Echmishte Study Plot
Pirin
Bulgaria
Elevation: 1952 m
Aspect: N

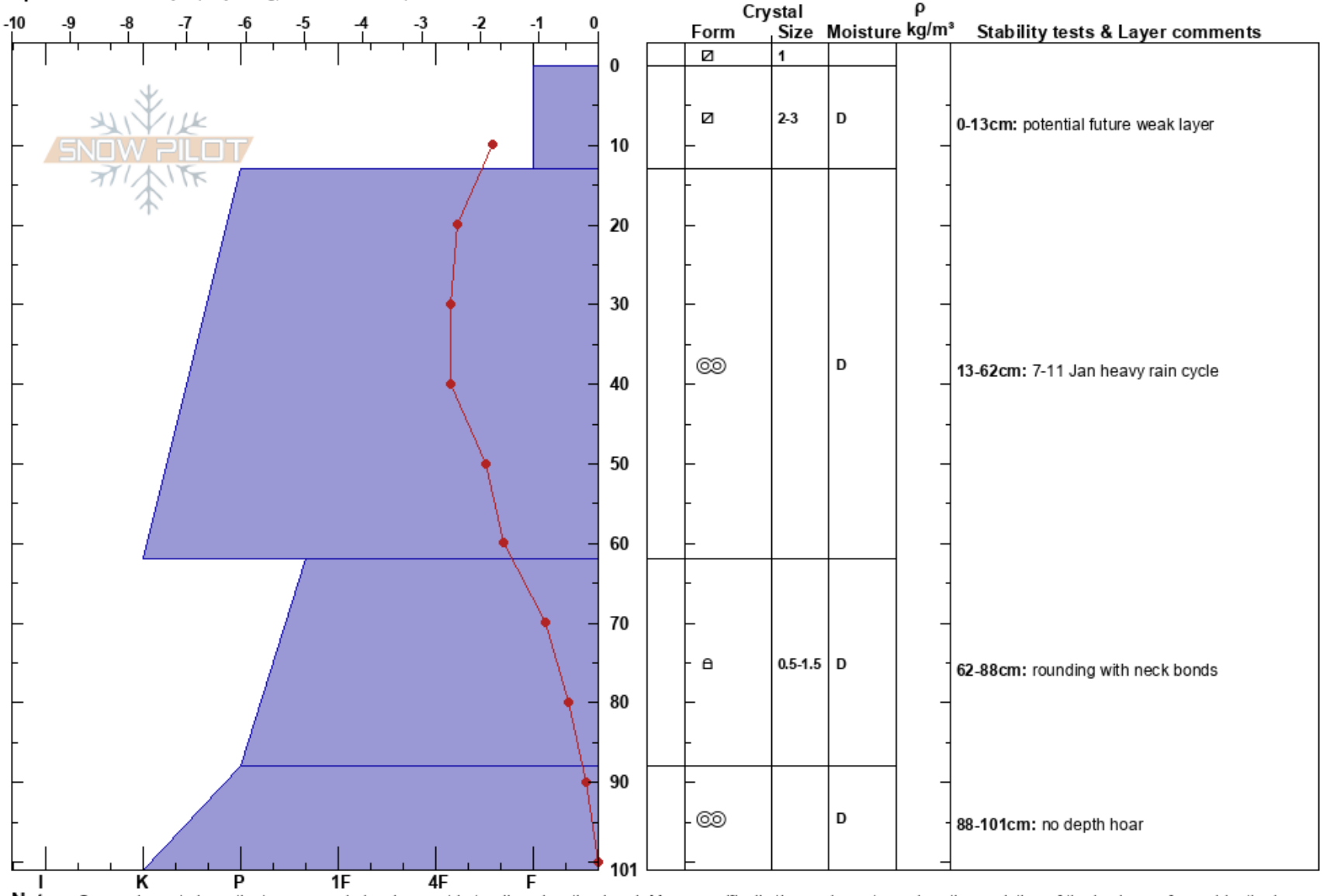
Alexander Mihaylov
22/01/2021 - 16:45
Co-ord: 41.76813N, 23.44935E
Slope Angle: 5°
Wind Loading: previous

Specifics: Instability rapidly rising; Ski tracks on slope

Stability: Very Good
Air Temperature: 1.1°C
Sky Cover: OVC
Precipitation: S-1
Wind: S Light Breeze

HS:101
PF:20

Layer Notes:
0-13cm: potential future weak layer
0-13cm: Problematic layer
13-62cm: 7-11 Jan heavy rain cycle
62-88cm: rounding with neck bonds
88-101cm: no depth hoar



Form	Size	Moisture	ρ kg/m³	Stability tests & Layer comments
⧄	1			
⧄	2-3	D		**0-13cm:** potential future weak layer
◎◎		D		**13-62cm:** 7-11 Jan heavy rain cycle
⧆	0.5-1.5	D		**62-88cm:** rounding with neck bonds
◎◎		D		**88-101cm:** no depth hoar

Notes: Our goal was to investigate snowpack development in treeline elevation band. More specifically the goal was to explore the evolution of the ice layers formed by the heavy rain cycle 2 weeks ago, followed by an arctic cold spell with min. temps of -22.

Summary of results: the rain cycle has helped the formation of a homogenous base of the snow pack at this elevation with almost a 50 cm thick laminated melt-freeze crust. The anticipation of sudden planar test results on top of that layer was not confirmed - both CT & ECT did not produce any results.

Concerning is the top layer of faceted crystals (near surface facets), that once buried may become a weak layer. We currently see this happening at higher elevations as a result of wind slabs forming strong and heavy layers on top of this low density and low strength (weak) layer.