

Appendix I Symbols and Abbreviations

Symbol	Term	Units
BB	Boardblock test	categorical
CT	Compression test	categorical
D#	Avalanche size – destructive force	categorical
E	Grain size	mm
F	Grain form	categorical
f	Fall height of the hammer, ram penetrometer	cm
H	Vertical coordinate (line of plumb)	cm, m
H	Mass of hammer, ram penetrometer	kg
H2D/H2DW	Twice per day snow accumulation/water equivalent	cm/mm
HIN/HINW	Interval snow height/water equivalent	cm/mm
HN24/HN24W	Height of 24-hour snow accumulation/water equivalent	cm/mm
HN/HNW	Height of new snow layer/water equivalent	cm/mm
HS/HSW	Height of snowpack/total water equivalent	cm/mm
HST/HSTW	Storm snow height/water equivalent	cm/mm
HW	Water equivalent of a layer	mm
L	Layer thickness (measured vertically)	mm,cm,m
n	Number of blows of the hammer, ram penetrometer	dimensionless
P	Penetrability	cm
p	Increment of penetration for n blows, ram penetrometer	cm
PF	Depth of foot penetration	cm
PR	Depth of penetration by standard ramsonde	cm
PS	Depth of ski penetration	cm
Q	Shear quality	categorical
R	Hand hardness index	categorical
R#	Avalanche size – relative to path	categorical
RB	Rutschblock test	categorical
RH	Relative humidity	%
RN	Ram number	kg

Symbol	Term	Units
RR	Ram resistance	N
SB	Stuffblock test	categorical
SR	Stability ratio	dimensionless
ST	Shovel shear test	categorical
T	Temperature of snow	°C
T	Mass of tubes, ram penetrometer	kg
T _a	Air temperature	°C
T _g	Ground temperature	°C
T _s	Temperature of snow surface	°C
T ₂₀	Temperature of snow 20 cm below the surface	°C
α	Alpha angle	degree
α_i	Alpha angle of an individual avalanche	degree
α_e	Alpha angle of an extreme event. Smallest angle observed in a specific avalanche path	degree
Δ (Delta)	Change in penetration	cm
ε (epsilon)	Strain	dimensionless (m/m)
θ (theta)	Liquid water content	% (by volume)
ρ (rho)	Density	kg/m ³
σ (sigma)	Normal stress	Pa
Σ (Sigma)	Normal strength	Pa
τ (tau)	Shear stress	Pa
T(Tau)	Shear strength	Pa
T _∞	Frame independent shear strength	Pa
T ₁₀₀	Shear strength measured with 100 cm ² shear frame	Pa
T ₂₅₀	Shear strength measured with 250 cm ² shear frame	Pa
ψ (psi)	Slope angle	degree

Snow Profile

Reference: _____

Date: _____ Time: _____ Observers: _____

Location: _____

Elev: _____ Aspect: _____ Slope Angle: _____ Precip: _____ Sky: _____ Wind Dir: _____ Speed: _____ G

Wind Loading? Y N PREV Ski Pen: _____ cm in Boot Pen: _____ cm in Profile Type:

Snow Layer Temperature (°C)	Depth <i>H</i>	Moist θ	Form <i>F</i>	Size <i>E</i>	Density ρ	Test Results and Comments
-18° -16° -14° -12° -10° -8° -6° -4° -2°	(cm)			(mm)	(kg/m ³)	
	200					
	190					
	180					
	170					
	160					
	150					
	140					
	130					
	120					
	110					
	100					
	90					
	80					
	70					
	60					
	50					
	40					
	30					
	20					
	10					
	0					

I K P 1F 4F F

Temperate Conversion Chart

°C	°F
-40	-40
-39	-38.2
-38	-36.4
-37	-34.6
-36	-32.8
-35	-31
-34	-29.2
-33	-27.4
-32	-25.6
-31	-23.8
-30	-22
-29	-20.2
-28	-18.4
-27	-16.6
-26	-14.8
-25	-13
-24	-11.2
-23	-9.4
-22	-7.6
-21	-5.8
-20	-4
-19	-2.2
-18	-0.4
-17	1.4
-16	3.2
-15	5
-14	6.8
-13	8.6
-12	10.4
-11	12.2
-10	14
-9	15.8
-8	17.6
-7	19.4
-6	21.2
-5	23
-4	24.8
-3	26.6
-2	28.4
-1	30.2
0	32

°C	°F
0	32
1	33.8
2	35.6
3	37.4
4	39.2
5	41
6	42.8
7	44.6
8	46.4
9	48.2
10	50
11	51.8
12	53.6
13	55.4
14	57.2
15	59
16	60.8
17	62.6
18	64.4
19	66.2
20	68
21	69.8
22	71.6
23	73.4
24	75.2
25	77
26	78.8
27	80.6
28	82.4
29	84.2
30	86
31	87.8
32	89.6
33	91.4
34	93.2
35	95
36	96.8
37	98.6
38	100.4
39	102.2
40	104

Wind Speed Conversion Chart

mi/hr	m/s	kt	km/hr
1	0.4	0.9	1.6
2	0.9	1.7	3.2
3	1.3	2.6	4.8
4	1.8	3.5	6.4
5	2.2	4.3	8.0
10	4.5	8.7	16.1
15	6.7	13.0	24.1
20	8.9	17.4	32.2
25	11.2	21.7	40.2
30	13.4	26.1	48.3
35	15.6	30.4	56.3
40	17.9	34.8	64.4
45	20.1	39.1	72.4
50	22.4	43.4	80.5
55	24.6	47.8	88.5
60	26.8	52.1	96.6
65	29.1	56.5	104.6
70	31.3	60.8	112.7
75	33.5	65.2	120.7
80	35.8	69.5	128.7
85	38.0	73.9	136.8
90	40.2	78.2	144.8
95	42.5	82.6	152.9
100	44.7	86.9	160.9
105	46.9	91.2	169.0
110	49.2	95.6	177.0
115	51.4	99.9	185.1
120	53.6	104.3	193.1
125	55.9	108.6	201.2
130	58.1	113.0	209.2
135	60.4	117.3	217.3
140	62.6	121.7	225.3
145	64.8	126.0	233.4
150	67.1	130.3	241.4