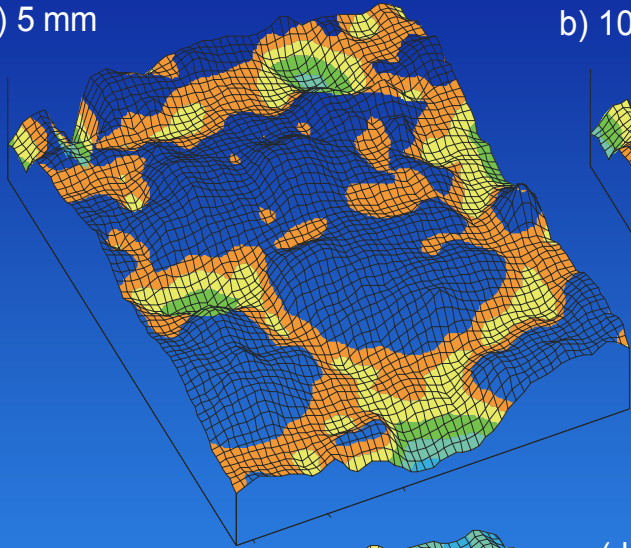
Moss,  
Labrador Tea



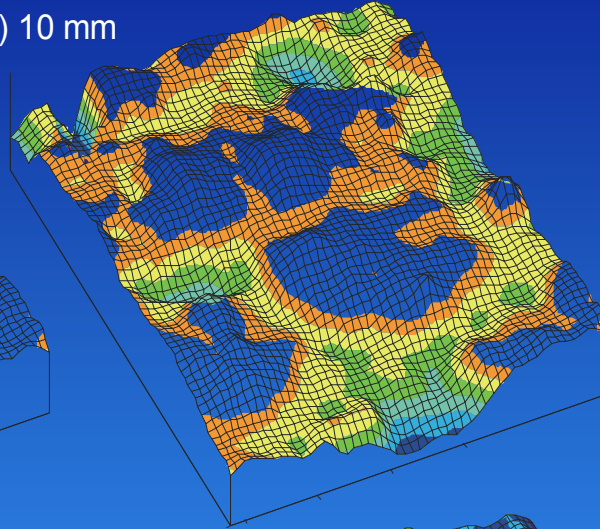


# FT topography - runoff

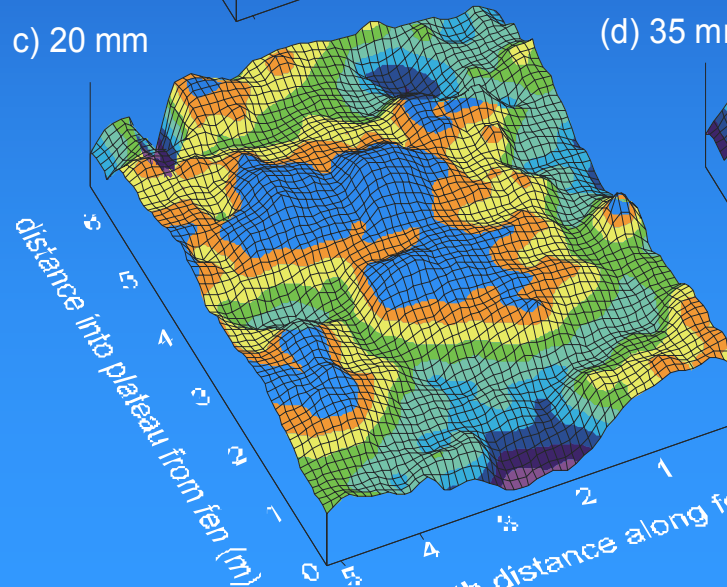
a) 5 mm



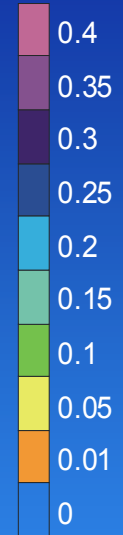
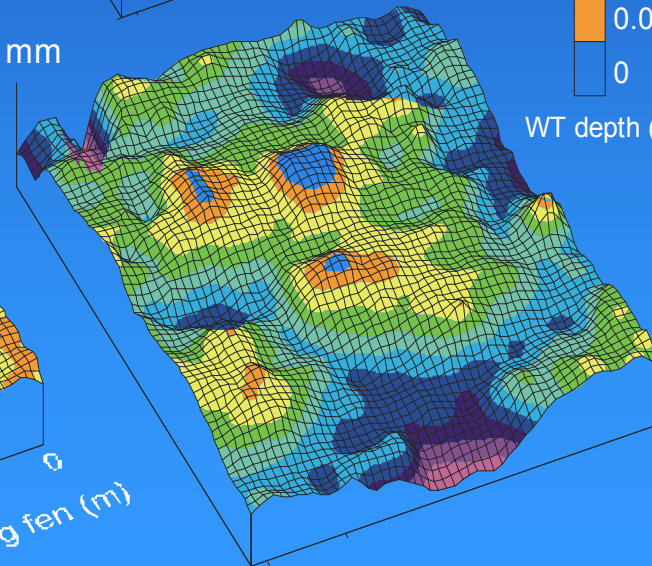
b) 10 mm



c) 20 mm



(d) 35 mm



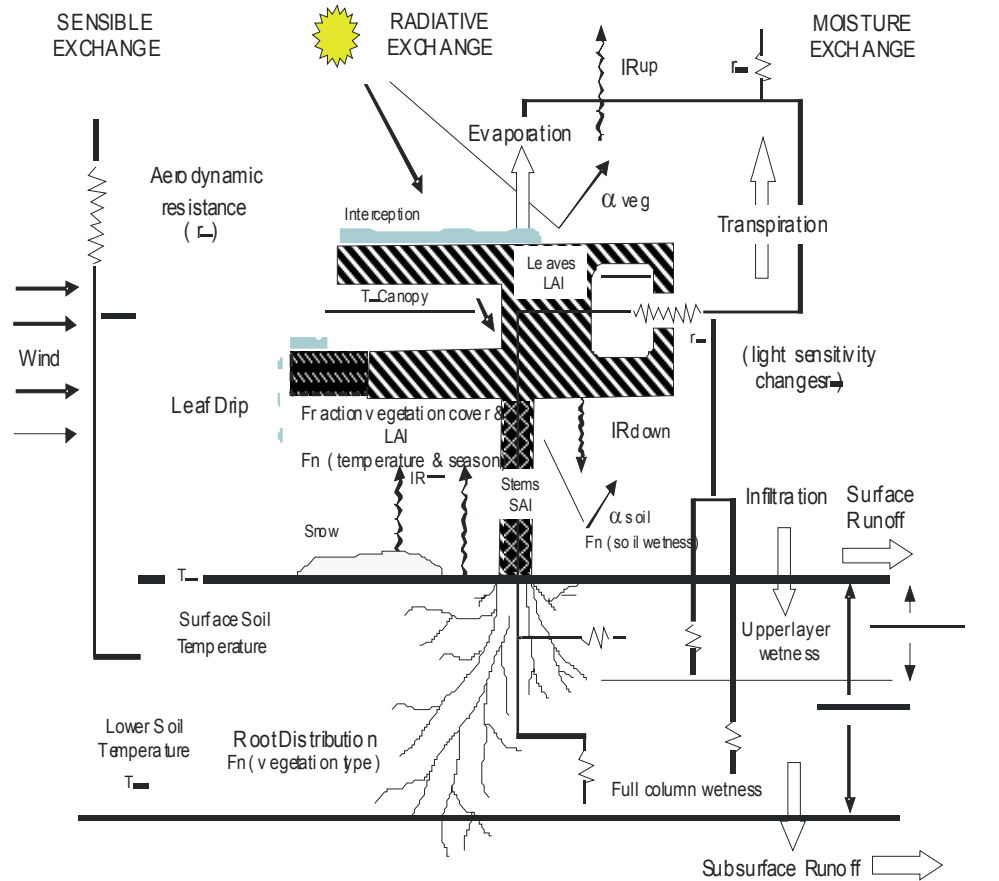
WT depth (m)

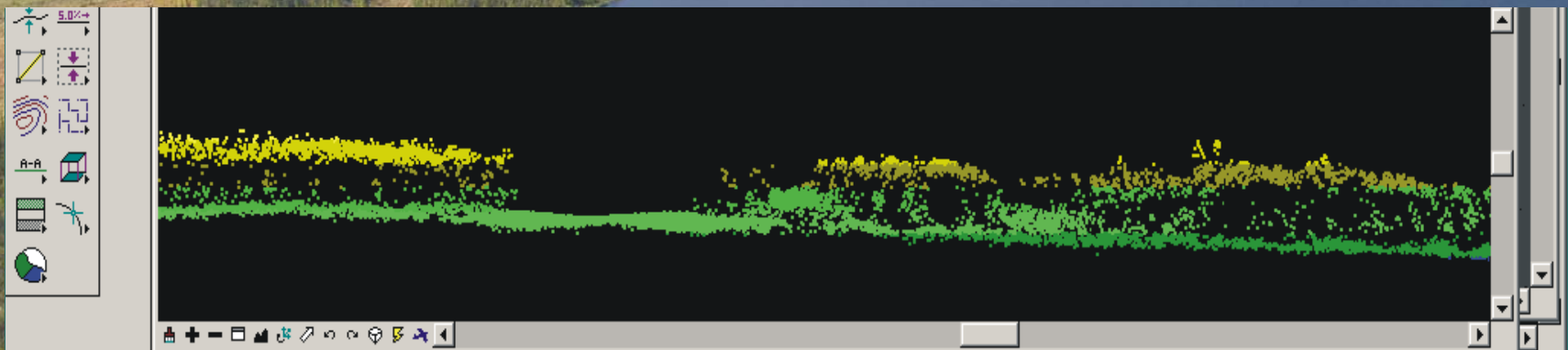




# CLASS

## Second Generation Land Surface Scheme

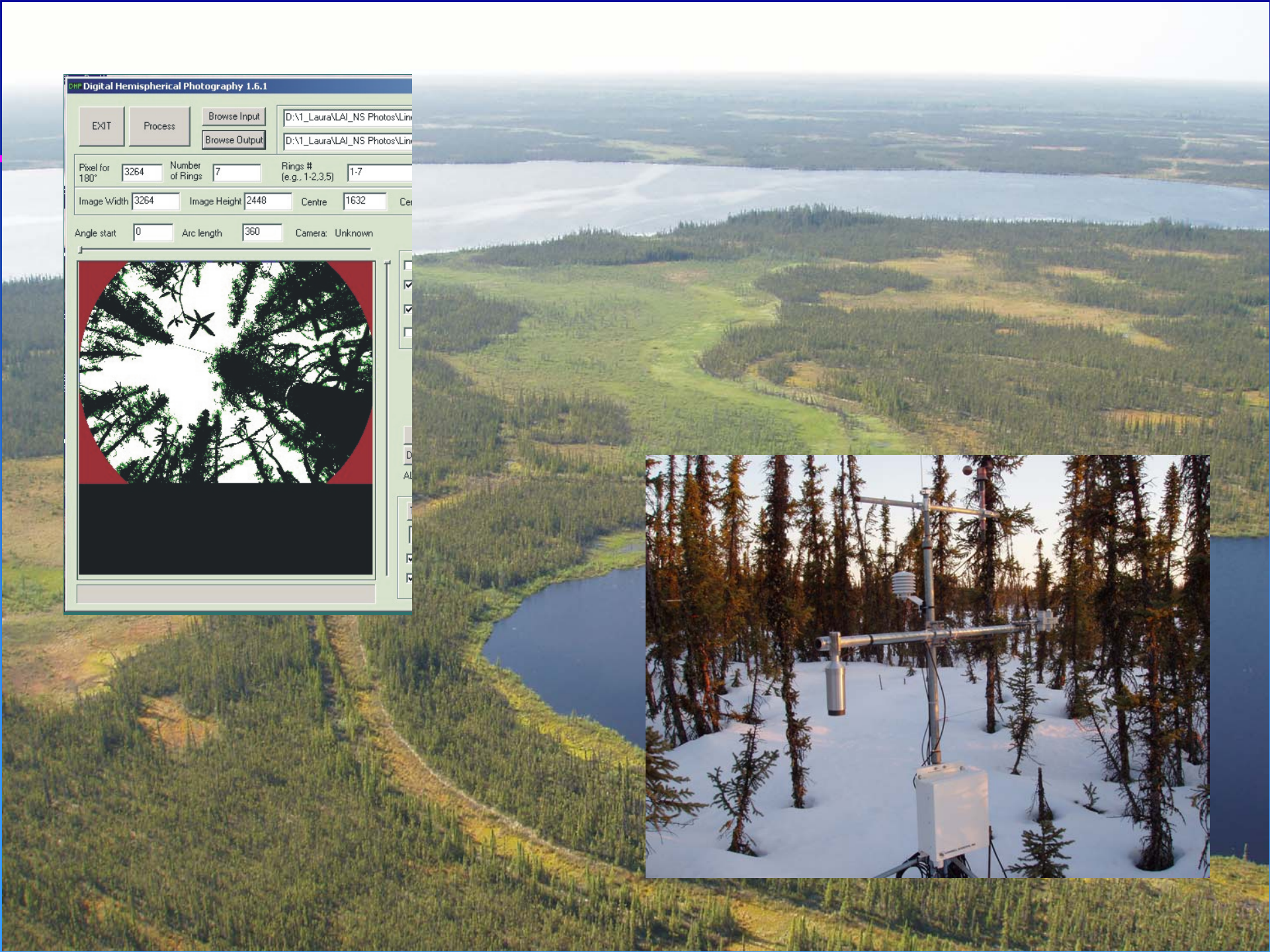
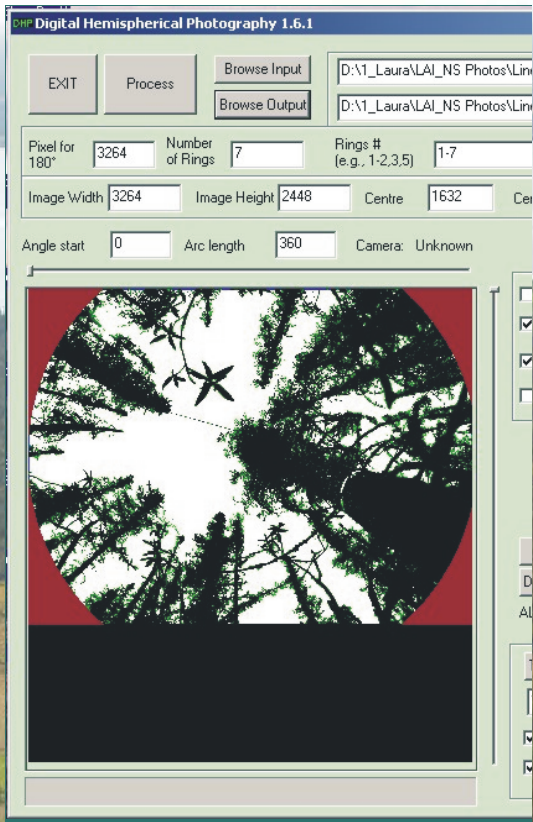




Default [1] [2] [3] [4] [5] [6] [7] [8] X: 595084.0220 Y: 6809705.5030 Z: 186.9530

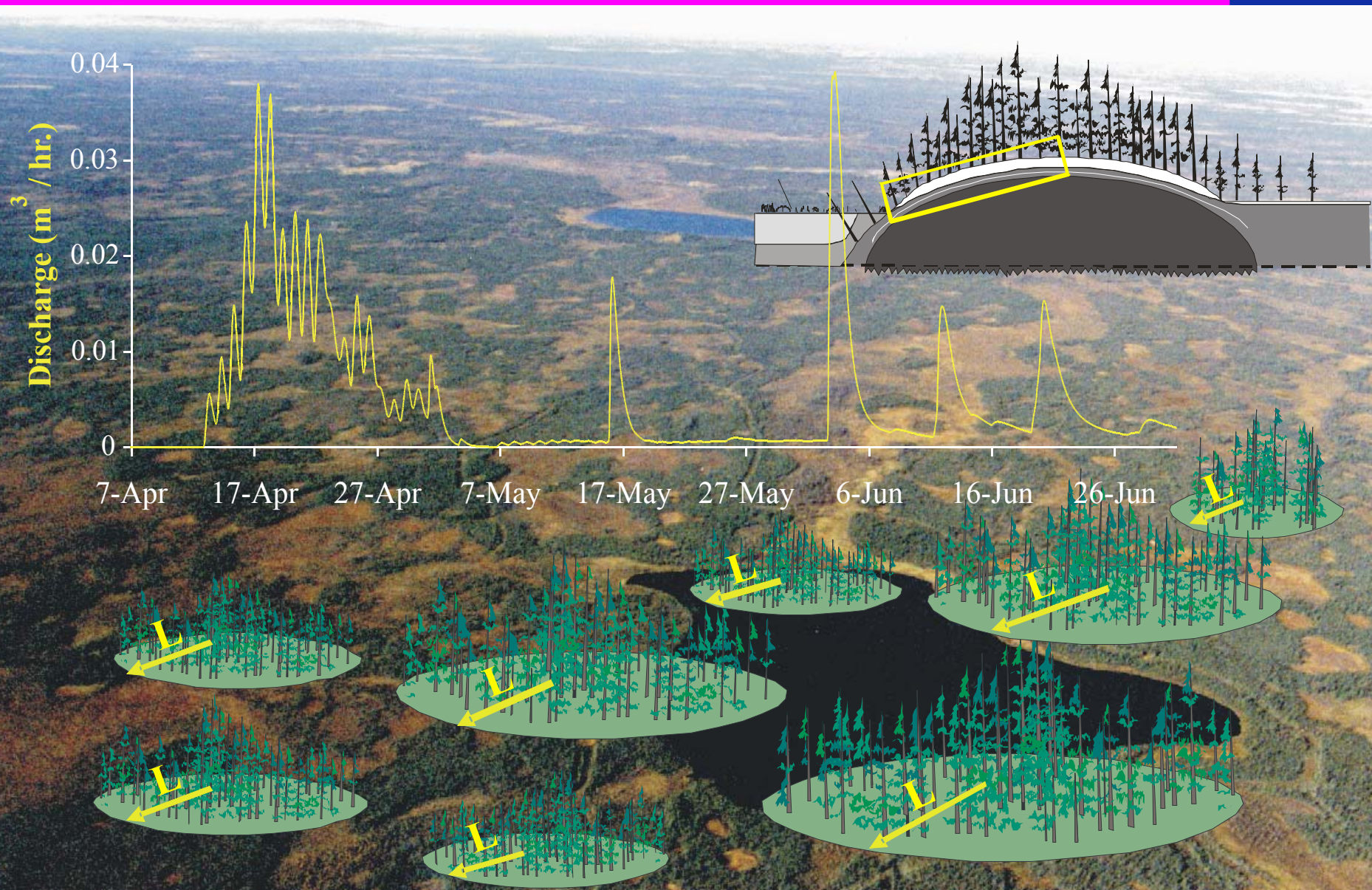
Draw Section > Enter left point Size 327 MB Default : 1





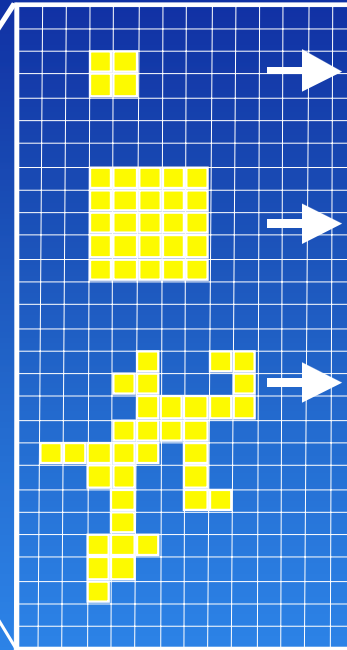
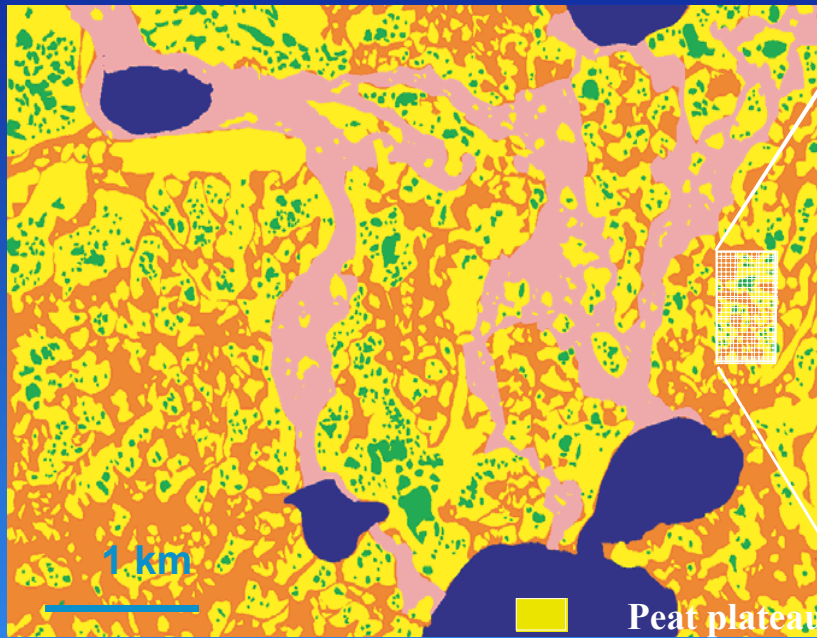


# Hydraulic lengths (L) for composite hydrograph:





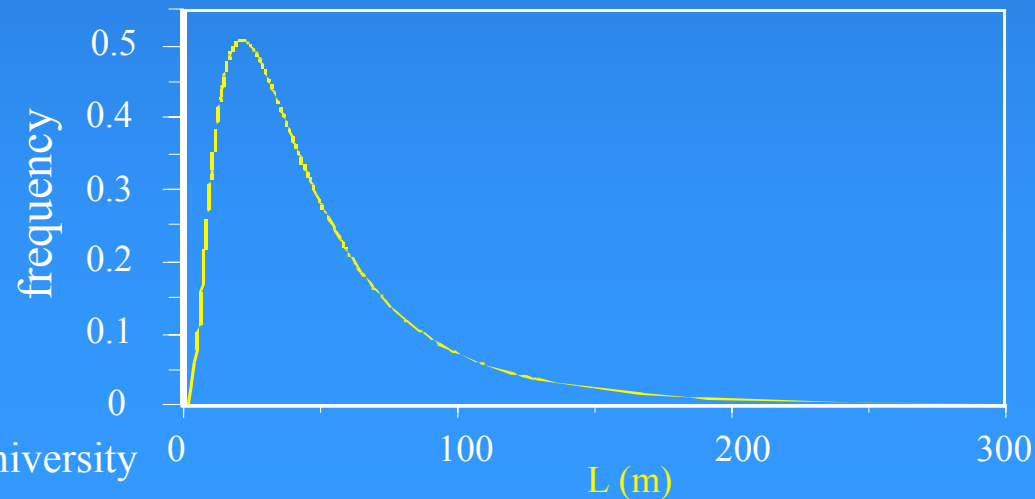
# Spatial analysis of peat plateaus:



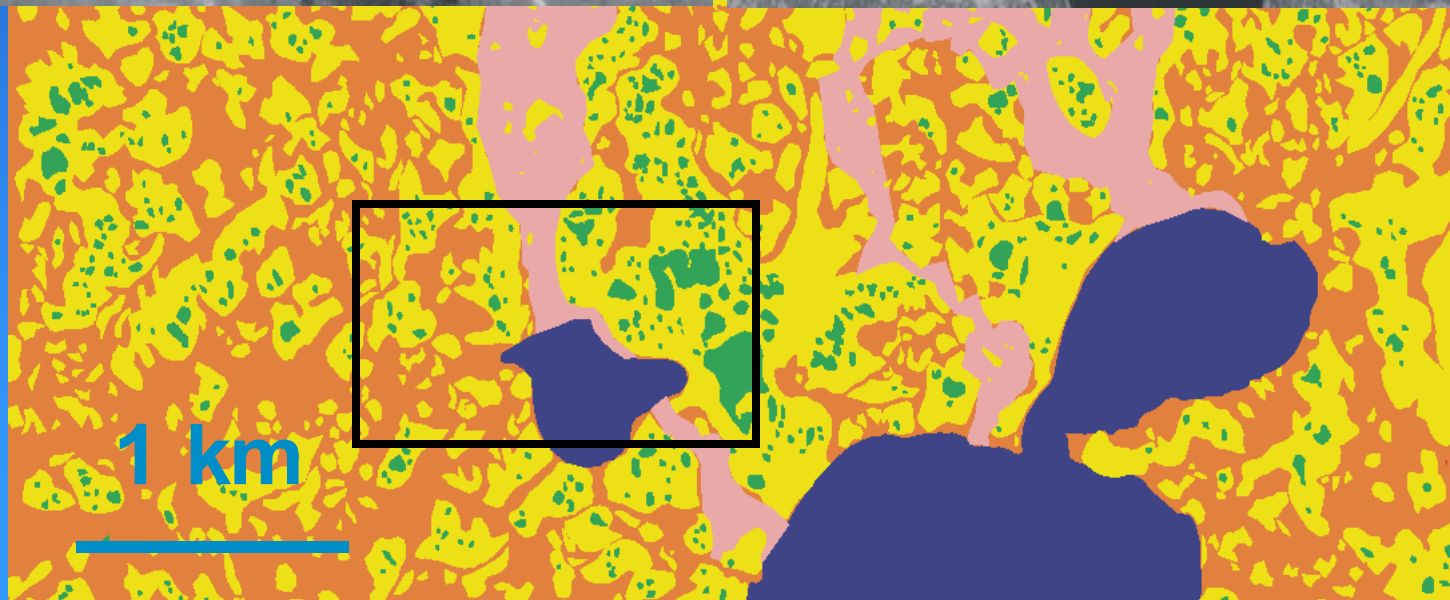
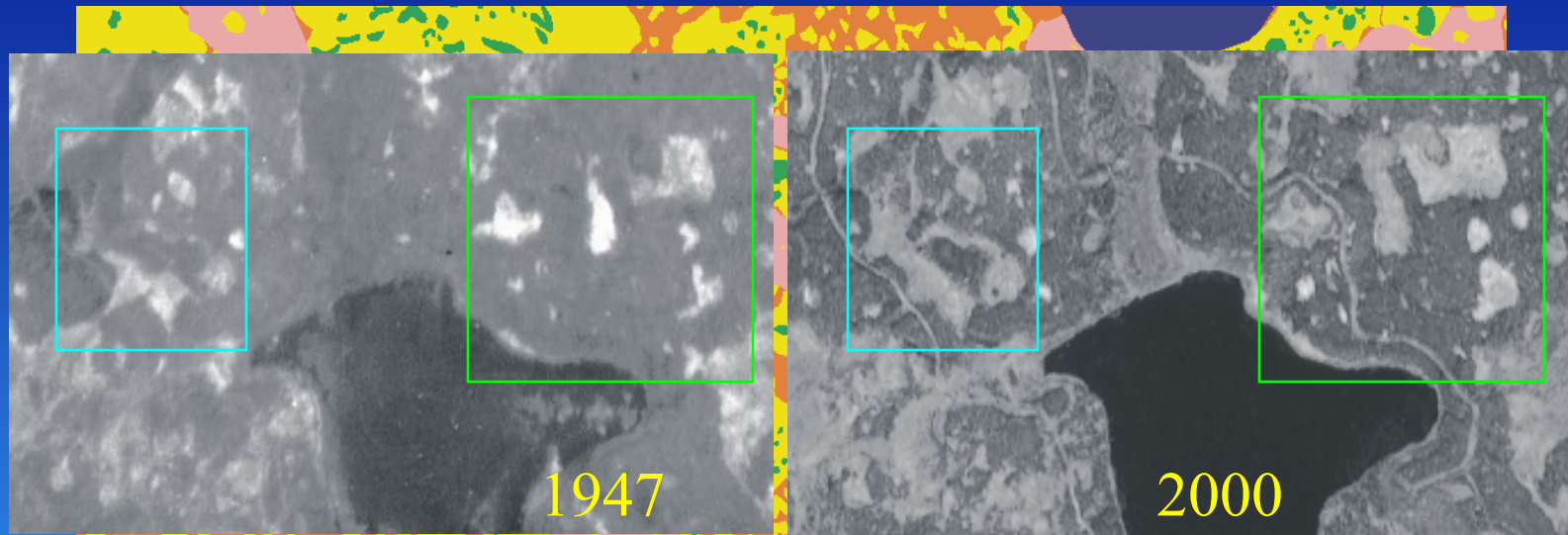
$$L = 2 A/P$$
$$L = 1 \text{ m}$$

$$L = 2 A/P$$
$$L = 2.5 \text{ m}$$

$$L = cA/P$$
$$c = 1 - 2$$
$$L = 0.56 - 1.11 \text{ m}$$

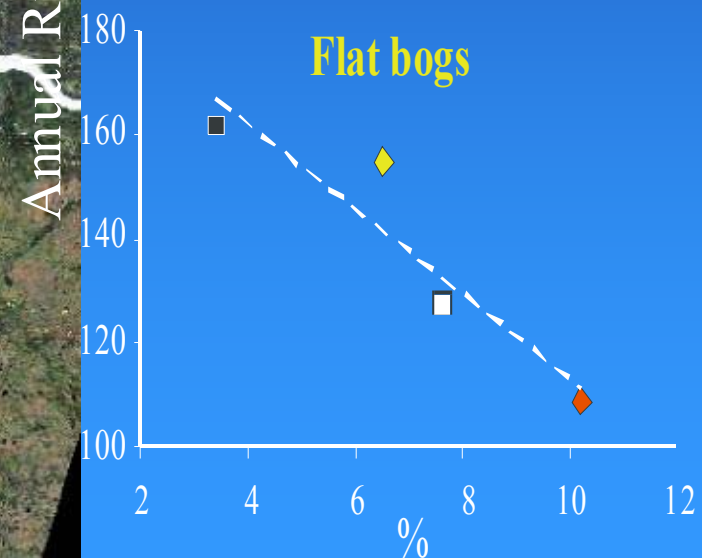
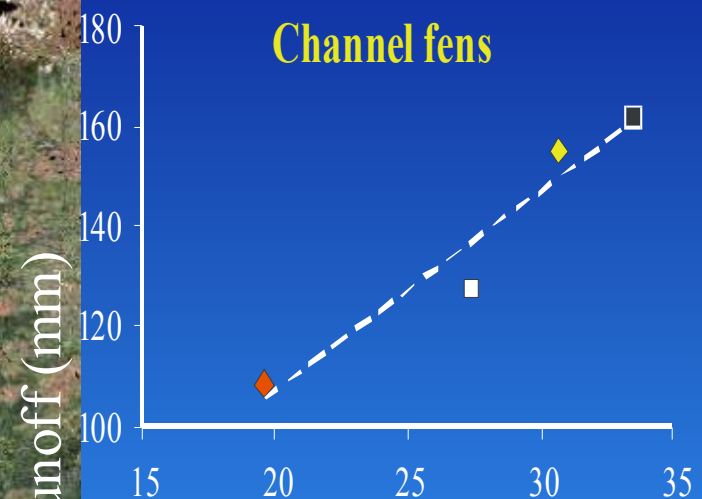
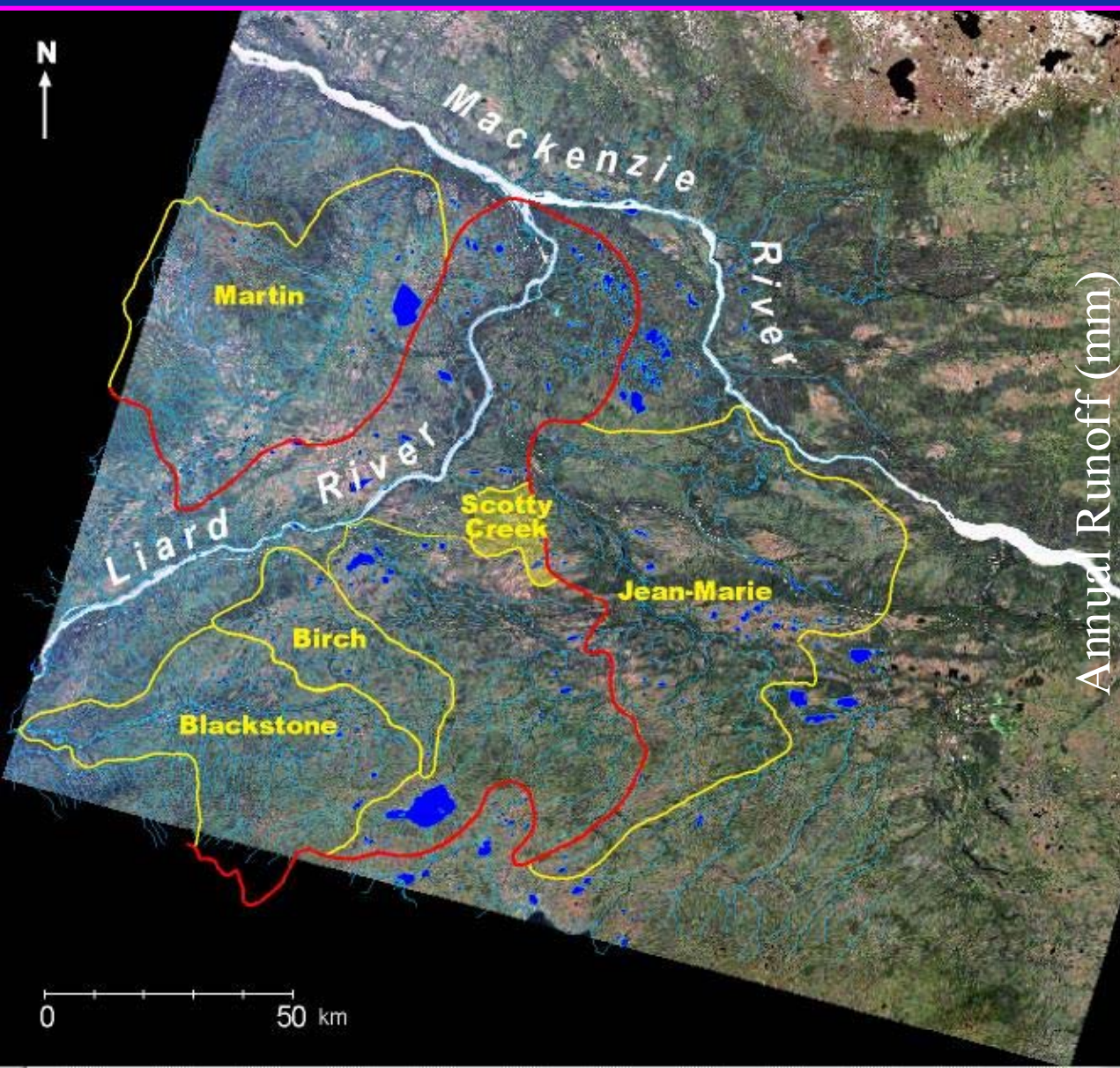


# Loss of permafrost:





# Implications for basin runoff:



◆ Scotty    ◆ Birch    ■ Blackstone    ■ Jean-Marie