KG
11366
v. 318

Sep. 6; Mon. 3

September 9. 1885.

Mr. Mosilark.

Sirius A.

Coll & level on ~~tripod~~ ~~(slide [illegible])~~

Black (SO) eye-pieces (in telescope)

Az

Ev 1.2

233.0 708.0 9.8 31.2 758.6 708.7

59.3

58.9 708.9

10 25 708.0 10.1 31.3 758.9 708.8 +150.1

Ep 0.8

707.0 8.7 30.0

859.8 706.1

60.8

60.8 707.0

708.0 8.7 29.8 860.5 706.6 +153.9

clouds

Ov.

705.0 9.0 30.4

554.4 704.6

55.4

36?

553.3 -149.3

Op

707.0 9.8 31.2

539.5 707.7

59.1

58.8 707.1

10 43 707.0 9.5 30.7 559.1 707.4 +148.3

September 6. 1885.

						Alt. Corr for level, altitude 706.4 − 1.5		true az.
10 45	Clouds							
10 55	9.0 31.3 Kineo		47.2	707.0	707.6			
	E2							
	9.0	30.3	222.1	707.0	706.5	+0.1		
	~~9.0~~ 8.7	30.2	180.0	"	706.3	−0.1		
	8.6	30.2	270.0	"	706.2	−0.2		
			211.6	815.2		~~107.3~~ 110.3	309.9	275.7
	N. Tripy		213.7	~~97.3~~ 907.3		~~199.4~~ 202.4	311.0	277.8
	~~Tremont~~ Chor.		213.9	895.6		~~187.7~~ 190.7	312.2	278.0
	" "		214.6	893.1		188.2	312.9	278.7
	1st probably not visible "		214.7	903.6		198.7	313.0	278.8
	Lost? "		215.4	889.6		184.7	313.7	279.5
	N. Trip.		216.1	821.2		~~118.3~~ 121.3	314.4	280.2
	"		217.4	828.3		123.4	315.7	281.5
Passaconaway	"		217.8	827.2		~~119.3~~ 122.3	316.1	281.9
	" (Slide Pk)		218.6	831.7		126.8	316.9	282.7
	hill		219.4	858.6		153.7	317.7	283.5
	" ~~[illegible]~~ ?		220.3	861.3		156.4	318.6	284.4
	[illegible]		220.9	884.3		179.4	319.2	285.0
Whiteface	~~Osceola~~		21	840.7		135.8	320.4	286.2
	Tecumseh (roll)		3.8	911.6		206.7	322.1	287.9
	Mt. Lyman		5.4	942.8		237.9	323.7	289.5
	" " "		6.2	957.4		252.5	324.5	290.3
	Dicky?		6.6	969.8		254.9	324.9	290.7
	" Lyman		7.1	962.8		257.9	325.4	291.2
	Sa. range		7.4	1001.3		296.4	325.7	291.5
	Mt. Lyman		8.2	966.2		261.3	326.5	292.3
	V.d. Maine		8.6	989.7		284.8	326.9	292.7
	Mt. Lyman		8.8	986.3		281.4	327.1	292.9

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	Green hills	959.8	9.6	254.9	327.9	293.7
9d	" "	763.4	9.8	258.5	328.1	293.9
11 28	8.8 30.3	707.0	"	706.4 0.0		
	Beach (SD)	857.8	232.2	152.9	330.5	296.3
	" "	856.6	2.9	151.7	331.2	297.0
	" lamp pk	927.1	5.8	222.8	334.1	299.9
	dist.	968.3	237.8	263.4	336.1	301.9
	Black line	1055.0	238.2	350.1	336.5	302.3
	Cellapse line.	940.6	239.3 ~~240.3~~	235.7	337.6	303.4
	Tunnel ?	918.6	240.3	213.7	338.6	304.4
	Shore (of lookout)	906.7	0.4	201.8	338.7	304.5
	Cellapse	921.2	1.3 ~~1.8~~	216.3	339.6	305.4
	" lower	952.0	1.9	247.1	340.2	306.0
	" "	975.2	2.8	270.3	341.1	306.9
?	Trad (end of 3)	969.8	243.3	264.9	341.6	307.4
	~~Patterson~~		245.3		333.6	309.4
11.50	7.8 29.3	708.0	"	706.7 +0.3		
	Pattern thin dry	975.8	"	270.9		
	" " "	974.6	245.3	269.7	333.7	309.5
	" "	973.3	245.6	268.4	333.9	309.7
	left bank	956.2	7.6	251.3	335.9	311.7
	& summit	950.3	9.0	245.4	337.3	313.1
Red Hill	main hill	1041.6	250.5	336.7	338.8	314.6
	dist	972.3	1.0	267.4	339.3	315.1
	tent.	973.2	2.8	268.3	341.1	316.9
	10 Dist.	977.2	4.2	272.3	342.5	318.3
	dist	968.8	6.8	263.9	345.1	320.9
	"	966.3	8.0	261.4	346.3	322.1

Instrument touched and as disturbed

9.0 30.3 702.0 701.5

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[illegible] Series B

	11.6	32.8	705.0	180.0	708.0	706.0	
	9.3	30.4	708.0	225.0	707.8		
	8.6	29.8	708.0	270.0	706.9		
12 10	7.5	29.0	708.0	315.0	705.0		
	[illegible]		978.4	237.1	706.7	271.7	318.3
	9.6	31.0	707.2	239.2	707.6		~~318.4~~
	Black SD.		857.6	215.8	706.8	150.8	297.0
	9.7	31.2	707.2	215.8	707.8		
	Black SD		859.4	215.2	706.8	152.6	296.4
	[illegible]		935.6	245.3	706.5	227.1	326.5
	" [illegible]		956.4	63	706.5	249.9	327.5
	[illegible]		1119.6	246.4	706.5	413.1	327.6
	[illegible]		980.2	47.7	706.5	273.7	328.9
	" "		78.3	48.3	706.5	271.8	329.5
	Agam ↓ ↓		58.8	54.3	706.4	251.4	335.5
	"		57.8	54.6	706.4	251.4	336.0
	Hill.		1268.0	254.6	706.4	561.6	335.8
	[illegible]?		995.8	263.4	706.1	289.7	344.6 ~~370.9~~
	10.1	31.2	707.0	263.3	707.9		34
	Hill		1325.4	264.7	706.1	619.3	345.9
	"		1125.0	267.6	706.1	418.9	348.8
	Union 1		955.8	269.2	706.0	249.8	350.4
	10.0	31.2	707.0	269.4	707.8		
	Union 2		54.8	269.6	706.0	248.8	350.8
	J England		55.6	272.2	705.9	249.7	353.4
	Hill		1079.2	273.0	705.9	373.3	354.2
	~~[illegible]~~ [illegible]		991.0	275.2	705.8	285.2	356.4
			952.4	278.7	405.7	246.7	359.9

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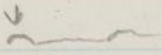
Dist	942.3	277.4	705.8	236.5	358.6
"	40.8	7.8	705.8	235.0	359.0
"	43.0	7.9	705.8	237.2	359.1
Wach lower pk.	50.7	9.2	705.7	244.5	0.4
"	40.0	9.5	705.7	234.3	0.7
Kear S lower pk	30.1	9.6	705.7	224.4	0.8
Kear S upper pk.	895.7	.0.4	705.7	190.0	1.6
~~9.5 30.6~~	707.0	280.6	707.3		
9.6 30.8 Kear S l pk	916.3	281.1	705.6	210.7	2.3
v.v. dist	939.3	281.6	705.6	233.7	2.8
Mon Mt	1098.2	282.4	705.6	392.6	3.6
" "	1104.7	283.4	705.5	399.2	4.6
Cardigan.	826.6	287.9	705.4	121.2	9.1
Mored,	03.3	8.3	705.4	197.9	9.5
" Mtn	93.6	8.8	705.4	188.2	10.0
9.6 30.7	707.0	288.8	707.2		
Nut mount	910.6	290.3	705.4	205.2	11.5
Bag Mt.	920.5	289.6	705.4	215.1	10.8
Sunapee	~~906~~ 900.6	90.3	705.4	195.2	11.5
dist	934.9	300.7	705.0	229.9	21.9
Mane.	1071.3	1.6	705.0	366.3	22.8
dist	45.3	5.2	704.9	240.4	26.4
Croydon?	907.8	6.3	704.8	203.0	27.5
l pk.	25.6	7.6	704.8	220.8	28.8
a dist 	34.4	9.3	704.7	229.7	30.5
v dist	25.2	310.1	704.7	220.6	31.3
S Mon.	1426.8	307.6	704.7	722.1	28.8
9.0 30.2	707.0	307.6	706.5	~~9.5~~ ~~28.8~~	
v d	894.8	314.7	704.5	190.3	35.9
v d	97.7	315.8	704.5	193.2	37.0

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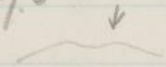
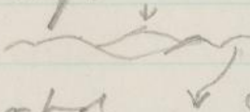
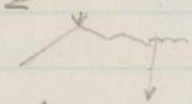
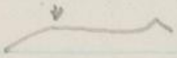
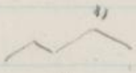
	Mon Mt.		984.1	315.7	704.5	279.6	36.9
	beyond		1020.2	317.0	704.4	315.8	38.2
Ascutney	Ascutney		876.4	317.0	704.4	172.0	38.2
	86 29.6		707.0	317.1	705.8		
Saddle	beyond		890.4	318.1	704.4	186.0	39.3
Greylock	& dist. high		868.3	319.6	704.3	164.0	40.8
	dist		882.8	324.6	704.0	178.8	45.8
	or back		869.0	326.3	704.0	165.0	47.5
	beyond		873.4	327.0	704.0	169.4	48.2
			863.6	329.7	703.9	159.7	50.9
			67.6	1.6	703.8	163.8	52.8
	beyond.		87.8	2.4	703.7	184.1	53.6
	Killington		47.7	336.6	703.5	144.2	57.8
			36.3	81	703.5	132.8	59.3
			23.4	8.8	703.5	119.9	60.0
	9.4 305		7050	338.8	704.9		
	Pico		35.3	341.2	703.3	132.0	62.4
	Man		1334.3	341.3	703.3	631.0	62.5
	Cube		1114.7	323.8	704.1	410.6	45.0
			880.1	349.6	702.9	177.2	70.8
			63.4	1.5	702.8	160.6	72.7
			53.7	352.4	702.8	150.9	73.6
			68.0	355.8	702.6	165.4	77.0
	Gap.		916.4	356.6	702.6	213.8	77.8
	9.0 29.7		7~~4~~05.0	356.7	704.1		
	9.7 30.8		7~~4~~07.0	281.6	707.3		
	= Kear. S.		895.2	280.4	705.7	189.5	1.6
	Black l. in the		857.6	215.6	706.7	150.9	297.0
	9.6 30.4		706.0	153.8	706.0		~~235.0~~

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[illegible]	806.6	154.8	704.9	101.7	236.0
[illegible]	768.3	154.7	704.9	63.4	235.9
[illegible] ridge	778.3	156.5	705.0	73.3	237.7
Bard,	750.6	158.0	705.0	45.6	239.2
[illegible]	836.3	158.7	705.1	131.2	239.9
Back Pk Ridge	820.2	159.6	705.1	115.1	240.8
Valley ?	801.6.	160.4	705.2	96.4	241.6
Center	773.4	160.7	705.2	68.2	241.9
" Dome	760.4	161.2	705.2	55.2	242.4
	802.3	162.5	705.3	97.0	243.7
end Flume range	955.3	163.4	705.3	250.0	244.6
N Boldface,	854.5	166.3	705.4	149.1	247.5
S Boldface	856.0	167.7	705.4	150.6	248.9
East,	858.8	168.9	705.5	153.3	250.1
[illegible] ?	886.3	169.3	705.5	180.8	250.5 ~~251.2~~
[illegible]	872.8	169.8	705.5	167.3	251.0
	851.3	171.1	705.6	145.7	252.3
↓	857.4	171.8	705.6	151.8	253.0
Carrying lines	812.8	173.3	705.7	107.1	254.5
" top	754.3	174.6	705.7	48.6	255.8
9.2 30.3	707.0	174.6	706.7		
Carrying line	791.6	175.4	705.7	85.9	256.6
Hermit, ?	793.6	175.1.	705.7	87.9	256.3
[illegible]	944.3	175.3	705.7	238.6	256.5
Hancock,	820.8	176.7	705.8	115.0	257.9
"	819.6	177.6	705.8	113.8	258.8
" end	876.1	179.3	705.9	170.2	260.5
[illegible]	881.2	179.8	705.9	175.3	261.0
9.6 31.1	707.0	179.8	707.6		
10.6 31.9	707.0	215.9	708.7		
Black	858.3	215.8	706.7	151.7	297.0

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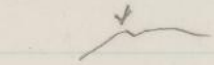
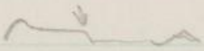
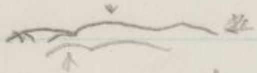
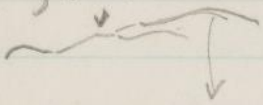
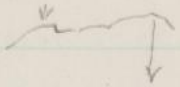
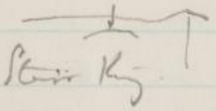
Black	858.3	215.9	706.7	151.6	297.1
100 31.3	707.0	215.9	707.9		
94 30.6	707.0	179.8	707.0		
Kean N.	880.4	179.8	705.9	174.5	261.0
– a	911.1	182.5	706.0	205.1	263.7
Lg. pun.	957.2	181.6	706.0	245.2	262.8
between at ridge	925.3	182.9	706.1	219.2	264.1
b	909.0	183.4	706.1	202.9	264.6
mare.	988.9	184.5	706.1	282.8	265.7
	1185.3	183.9	706.1	479.2	265.1
N. Moat	901.6	186.2	706.1	195.5	267.4
	909.6	186.7	706.1	203.5	267.9
	912.7	187.8	706.1	206.6	269.0
mare ridge	957.5	187.3	706.1	251.4	268.5
S. Moat	936.8	187.4	706.2	230.6	268.6
	970.4	190.2	706.2	264.2	271.4
	901.0	191.4	706.2	194.8	271.6
	843.4	193.3	706.3	137.1	274.5
	818.4	194.3	706.3	112.1	275.5
Chose highest pt vis not true limit	891.2	198.3	706.4	184.8	279.5
	874.3	136.5	704.0	170.3	217.7
Stein Ring	855.0	137.4	704.0	+151.0	218.6
93 29.4	707.0	137.4	705.5		
102 31.4	707.0	210.0	708.1		
N. Loaf.	676.2	141.7	704.3	−28.1	222.9
Loaf. Sum ? cloud	634.3	143.4	704.3	−70.0	224.6
Lat.	685.9	144.5	704.4	−18.5	225.7
Dein.	666.3	145.7	704.4	−38.1	226.9
Ph	737.0	147.6	704.5	+32.5	228.8

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[illegible]	719.4	149.3	704.7	+14.7	230.5
Madison ? or	714.9	150.4	704.7	+10.2	231.6
S. S. Tom.	746.3	150.4	704.7	+41.6	231.6
Jeff ? Adams	694.6 ~~695.6~~	150.6	704.7	−9.9	231.8
[illegible]	769.6	154.9	704.9	+64.7	236.1
Lafayette	807.4	154.8	704.9	102.5	236.0
" both cliffs	814.8	"	704.9	109.9	"
9.1 305	707.0	154.4	706.7		
Pollard's ? or.					
at west gable	1971.6	1763	705.9	1265.7	257.5
white range.	2161.4	1780	705.9	1455.5	259.2
10.4 318	707.0	2158	708.5		~~257.0~~
Black S.D.	855.8				
Σ₂	858.4		858.6		
	857.7				
10.4 32.0	707.0		708.6		
8.7 Σ 30.3	710.0		709.3		
	863.8				
Θ₂	552.6				
8.3 29.6	707.0		705.6		
Θ₂					
8.7 30.3	706.0		705.4		
	555.3				

Gair's Inst., lower flash 152.2

10.6 304	498.0		498.7	498.5	
	152.8	60.0		152.8	
				346.0	
11.8 32.2	496.0		498.3		
Mt. Shaw		56.6			

September 7, 1885.

Station 100 yds north of House in line with
Croydon Sirius C

8 25 Coll level from Lafayette which is above horizon

Op 8.6 29.2 707.0 1310 ~~706.5~~ 705.5
780.6
779.8 } 780.0 +70.9 +75.1
779.7
8.2 28.6 707.0 ~~709.1~~ 704.9
Ov 8.3 28.6 707.0 ~~709.1~~ 704.9
775.8
775.6 } 775.6 ~~+66.5~~ +70.7
775.3
704.4 704.9
7.8 28.3 707.0 ~~709.6~~ ~~709.1~~
Ep ~~10.6 31.2~~ 707.0
10.9 31.5 707.0 708.6
639.2
638.9 638.8 −70.6
638.4
12.3 32.6 707.0 710.3
8.4 28.8 711.0 709.1
Ev 9.4 29.8 710.0 709.5
634.4
634.8 634.6 −74.8
634.7
9.4 30.0 710.0 709.6
Average 709.4
700.0 124.2

Found that rock moved and selected a level station

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				att. level		
9 00	10.6 31.2	707.0	236.6	708.2		
	Arlington	874.4	236.4	~~701.2~~	167.7	38°.1
	Bottom of Gap	910.9	276.1	702.1	208.8	77.8
	8.4 29.2	705.0	276.2	703.4		~~77.9~~ 77.7
	Carroll Gap 2d.	843.2	308.4	701.0	142.2	110.1
	Gardiner 1	913.8	309.1	701.0	212.8	110.8
	9.4 29.8	703.0	309.0	702.5		
	Canon Gap clouds?	823.7	309.9	701.0	122.9	111.6
	" "	24.3			123.3	
	Gardner, 2.	924.3	309.9	701.0	223.3	111.6
	" 3	906.2	312.1	700.9	205.3	113.8
	" 4	907.4	314.7	700.8	206.6	116.4
	" 5	885.6	315.6	700.8	184.8	117.3
	Gr Mtn a	876.6	316.1	700.8	175.8	117.8
	" b	871.4	6.6	700.8	170.6	118.3
	" c	858.0	7.7	700.8	157.2	119.4
	Gardner 6	909.2	7.7	700.8	208.4	119.4
	Gr d	843.8	9.1	700.7	143.1	120.8
	" e	870.8	319.8	700.7	170.1	121.5
	Gardner 6	908.4	317.7	700.7	207.7	119.4
	Monad rock Pk	869.8	320.3	700.7	169.1	122.0
	" .	850.3	1.0	700.7	149.6	122.7
	" highest top	845.3	322.6	700.7	144.6	124.3
	Gard 7	966.6	322.6	700.7	265.9	124.3
	Monad clouds					
	Mount	849.5	327.2	700.7	148.8	128.9
	Elmira?	846.4	327.6	700.7	145.7	129.3
	Derby ?,	845.4	329.2	700.7	144.7	130.9
	9.8 30.6	702.0	329.4	702.3		131.1
	Stin. range	902.3	323.3	700.7	201.6	124.8
	begin	914.3	323.7	700.7	213.6	125.4

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	mean +	914.6	335.3	700.7	213.9	137.0
	dist	888.8	336.6	700.7	288.1	138.3
	8.5 30.4	703.0	336.6	702.3		
	interval to get coal					
9 38.	9.4 30.4			702.9		
	Samt	867.4	339.8	700.8	166.6	141.5
	mean	947.4	340.1	700.8	246.6	141.8
	mean	1062.6	340.4	700.8	361.8	141.7
	dist 1	864.9	343.8	700.9	164.0	142.5
	" 2	878.4	345.2	700.9	177.5	146.9
	" 3	872.1	346.2	700.9	171.2	147.9
	mean	933.2	347.2	700.9	232.3	148.9
	Jup [illegible] 1	854.6	348.8	701.0	153.6	150.5
	" 6th	852.4	349.6	701.0	151.4	151.3
	"	852.8	"	701.0	151.8	
	9.4 30.3	703.0	"	702.8		
	Jup 3	870.4	350.2	701.0	169.4	151.9
	" 4	890.6	350.6	701.1	189.5	152.3
	mean	915.3	351.2	701.1	214.2	152.9
	dist	901.2	351.5	701.1	200.1	153.2
	"	887.2	352.6	701.1	186.1	154.3
	Mar.	1109.3	352.1	701.1	408.2	153.8
	2 mar	1484.3	354.9	701.2	783.1	156.6
	" " "	1622.7	6.1	701.3	921.4	157.8
	" "	1571.2	359.7	701.6	869.6	161.4
	dist	922.6	359.2	701.6	221.0	160.9
	mean	926.5	359.3	701.6	224.9	161.0
	dist	914.6	359.8	701.6	213.0	161.5
	mod dist ~~Wil mag~~	1056.6	1.3	701.7	354.9	163.0
	Wil mag	909.2	2.4	701.7	207.5	164.1
	" " or [illegible] [illegible] [illegible] [illegible]	915.7	3.6	701.8	213.9	165.3
	" " [illegible]	917.0	3.8	701.8	216.2	165.5

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10 02	Hor.	901.2	5.4	701.9	199.3	167°.1
	Oxford.	19.6 20.6	6.1	701.9	217.7 218.7	167.8
	Hill = Will Eng	34.6	6.2	701.9	231.7	167.9
	Amanda	895.6	6.8	702.0	193.6	168.5
	Hill nearer	1072.9	7.1	702.0	370.9	168.8
	10.4 31.2	703.0	7.1	704.9		16
		900.5	8.1	702.0	198.5	169.8
	↓	885.4	8.8	702.0	183.4	170.5
	Haystack d	863.4	9.6	702.1	161.3	171.3
	Hill nearer	981.2	9.8	702.1	279.1	171.5
	dist Hay 2	892.6	10.6	702.1	190.5	172.3
	s	890.6	11.0	702.1	188.5	172.7
	Con?	876.6	13.6	702.3	174.3	175.3
	beyond ? top	906.6	15.5	702.5	204.1	177.2
	Brown ?	890.6	16.3	702.5	188.1	178.0
	beyond.	870.0	16.7	702.5	167.5	178.4
	nearer in gap	911.3	16.8	702.5	208.8	178.5
	Brown range.	884.6	18.2	702.6	182.0	179.9
	beyond dist	883.6	18.3	702.6	181.0	180.0
	11.0 31.6	703.0	18.3	704.7		
	dist	867.3	20.0	702.9	154.4	181.7
	nearer	873.1	20.0	702.9	170.2	181.7
	near	935.2	20.0	702.9	232.3	181.7
	Mt. A	858.4	22.2	703.0	155.4	183.9
	beyond B	893.2	24.7	703.3	189.9	186.4
	between A & B = dist ~~[illegible]~~ [illegible]	899.2	25.7	703.3	195.9 ?	187.4
10 26	near	1042.6	26.6	703.3	339.3	188.3
	Chapin?	912.7	30.6	703.8	208.9	192.3
	dist	855.6	34.4	704.1	151.5	196.1
	dist	884.9	27.1	703.5	181.4	188.8

[illegible] 70[illegible] 885

1035 Clouds interfere in this region

	Upper? 2	924.3	31.6	703.9	220.4	193.3
	" 1	912.6	30.6	703.9	208.7	192.3
	↓	848.3	36.4	704.2	144.1	198.1
	↓	848.6	38.0	704.4	144.2	199.7
	mauve	1012.9	38.0	704.4	308.5	199.7
	lam range	1028.6	36.1	704.2	324.4	197.8
	dist	890.3	39.6	704.5	185.8	201.3
	"	883.6	40.0	704.5	179.1	201.7
	medium	912.8	39.9	704.5	208.3	201.6
	"	955.2	40.1	704.5	250.7	201.8
	"	1002.6	40.3	704.5	298.1	202.0
	Interval					
11 8±	8.5 29.4	703.0		701.6		
	Dist. cl.?	852.3	41.3	704.5	147.8	203.0
	" clear	853.4	"	704.5	148.9	"
	"	853.2	"	704.5	148.7	"
	Pikes Peak	861.2	42.2	704.7	156.5	203.9
	" " indist	872.9	42.4	704.7	168.2	204.1
	" "	871.5	"	704.7	166.8	
	dist Rugard	862.1	42.6	704.7	157.4	204.3
	9.8 30.6	705.0	42.6	705.3		
	Upper? 1	911.5	30.7	703.9	207.6	192.4
	Dist "	876.8	31.4	703.9	172.9	193.1
	near St K. range low	945.5	42.8	704.8	240.7	204.5
	↓	847.6	43.8	704.8	142.8	205.5
	∨	847.8	44.5	704.8	143.0	206.2
	St K range	845.3	45.6	704.9	140.4	207.3
	"	857.2	46.6	704.9	152.3	208.3
	"	851.8	47.2	704.9	146.9	208.9

C

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Mt-Dieb Long PPk.	862.6	29.4	703.7	158.9	191.1
Long Pk 1	62.6	32.1	704.0	158.6	193.8
" " 2	873.4	42.4	704.7	168.7	204.1
10.3 31.1	705.0	42.4	705.9	9?	
St-K range	857.6	47.2	705.0	146.6	208.9
Mid 3 marks	854.3	48.0.	705.0	149.3	209.7
St-K,	812.4.	50.1	705.1	107.3	211.8.
10.8 31.6	705.0	49.9	706.6		
St-K	812.0	50.0	705.1	106.9	211.7
" " 2 —	818.4	50.5	705.2	113.2	202.2
Kinsman	884.5	50.1	705.1	179.4	211.8
Bryant,	851.4	51.6	705.2	146.2	213.3
St-K rng.	852.9	51.8	705.2	147.7	213.5
Kins	870.0	52.8	705.3	164.7	214.5
St-K range	833.3	53.0	705.3	128.0	214.7
Kins. Bryant	900.4	54.0	705.3	196.1	215.7
St-K,	824.1	54.3	705.3	118.8	216.0
Kins	918.8	55.3	705.4	213.4	217.0
St-K.	830.3	55.6	705.4	124.9	217.3
Chilly	875.3	56.1	705.4	169.9	217.8
Pollock ?	855.4	56.8	705.4	150.0	218.5
Chilly end	895.4	57.6	705.5	189.9	219.3
11.2 32.1	705.0	57.7	707.2		
Kear. N.	881.6	99.3	706.8	174.8	261.0
9.8 30.7	708.0	94.4	708.3		
Coll level on Kins.		50.2			211.9
Eo 8.7 29.6	707.0		705.9		
	883.7				
	883.8		883.9		
	884.2				
Eo 9.3 30.0	707.0		706.5		

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	Ep	9.1	29.8	707.0	706.3
				887.3	
				887.8	887.6
				887.8	
11 46		9.0	29.6	707.0	706.1
	Gv	~~9.0~~ 11.0	~~29.7~~ ? 30.3	707.0	707.9 ~~706.1~~
				527.2	
				526.6	528.8 ~~[illegible]~~
				526.5	
		11.2 ~~8.8~~	30.4 ? ~~29.6~~	707.0	708.1 ~~705.9~~
	Gp	10.2	30.8	707.0	707.7
				530.4	
				531.1	530.9
				531.1	
		9.7	30.6	707.0	707.2
	Gv	9.8	30.6	707.0	707.3
				526.4	
				526.3	526.7
				527.4	
11 57		9.6	30.4	707.0	707.0
12 37		9.8	30.9	708.0	707.5

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2 48 Afte

C.M. Lea

Θ_v 10.9

Sept. 9, 1885
to April 1, 1897

11.0

Θ_p 11.1

10.8

Σ_p 9.6

8.3

Σ_v 8.1

8826

8826 8826

8826

8.0 28.7 707.0 36.7 41.8 4.9 704.8

301 105 31.3 704.0 705.9

Ascending 876.6 304.6 704.9 171.7 38.°2

9.6 305 707.0 707.1

Mean 884.5 303.6 704.8 179.7 37.2

dist. 891.0 305.6 704.9 186.1 39.2

n dist 868.6 307.1 705.0 163.6 40.7

Cube 1115.3 311.5 705.1 410.2 45.1

850.2 374.3? 57.9?

2 Sept. 1885

2 48 Afternoon.

Coll. Level a Kenton. Series D.

Θv 10.9 31.4 707.0 298.4 708.5

522.2

528.0 528.1

528.0

11.0 31.5 707.0 297.9 708.7

Θp 11.1 31.6 707.0 708.8

531.8

531.8 531.6

531.2

10.8 31.4 707.0 709.2

Ep 9.6 30.2 707.0 706.9

886.6

886.7 886.6

886.6

8.3 28.8 707.0 705.1

Σv 8.1 28.6 707.0 704.8

882.6

882.6 882.6

882.6

8.0 28.7 707.0 36.7 / 41.8 / 4.9 704.8

301 10.5 31.3 704.0 705.9

Alcaling 876.6 304.6 704.9 171.7 38.2°

9.6 30.5 707.0 707.1

Mean. 884.5 303.6 704.8 179.7 37.2

dist. ⌒↓ 891.0 305.6 704.9 186.1 39.2

n dist 868.6 307.1 705.0 163.6 40.7

Cube 1115.3 311.5 705.1 410.2 45.1

850.2 324.3? 57.9?

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3 11	Killington?	826.3	326.2	705.7	120.6	59°.8
	9.6 30.7	707.0	326.2	707.2		
	Pico ?	837.3	328.8	705.8	131.5	62.4
	Gr Mt	892.6	330.6	705.8	186.8	64.2
	"	871.3	332.6	705.8	165.5	66.2
	"	871.9	332.8	705.8	166.1	66.4
	"	864.9	338.9	706.1	158.8	72.5
	"	859.9	339.9	706.1	153.8	73.5
	"	870.4	343.5	706.2	164.2	77.1
	Bag Hollow	919.8	344.0	706.2	213.6	77.6
	10.0 31.0	707.0	344.3	707.7		
	3d roll	867.5	345.1	706.2	161.3	78.7
	Gr Mt	867.3	346.2	706.2	161.1	79.8
	"	843.2	355.0	706.5	136.7	88.6
	"	857.2	356.3	706.5	150.7	89.9
	"	866.2	358.8	706.5	159.7	90.4
	"	859.3	358.3	706.5	152.8	91.9
	"	854.2	358.6	706.5	147.7	92.2
	Mar roll	1214.6	0.8	706.5	508.1	94.4
	105 31.4	707.0	0.8	708.3		
	Shrewsbury?	835.2	3.6	706.6	128.6	97.2
	"	836.4	4.0	706.6	129.8	97.6
	"	831.1	6.3	706.6	124.5	99.9
	Whiteface r fl	873.3	9.8	706.6	166.7	103.4
	Camel's Hump 2	851.8	16.2	706.7	145.1	109.8
	Gardner 1	920.8	16.8	706.7	216.1	110.4
	10.2 31.3	707.0	20.8	708.0		
	Camel Hill	832.4	17.8	706.7	125.7	111.4
	Gr Mt.	865.2	25.7	706.6	158.6	119.3
	Gardner 6	916.6	25.7	706.6	210.0	119.3

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3 37	Gr Mt	851.6	27.0	706.6	145.0	120°.6
	Light " ~~[illegible]~~	878.4	27.7	706.6	171.8	121.3
	mean.	877.6	28.3	706.6	171.0	121.9
	"	853.3	29.4	706.6	146.7	123.0
	"	851.2	30.7	706.6	144.6	124.3
	Mns. 0	845.3	31.6	706.6	138.7	125.2
	top mnt.	837.4 37.6	31.9	706.6	130.8 131.0	125.5
	base mnt	848.2 47.3	32.0	706.6	141.6 140.7	125.6
	~~[illegible]~~ mnt. mean	870.6 70.6	32.0	706.6	164.0 164.0	125.6
	mnt on Mns.	838.7	37.4 2.	706.5	~~122.2~~ 127.2	126.0
	" "	835.2	32.6	706.6	128.6	126.2
	Top Mns	822.9	32.9	706.6	116.3	126.5
	"	823.4			116.8	
	"	822.8			116.2	
	10.4 · 31.3	707.0		708.1		
	Top Mns	822.4	32.9	706.5	115.9	126.5
	mnt	835.6	33.3	706.5	129.1	126.9
	Elm	856.2	35.1	706.5	149.7	128.7
	"	853.3	35.5	706.5	146.8	129.1
	Steeple	852.2	37.1	706.5	145.7	130.7
	Mean	909.2	40.8	706.5	202.7	134.4
	[illegible]	921.6	41.7	706.5	215.1	135.3
	"	929.8	42.3	706.5	223.3	135.9
	mean	922.9	43.0	706.5	216.4	136.6
	dist	873.9	47.7	706.4	167.5	141.3
	10.2 31.3	707.0	47.8	708.0		1
	dist	870.3	52.0	706.3	164.0	145.6
	Jay Pk. 1	859.5	56.8	706.2 ~~706.9~~	156.3	150.4
	" " 2 [illegible]	857.4	57.6 ~~58.6~~	706.2	151.2	151.2
4 01	10.2 31.3	707.0	57.6	708.0		~~151.2~~

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4 21	10.1 30.1	707.0	57.6	707.1		
	Ditto Mt.? Chocorua Peak	920.3	67.9	705.9	214.4	161.5°
	" "	912.8	68.6	705.9	206.9	162.2
	Don Hor	905.3	73.5	705.8	199.5	167.1
	Oxford	925.7	73.9	705.8	219.9	167.5
	9.6 30.8	707.0	74.6	707.3		
	Ammonoosuc	899.4	74.9	705.8	193.6	168.5
	Haystack	867.2	77.6	705.7	161.5	171.2
	? Cannon	879.3	81.7	705.4	173.9	175.3
	? Bunker	893.4	84.4	705.3	188.1	178.0
	dist flat	859.9	90.2	705.1	154.8	183.8
	v dist	894.3	92.8	705.0	189.3	186.4
	Unknown? 1	913.3	98.9	704.7	208.6	192.5
	dist	877.3	99.6	704.7	172.6	193.2
	Unknown? 2	924.4	99.8	704.7	219.7	193.4
	Dist	893.3	100.7	704.7	188.6	194.3
	"	861.4	101.5	704.6	156.8	195.1
	8.9 29.8	707.0	101.4	706.1		
	Dist	855.2	102.3	704.6	150.6	195.9
	Long ? Mt. ↓ ⌒	847.4	104.4	704.6	142.8	198.0
	" " ↓	847.2	106.1	704.5	142.7	199.7
		852.8	109.3	704.3	148.5	202.9
	Percy Pk	861.8	100.2	704.3	157.5	203.8
		862.6		"	158.3	
	St-K range	843.9	113.6	704.2	139.7	207.2
	St-K.	812.4	118.0	704.0	108.4	211.6
	Kinsman	883.3	118.3	704.0	179.3	211.9
	8.4 29.3	707.0	118.3	705.5	~~15~~	211.9
	St K 2	816.9	118.6	704.0	112.9	212.2
	Kinsman	887.6	120.9	703.9	183.7	214.5

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4 47	Kins. lower pk.	821.8	122.3	703.8	118.0	215.9
	Chilly	873.3	124.1	703.8	169.5	217.7
	St K orange pk.	852.9	125.0	703.8	+149.1	218.6
	m Ref.	674.3	129.6	703.5	− 29.2	223.2
	Ref.	631.7	131.0	703.5	−71.8	224.6
	9.2 30.3	707.0	131.0	706.7		
	Clad.	682.4	132.4	703.4	− 21.0	226.0
	Deinedr	661.4	133.6	703.4	− 42.0	227.2
	pk	733.1	135.4	703.3	+29.8	229.0
	S Basin	716.3	137.0	703.1	+13.2	230.6
	Adams 3?	710.9	138.0	703.1	+ 7.8	231.6
	G S Basin	743.3	138.0	703.1	+40.2	231.6
	Gurgot	766.4	142.4	703.0	63.4	236.0
	Sentinel clf	805.3	142.4	703.0	102.3	236.0
	Bridgetown Bend	775.8	144.1	702.9	72.9	237.7
	Bend	748.4	145.6	702.9	45.5	239.2
	of Flume	832.6	146.3	702.9	129.7	239.9
	Center Dome	757.8	148.8	702.8	55.0	242.4
	8.9 29.8	705.0	148.8	704.1		
5 10	8.8 29.8	"	"	704.1		
		847.3	158.6	702.4	144.9	252.2
	Carrigain	750.9	162.3	702.3	48.6	255.9
	Kearsarge & New Hamp	876.6	167.4	702.1	174.5	261.0
	low mark for Orange	1203.2	167.0	702.1	501.1	260.6
	" "	1163.3	168.0	702.1	461.2	261.6
	Chocorua	812.3	182.3	701.8	110.5	275.9
	N Twin	821.9	186.6	701.8	120.1	280.2
	"	824.6	188.2	701.8	123.0	281.8
	Pass	822.6	188.4	701.8	120.8	282.0
	9.5 30.6	703.0	188.4	703.1		

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5 24	Mirf	827.1	189.2	701.7	125.4	282.8
	Whitfen	837.6	192.6	701.7	135.9	286.2
	[illegible]	881.3		701.7	179.6	
	of Cork SD	854.2	202.9	701.7	152.5	296.5
	96 311	703.0	202.6	703.5		296.2
	Black SD 2	857.9	203.6	701.7	150.2	297.2
	Shaw.	903.2	211.0	701.8	201.4	304.6
	9.4 307	703.0	210.6	703.1		304.2
	Guelat	930.4	232.7	702.1	228.3	326.3
	9.7 312	703.0	"	703.6		
	Acenting	874.4	304.5	704.9	169.5	38.1
	10.4 31.6	705.0	"	706.3		
	Whitfen	872.6	9.8	706.5	166.1	103.4
	9.0 303	709.0	9.8	708.5		
	adie.	918.6	20.6	706.6	212.0	114.2
	"	909.3	21.3	706.6	202.7	114.9
	"	906.9	21.8	706.6	200.3	115.4
	102 318	707.0	22.0	708.3		
	106 320	707.0	33.0	708.7		
	Mana hf	821.5	33.0	706.6	114.9	126.6
		821.8	31.9	706.6	115.2	126.5
	102 316	707.0	31.4	708.2		
	Whitfen	873.2	9.1	706.6	166.6	103.5
	"	73.2			166.6	
	"	72.6			167.0	
	96 315	707.0		707.7		
	adie	891.7	10.4	706.6	185.1	104.0
	adie	869.4	11.3	706.6	162.8	104.9

September 7c 1885.

		10.0	31.6	707.0		708.1
	Let Mant.			821.8		
				820.8		820.3
				821.3		
		10.3	32.0	707.0		708.5
		10.3	31.8	707.0		.708.4
				825.3		
				824.8		824.9
				824.6		
		9.6	31.4	707.0		707.7
	6h	9.5	31.3	701.0		701.5
				586.6		
				87.2		587.0
				87.2		
		10.3	31.6	703.0		704.9
	6h	10.3	31.8	9	+1.4	(704.4)
				90.9		
				91.1		591.1
				91.4		
7.00±		9.8	31.6	703.0		703.9

September 8 1885

On Sept. 6. the air was unusually clear; wind north west and cold. Overcast most of the morning. Horizon cloudy to east becoming clear to leeward

Sept. 7. Very clear in early morning becoming less so during morning. Moderately cold wind from south.

Sept. 8. Hazy becoming thicker during morning. In afternoon cloudy or thunderstorm with rain.

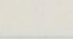
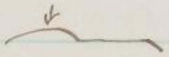
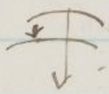
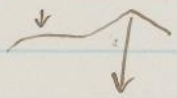
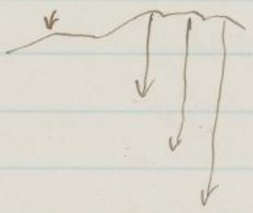
Sept. 9. Cloudy on summit

follows page 27

~~Lone Peak. Summit~~	~~1002.6~~	~~296.6~~	~~705.8~~	~~296.8~~	
" " " Summit	931.1	303.8	706.0	225.1	285.8
Summit	887.1	304.3	706.0	181.1	286.3
Base rock	909.6				
Rock	915.0	302.3	706.0	209.0	284.3
Flat point	913.6	305.7	706.0	207.6	287.7
	971.4	308.6	706.1	265.3	290.6
Welch ?	1181.4	314.3	706.2	475.2	296.3
Black S.O.	859.3	314.3	706.2	153.1	296.3
10.5 30.6	707.0		707.7		

Sep. 11. 1885.

Copy from Sketch Book pp 82 83

			G.	Alt. in scale	
9.6 30.2	707.0	260.6	706.9		
Carter Dome	761.4	260.6	705.1	56.3	242°.6
Kearsarge N.	880.8	279.0	705.5	175.3	261.0
9.6 29.7	707.0	"	706.5		
Flume	836.3	257.8	705.1	131.2	239.8
	1039.3	261.8	705.1	334.2	243.8
	955.4	262.6	705.1	250.3	244.6
v	1008.8	265.6	705.2	303.6	247.6
Top bare place	1077.6	265.4	705.2	372.4	247.4
End Ridge	1131.2	267.3	705.2	426.0	249.3
	1128.6	268.8	705.2	423.4	250.8
Dome peak	1239.2	270.4	705.3	533.9	252.4
	1055.6	274.6	705.4	350.2	256.6
	943.6	274.5	705.4	238.2	256.5
Ridge	1073.6	275.5	705.4	368.2	257.5
	1207.6	278.5	705.5	502.1	260.5
	1166.5	279.5	705.5	461.0	261.5
Kearsarge N.	880.6	279.2	705.5	175.1	261.2
10.4 30.2	707.0	270.0	707.4		
	1218.0	280.4	705.5	512.5	262.4
	1221.8	281.6	705.5	516.3	263.6
	1279.8	282.3	705.5	574.3	264.3
	1183.4	283.2	705.6	477.8	265.2
	1181.3	283.6	705.6	475.7	265.6
	1191.6	284.3	705.6	486.0	266.3
	957.6	286.4	705.6	252.0	268.4
End ridge	1159.4	288.4	705.7	453.7	270.4
Osceola	816.6	293.8	705.8	110.8	275.8
10.6 29.8	707.0	293.6	707.3		
Low peak	1002.6	296.6	705.8	296.8	278.6

September 10. 1885.
S. Peak, Mocklank Silus E.
Level, Ev

10.9	30.4	7070	135.0	707.9
11.1	30.4		180.0	708.0
10.4	30.0		225.0	707.3
9.7	29.4		270.0	706.4
9.6	29.4		315.0	706.3
9.7	29.3		0.0	706.3
10.2	29.8		45.0	707.0
10.8	30.3		90.0	707.7
11.4	30.8		135.0	708.5

Ev.

9.8	29.6	707.0	331.5	706.6	
		490.6			
		490.5		490.5	216.3
		490.3			
10.1	29.8	707.0		706.9	
Ep 10.2	29.8	707.0		707.0	
		494.3			
		94.5		494.4 7068	212.4
		94.3			
Op 9.8	29.7	707.0		706.7	
Op 10.0	29.9	7100		709.9	
		925.3			
		25.3		44 925.3 7094	
		25.2			
9.2	29.1	7100		708.8	

Sept. 10. 1885

Go = -.11

Go	9.4	29.1	710.0	709.0	
			921.0		
			920.9	920.0 8.6	
			921.2		
	8.8	28.7	710.0	708.3	
Summit Cabin near house ground			1403.2	166.3	707.0 −696.2 above
Station at ground			1423.6	167.0	" −716.6
Bench				168.8	"
	10.4	30.3	709.0	709.5	
Sandwich 1			579.8	70.7	706.1 +186.3 below
" 2			509.6	71.7	" 196.5
			521.0	93.7	" 185.1
			531.6	96.9	" 174.5
Whiteface			519.7	65.2	" 186.4
	8.9	29.2	708.0	64.4	706.6
1 Ridge				189.0	
Owl's Head approx				85.0	
Eo			707.0		

Further observations prevented by clouds, (remaining from the storm) covering lower summit and scarcely leaving Moosilauke clear.

~~[illegible]~~

1 30 Station N of House. Images wavy. Seem rather higher & clearer.

Op

9.5 29.7 710.0 315.7 709.5 Later Condition of air better.

531.4

531.3 531.3

531.3

9.2 29.3 710.0 709.0

Oo 9.4 29.7 710.0 709.4

527.6

527.3 527.5

527.5

8.8 29.4 710.0 708.8

Ep ~~9.8 30.4~~ 707.0 706.9

10.2 29.6 ? 888.3

887.8 887.9

887.6

8.7 29.4 707.0 705.7

Eo 8.5 29.0 707.0 705.3

884.1

54

883.6 883.7

883.4

1 43 8.6 29.1 707.0 705.5

9.8 30.6 0.0 707.3

9.7 30.3 45.0 707.0

9.4 29.8 90.0 706.5

9.3 29.8 135.0 706.4

9.2 29.6 180.0 706.2

9.7 30.3 225.0 707.0

10.5 31.2 270.0 708.1

10.8 31.3 315.0 708.4

10.6 31.1 0.0 708.1

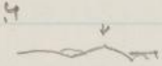
A

September 10, 1885.

Alt. corr. for coll.

9.8 30.2	707.0	154.6	707.0		230.6
I. Tenis	718.3	154.6	705.4	+12.9	230.6
Pk. White Mt. Road	713.3	155.6	705.4	+7.9	231.6
S.S. Tenis.	744.6	155.6	705.4	+39.2	231.6
Adams 2?	693.4	155.9	705.4	−12 ~~8.80~~	231.9
Adams.	677.2	156.6	705.4	−28.2	232.6
Jeff.	678.3	156.8	705.4	−27.1	232.8
Clay min	690.4	158.9	705.4	−15.0	234.9
Clay	691.6	159.3	705.4	−13.8	235.3
Horn on Mt W. RR.	671.6	160.2	705.3	−33.7	236.2
Gryph	768.0	160.1	705.3	+62.7	236.1
Lake. up	806.4	160.2	705.3	+101.1	236.2
2d Horn Mt W RR.	665.3	160.3	705.3	−40.0	236.3
Lower Mt W.	619.6	161.0	705.3	−85.7	237.0
Gr Mt W.	620.7	161.0	705.3	−84.6	237.0
Boott's Spur calls base of Dome	689.3	162.5	705.3	−16.0 −16.0	238.5
Bond ?	754.9	162.4	705.3	+49.6	238.4
Up Slide	827.4	162.6	705.3	+122.1	238.6
Bond	753.3	163.2	705.3	+48.0	239.2
Monroe	692.3	163.3	705.3	−13.0	239.3
Mann	836.3	163.9	705.3	+131.0	239.9
Field ?	811.4	164.7	705.3	+106.1	240.7
O. Bond	823.2	164.6	705.3	117.9	240.6
Pk. Mill way	762.4	165.4	705.3	57.1	241.4
Milly.	801.4	165.6	705.3	96.1	241.6
Center	773.6	165.9	705.3	68.3	241.9
	888.4	6.1	705.3	183.1	242.1
Center Dome	760.4	6.1	705.3	55.1	242.1
		6.3	705.3		242.3
9.2 29.6	707.0	166.7	706.2		242.7
~~Hus.~~ 8.9 29.4	707.0	135.7	706.9		211.7
Kine	884.2	138.6 ~~884.2~~	705.4	178.8	211.6

September 10, 1885

9.5 29.8	7070	49.6	706.5		
Mt Mans. Nose	824.6	49.6	705.0	129.6	125.6
~~Nose~~ " Chin.	820.2	50.6	705.0	115.2	126.6
Camels Hump	830.8	35.5	704.8	126.0	111.5
Gard 2	929.7	35.5	704.8	224.9	111.5
9.3 29.4	7070	15.3	706.1		
	851.6	16.2	704.7	146.9	92.2
Adir. flat top ↓	857.3	16.7	"	152.4	92.7
	57.6		"	152.9	
	863.9	17.6	"	159.2	93.6
	64.2		"	159.5	
Marcy	855.8	17.8	"	151.1	93.8
	55.6		"	150.9	
Mt.	865.2	18.3	"	160.5	94.3
	65.6		"	160.9	
	866.4	18.6	"	161.7	94.6
	66.3		"	161.6	
	867.2	19.1	"	162.5	95.1
	67.2		"	162.5	
	881.0	19.3	"	176.3	95.3
	881.4		"	176.7	
	864.8	19.8	"	160.1	95.8
	65.6		"	160.9	
	59.8	20.2	"	155.1	96.2
	59.6		"	154.9	
Gr Mt.	833.3	21.1	704.7	128.6	97.1
9.6 29.7	7070	21.1	706.5		
~~Whiteface~~ 9.3 29.4	7070	27.6	706.1		
Whiteface	870.8	27.6	704.8	166.0	103.6
	70.8		"	166.0	

September 10, 1885.

	Adir. Rge.	889.5	28.0	704.8	184.7	104.0
		906		"	185.8	
	Adir	906.4	29.6	"	201.6	105.6
		906.9		"	202.1	
2 35	Camels Hump 2	850.4	33.6	"	145.6	109.6
	" 1	831.4	35.6	"	126.6	111.6
	Gardner 7	928.8	"	"	224.0	
	9.8 29.7	707.0	35.4	706.7		111.4
	Adir	917.1	38.3	704.9	212.2	114.3
		16.8		"	211.9	
	"	907.3	39.1	"	202.4	115.1
		07.5		"	202.6	
	"	903.8 5.6 5.6	39.6	"	198.9 200.7 200.7	115.6
	Gardner 5	891.2	41.0	"	186.3	117.0
	Bu Mor	849.6	44.6	"	144.7	120.6
	Nat. Mans. Nose	835.6	49.6	"	130.7	125.6
	Nose Mans. Chin	821.2	50.6	"	116.3	126.6
	9.9 29.8	707.0	50.6	706.8		
	Elmore	852.6	53.2	705.0	147.6	129.2
	Sterling	851.2	54.8	"	146.2	130.8
		896.8	62.6	"	191.8	138.6
	do	872.6	65.4	705.1	167.5	141.4
	Ph.	869.3	69.6	"	164.2	145.6
	Jay 2	859.4	74.6	"	154.3	150.6
	" 1	856.4	75.3	"	151.3	151.3
	10.1 30.2	707.0	"	707.2		
	Rounded top.	890.6	78.3	705.1	185.5	154.3
		908.8	82.3	705.2	203.6	158.3
	Owls Head	919.4	85.6	"	214.2	161.6
		912.8	86.3	"	207.6	162.3
2 59	10.4 30.3	707.0	"	707.5		

September 10, 1885,

	Annan.	904.4	90.8	705.2	199.2	166.8
	Orford	924.6	91.6	"	219.4	167.6
	"	924.6		"	219.4	
	Har.	899.4	92.4	"	194.2	168.4
	William Hay.	867.6	95.4	705.3	162.3	171.4
	Unonice?	879.8	99.3	"	174.5	175.3
	"	893.5	101.8	"	188.2	177.8
	Dist. beyond	887.3	103.8	"	182.0	179.8
	" " top	870.4	105.6	"	165.1	181.6
	marr. a	876.4	"	"	171.1	
	marr.	938.6	105.6	"	235.3	181.6
	same ridge as a	861.6	107.7	"	156.3	183.7
	dist	896.9	110.4	"	191.6	186.4
	Con?	915.1	116.3	705.4	209.[illegible]	192.3
	Dist	879.8	117.0	"	174.4	193.0
	9.5 303	707.0	"	706.9		
	Brown?	927.6	117.4	705.4	222.2	193.4
		857.4	120.1	"	152.0	196.1
		849.8	122.2	"	144.4	198.2
		849.3	123.6	"	143.9	199.6
		855.8	126.9	"	150.4	202.9
	Percy Pk.	864.7	127.8	"	159.3	203.8
	"	813.8	135.6	"	108.4	211.6
	Kins	886.0	135.8	"	180.6	211.8
3 17	10.0 307	707.0	135.8	707.5		
3 30	9.7 303	707.0	135.8	707.0		
	Kins City	869.8	138.6	705.4	164.4	214.6
	St. King	823.6	139.9	"	118.2	215.9
	N Leaf	675.4	147.2	"	-30.0	223.2
	Leaf	633.5	148.6	"	-71.9	224.6

4

17. September 20, 1885.

Lan	664.5	151.0	705.4	-40.9	227.0
10.4 307	707.0	"	707.7		
S. Twin	718.4	154.6	705.4	13.0	230.6
Mad.?	713.4	155.6	"	8.0	231.6
Adams 2	693.6	156.0	"	-11.8	232.0
Adams	678.2	156.4	"	-27.2	232.4
Jeff.	678.3	156.6	"	-27.1	232.6
Clay	690.8	158.8	"	-14.6	234.8
"	692.6	159.2	"	-12.8	235.2
Home Mt. W. Ble	673.6	160.1	"	-31.8	236.1
Guyot	768.6	160.0	"	+63.2	236.0
Bait.	806.6	"	"	+101.2	
~~Ch~~ Eans Mt. W.	620.4	160.8	705.3	-84.9	236.8
gr. Mt. W.	623.4	"	"	-81.9	
Monroe?	700.2	161.7	"	-5.1	237.7
Bond 2. [illegible]	755.6	162.4	"	+50.3	238.4
Bond 1	751.0	163.1	"	+45.7	239.1
Mem	835.9	163.9	"	+130.6	239.9
S. Bond.	822.6	164.9	"	+117.3	240.9
Anlid?	813.6	164.8	"	+108.3	240.8
Mt. W. range	755.5	164.8	"	+50.2	240.8
" "	763.6	165.3	"	+58.3	241.3
Willey	801.8	165.6	"	+96.5	241.6
Carter	773.6	165.9	"	+68.3	241.9
Carter Dome	760.6	166.4	"	55.3	242.4
9.5 301.0	707.0	"	706.7		
Top Slide on Bond.	827.6	126.9	705.4	122.2	202.9
" " " Leit.	997.8	160.4	705.3	192.5	236.4
" " " Flume	982.4	163.3	"	177.1	239.3
3 54	1048.3	162.8	"	343.0	238.8

September 10, 1885.

	Top Slide Illum	947.8	164.6	705.3	242.5	240.6
	B T	1001.0	164.6	"	295.7	240.6
	Top Slide	1007.3	168.8	"	302.0	244.8
	Top Slide +	1049.6	169.4	"	344.3	245.4
	Nancy ?	850.2	176.2	"	144.9	252.2
	Carrigain	753.4	179.7	705.2	48.2	255.7
	9.6 30.3	707.0	"	706.9		
	Kearsarge	880.4	185.0	705.2	175.2	261.0
	N. Moosl.	900.2	191.3	"	195.0	267.3
	Osceola	816.0	200.1	705.1	110.9	276.1
	N. Trip.	825.6	204.2	705.0	120.6	280.2
	Trip.	828.6	205.8	"	123.6	281.8
	Peak	827.3	205.9	"	122.3	281.9
	Trip	831.6	206.7	"	126.6	282.7
	Whiteface	841.6	210.2	"	136.6	286.2
	Tecumseh	885.3	"	"	180.3	286.2
	Mt. on Tec.?	912.8	211.4	"	207.8	287.4
	[illegible]	127	212.1	"	207.7	288.1
	[illegible]	943.2	213.6	"	238.2	289.6
		978.4	214.6	"	273.4	290.6
		1001.6	215.8	"	296.6	291.8
		1016.8	217.2	704.9	311.9	293.2
	Green Mt.	959.8	217.8	"	254.9	293.8
	Black S.D.	858.3	220.4	"	153.4	296.4
	"	856.4	221.1	"	151.5	297.1
	"	927.4	224.2	"	222.5	300.2
	Ossipee to Shore	906.3	228.6	"	201.4	304.6
4 14	9.4 29.6	707.0	228.7	706.3		
4 31	9.4 29.8			706.5		
	Some pk Ossipee	972.8	231.1	704.8	269.0	307.1

September 10, 1885.

Hat? cut of 3.	974.6	233.6	704.8	269.8	309.6
Mts	971.3	239.1	"	266.5	315.1
	968.3	245.0	"	263.5	321.0
	958.8	247.0	704.7	254.1	323.0
[illegible]	933.6	250.4	"	228.9	326.4
	955.6	259.7	704.6	251.0	335.9
9.4 29.6	707.0	259.9	706.3		
8.7 29.1	707.0	322.1	705.5		
Ascutney	875.5	322.1	704.4	171.1	38.1 ~~398.1~~
Saddle 2d	890.8	323.1	"	186.4	39.1 ~~399.1~~
[illegible] 1st	867.6	324.6	"	163.2	40.6
Tom?	895.6	319.7	"	191.2	35.7
	94.9	"	"	190.5	
Moose Hill	983.4	320.8	"	279.0	36.8
Cuba Hill	1114.8	328.8	"	410.4	44.8
Dist	882.9	329.6	704.5	178.4	45.6
Dell	873.8	332.0	"	169.3	48.0
beyond	887.2	332.5	"	182.7	48.5
	865.1	334.8	"	160.6	50.8
8.4 29.0	707.0	330.3	705.3		46.3
Killington	823.5	343.7	704.5	119.0	59.7
Pico	835.4	346.3	"	130.9	62.3
dist Mt	898.3	347.6	"	193.8	63.6
Gr Mts	863.5	358.6	704.6	158.9	72.6
Bolton Gap	916.3	361.4	"	211.7	77.4
8.8 ^{2}9.6	707.0	1.6	705.9		
8.8 ^{2}9.6	707.0	16.3	705.9		
Gr Mt Green Mt	854.3	16.3	704.7	146.6	92.3
Adir	856.8	16.9	"	152.1	92.9
	56.7		"	152.0	"

September 20, 1885.

		866.6	~~18~~ 17.3	704.7	161.9	93.3
		66.8		"	162.1	"
		863.6	~~18~~ 17.7	"	158.9	93.7
		63.3		"	158.6	"
	Marcy.	855.3	18.0	"	150.6	94.0
		855.3		"	150.6	"
		864.6	18.2	"	159.9	94.2
		64.9		"	160.2	"
	⌒	865.8	18.6	"	161.1	94.6
		65.8		"	161.1	"
	⌒	866.6	19.0	"	161.9	95.0
		66.4		"	161.7	"
	⌒	879.6	19.3	"	174.9	95.3
		79.7		"	175.0	"
	⌒	864.4	19.9	"	159.7	95.9
		64.2		"	159.5	"
	⌒	859.8	20.2	"	155.1	96.2
		59.4		"	154.7	"
	Gr Mer.	832.6	21.0	"	127.9	97.0
5 12	8.6 29.8	707.0	"	705.9		"
	Gr. Mt.	828.4	24.0	704.7	123.7	100.0
	Whiteface	870.2	27.4	704.8	165.4	103.4
		69.8		"	165.0	"
	Cadiz.	889.5	28.1	"	184.7	104.1
		89.3		"	184.5	"
	Cadiz	905.3	29.7	"	200.5	105.7
		05.6		"	200.8	"
	87 29.9	707.0	30.0	706.1		106.0
	Camels Hump	830.4	35.5	704.8	125.6	111.5
	Gardner 2	929.1	35.5	"	224.3	111.5

1

September 20. 1885.

	Aolic Mid of ³ Boo.		905.8	39.2	704.9	200.9	115.2
	8.3	29.3	707.0	0.0	705.4		
	9.6	29.6		45.0	706.5		
	8.9	30.3		90.0	706.5		
	9.0	30.3		135.0	706.5		
	8.8	30.0		180.0	706.2		
	8.8	30.0		225.0	706.2		
	8.7	30.0		270.0	706.1		
	8.7	30.0		315.0	706.1		
5 24	8.8	29.8		0.0	706.1		
	7.9	29.5		0.0	705.3		
	Whiteface		870.3	27.5	704.8	165.5	103.5
	Ca. Hump		830.3	35.6	"	125.5	111.6
			848.4	44.6	704.9	143.5	120.6
	Mt Mansfield Mens Lake Mose		834.3	49.6	"	129.4	125.6
			843.2		"	138.3	...
	~~Mt~~ Mans Chin		819.6	50.6	705.0	114.6	126.6
	Sterling		850.9	53.1	"	145.9	129.1
	Elmore		849.7	54.8	"	144.7	130.8
			867.7	69.6	705.[illegible]	162.6	145.6
	Jay Pk.		850.8	75.3	"	145.7	151.3
	Owl's Head		911.8	86.7	705.2	206.6	162.2
	Ascutney		924.4	91.6	"	219.2	167.6
	Her.		898.4	92.6	"	193.2	168.6
	Percy Pk.		863.3	127.8	705.4	157.9	203.8
	Kinsman		884.3	135.9	~~7~~ "	178.9	211.9
	Gr. K.		823.4	140.0	"	118.0	216.0
	Lafayette wing. ~~Haystack~~ ~~Lincoln~~ ?		864.6	151.1	"	159.2	227.1
	Wash gr.		624.0	161.0	705.3	−81.3 ~~187~~	237.0
	Carrig.		753.4	179.8	705.2+48.2		255.8

September 10, 1885.

Kew S.		880.0	185.0	705.2	174.8	261.0
Black,		856.5	220.4	704.9	151.6	296.4
Green		905.4	228.6	"	200.5	304.6
[illegible]		832.4	250.4	704.7	127.7	326.4
Cobalt		874.4	327.1	704.4	170.0	38.1
Grey		866.8	324.6	"	162.4	40.6
Kell		822.6	343.8	704.5	118.1	59.8
Whitfield		869.6	27.6	704.8	164.8	103.6
Murray		854.3	17.9	704.7	149.6	93.9
Murray [illegible]		54.6	"	"	149.9	"
		834.3	49.5	704.9	129.4	125.5
9.3	31.1	705.0	0.0	705.3		
9.8	31.6	705.0	45.0	705.9		
10.4	32.3	705.0	90.0	707.5		
9.4	312	707.0	135.0	707.4		
9.0	307	707.0	180.0	706.8		
8.6	303	707.0	225.0	706.3		
8.2	299	707.0	270.0	705.7		
8.3	299	707.0	315.0	705.8		
8.3	30.1	707.0	0.0	705.9		
8.6	30.4	707.0	135.6	706.3		
Kew		883.8				
..		883.4		883.6		
		883.5				
9.2	31.0	707.0		707.1		

H

Sept. 12 1885

Moore Mix Mansfield. H Allum Lead 7063 – 21
7042

2 50 Coll. ~~[illegible]~~

Op			7090	311.6	
			7868		
			7867		7867
			9865		
Op	9.5	28.6	709.0		707.7
Ov	9.1	28.4	7090		7073
			781.8		
			781.8		781.7 ~~717~~
			7814		
	9.3	28.4	7090		707.5
Ep	9.2	28.6	709.0		7075
			6553		
			6349		6350
			634.9		
Ep	10.2	29.6	7090		7089
Eo	10.4	29.7	709.0		709.1
			629.6		
			29.5		629.6
			297		709.6
	10.6	30.3	709.0		~~7099~~
	11.4	30.6	709.0	0.0	710.3
	11.3	30.6	711.0	45.0	712.3
	10.6	30.1	711.0	90.0	711.5
	8.4	27.9	711.0	135.0	708.5
	8.9	28.3	707.0	180.0	705.8
				225.0	

Relevelled –

September 12 1885.
Nose of Mt. Mansfield.

3.07

			~~0 0~~ a	Sep. 12 1885		a+58.4 az
12.8.	32.3	707.0	0.0	710.5		
11.8	31.3	707.0	45.0	709.1		
11.8	30.4	707.0	90.0	708.5		
9.8.	28.4	707.0	135.0	707.1		
9.6.	29.0	707.0	180.0	706.1		
10.2	29.7	707.0	225.0	706.9		
11.0	30.4	707.0	270.0	707.9		
12.1	31.6	707.0	315.0	709.5		
12.5	32.1	707.0	360.0	710.1		
Cairn on Chin.		too high -	119.6		-	178.0
Highest point		too high ~~123.7~~	123.7 ~~119.6~~		-	1821
Lower point.		621.3	131.6		-82.9	190.0
Distant.	4	880.8	139.5		176.6	197.9
Distant.	4	830.6	141.2		126.4	199.6
Distant.	3	833.8	141.3		129.6	1997
Distant	3	852.3	142.1		148.1	200.5
Distant	4	856.6	143.4		152.4	201.8
Distant	4	809.5	147.0		105.3	205.4
9.4	29.2	707.0	146.9	706.1		
Distant	4	776.9	148.9		472.7	207.3
Distant	4	770.3	149.6		466.1	208.0
Distant	4	843.2	152.9		139.0	211.3
Distant	4	846.1	153.4		141.9	211.8
Distant	3	981.4	152.9		277.2	211.3
Sterling Range		1084.1	144.7		379.9	203.1
"	"	1102.7	145.9		398.5	204.3
Distant	4	855.6	153.9		151.4	212.3
"	"	835.4	155.7		131.2	214.1
"	"	839.3	158.8		135.1	217.2

H

Sep. 12. 1885.

3.28	Distant 4.	828.2	159.6	124.0	218°.0
	" 5	920.3	161.0	216.1	219.4
	" 5	918.9	161.5	214.7	219.9
	Sterling 2	1004.5	163.7	300.3	222.1
	Distant 1	1553.7	165.2	849.5	223.6
	Sterling top.	895.4	166.2	191.2	224.6
	Distant . 4	912.1 .	168.1	207.9	226.5
	" . 3 Nub.	922.7	169.3	218.5	227.7
	" " Pk.	953.8	169.6	249.6	228.0
	" " flat.	924.4	171.0	220.2	229.4
	8.6. 28.4	707.0	172.4		
	Sterling 3	998.2	171.2	294.0	229.6
	Distant 3.	898.3	173.0	294.1	231.4
	Distant 5 very dim.	880.3	173.4	176.1	231.8
		880.7		176.5	
	Distant 4 flat	873.0	174.1	168.8	232.5
	Distant 3.	907.6	174.1	203.4	232.5
	Distant 5	895.2	175.7	191.0	234.1
	" " 3	964.8	175.8	260.6	234.2
	" " "	971.3	176.7	267.1	235.1
	Sterling.	1078.5	177.7	374.3	236.1
	Distant 4	875.8	177.5	171.6	235.9
	" 5 flat.	861.4	179.1	157.2	237.5
	Distant 4	859.4	182.0	155.2	240.4
	" "	847.9	182.6	143.7	241.0
	" "	828.4	183.6	124.2	242.0
	" 3	844.3	188.6	140.1	247.0
	" "	819.3	190.1	115.1	248.5
	8.5 28.2.	707.0	190.4.	704.8	248.8
3.50	Tops of slide.	887.2	190.2,	183.0	248.6

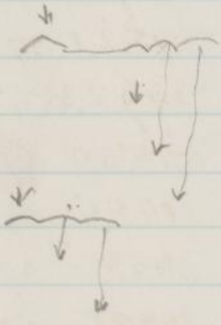
Sep. 12. 1885 –

3 50	dist.	4	854.6	192.0	150.4	250°.4
	"		862.4	193.1	158.2	251.5
	"	5	845.4	194.5	141.2	252.9
	"	5	824.3	196.3	120.1	254.7
	"	4	838.3	197.0	134.1	255.4
	"	5 –	829.7	197.4	125.5	255.8
	"	5	825.6	199.0	121.4	257.4
		5 –	844.2	200.6	140.0	259.0
		4 ✓	818.8	201.1	114.6	259.5
		4 wt.	817.2	201.5	113.0	259.9
	"	5	830.4	203.3	126.2	261.7
	"	5	829.7	203.7	125.5	262.1
	"	4	834.6	204.2	130.4	~~266.6~~ 262.6
	"	4	824.3	208.1	120.1	266.5
	Dalli?		861.3	208.3	157.1	266.7
	"		867.3	207.4	163.1	265.8
		5	835.7	209.6	131.0	268.0
		4	853.5	209.7	149.3	268.1
		3	873.4	210.1	169.2	268.5
		4	853.8	210.5	149.6	268.9
		5	823.8	210.6	119.6	269.0
		5	831.6	211.3 }	127.4	269.7
		5	829.2	211.3	125.0	269.7
		4	853.6	211.3	149.4	269.7
		3	881.4	211.3	167.2	269.7
		5	831.2	211.6	127.0	270.0
		5	819.6	212.3	115.4	270.7
		5	817.6	212.6	113.4	271.0
4 10	8.6 28.4		707.0	212.6	705.0	–

Sep 12. 1885.

Dith	5	807.3	213.0	103.1	271°.4 <
	5	810.3	213.2	106.1	271.6
Bombach	2	867.3	213.4	163.1	271.8
"	1	865.4	213.6	161.2	272.0
· dist	3	881.4	213.7	177.2	272.1
	5	829.6	214.0	125.4	272.4
↓	5	831.2	214.3	127.0	272.7
↓	5	830.4	214.6	126.2	273.0
	3	885.8	214.9	181.6	273.3 ~~240.0~~ <
	5	821.2	215.5	117.0	273.9
	4	856.0	215.6	151.8	274.0
	5	829.3	216.0	125.1	274.4
	5	821.7	216.6	117.5	275.0
	5	813.6	217.2	109.4	275.6
	3	891.8	217.4	187.6	275.8
	5	836.3	217.6	132.1	276.0
	5	832.2	217.9	128.0	276.3
	3 neb	901.3	217.9	197.1	276.3
	3	892.0	218.6	187.8	277.0
	5	856.3	218.6	152.1	277.0
	4 —	896.5	218.8	192.3	277.2
	5	857.2	219.1	153.0	277.5
	5	849.6	219.6	145.4	278.0
8.7	28.4	707.0	220.4	705.1	278.8
	3	894.3	220.3	190.1	278.7
	5	836.7	220.4	132.5	278.8
	4 fa	891.4	221.0	187.2	279.4
	3	896.4	221.4	192.2	279.8
	2 dk.	951.4	222.6	247.2	281.0 <
9.1	28.4	707.0	224.0	705.3	282.5 <

Sep. 12, 1885.

4 33	Mad. 1	780.6	221.9	76.4	280°.3
		79.9		75.7	
	.. 2	831.6	221.2	127.4	279.6
		31.4		127.2	
	Adams 2	777.3	222.3	73.1	280.7
		76.6		72.4	
	Adams 1	762.6	222.4	58.4	280.8
		763.1		58.9	
	Jeff	763.5	223.4	59.3	281.8
		62.9		58.7	
	Wash	745.2	225.0	41.0	283.4
		44.6		40.4	
		44.6		40.4	
4 42	9.4 28.9	707.0	"	705.9	
	Mon. ?	726.5	225.9	72.3	284.3
	Pleasant	796.8	227.0	92.6	285.4
		796.9		92.7	
	Frank. ?	812.8	227.8	108.6	286.2
		812.7		108.5	
		823.4	229.2	119.2	287.6
		826.3	229.4	122.1	287.8
		823.4	229.5	119.2	287.9
		816.7	229.6	112.5	288.0
		812.7	229.6	108.5	288.2
		810.4	229.9	106.2	288.3
		806.9	230.1	102.7	288.5
		813.0	230.4	108.8	288.8 <
		810.4	230.6	106.2	289.0
	In hori	779.4	231.5	75.2	289.9
	9.4 29.1	707.0	231.6	706.0	

Sep. 12. 1885

5 01	Moosilauke.				
	9.4 28.8	707.0	247.4	705.8	305°.8
	Moos. great Hole	764.4		60.2	
		65.3		61.1	
		64.2		60.0	
	9.5 29.3	707.0	247.4.	706.2	
	9.5 29.4	707.0	.235.4	706.3	293.8
	N Twin ?	779.3	231.5	75.1	289.9 ·
	S Twin	774.6	232.4	70.4	290.8 ·
	S S Twin	782.6	232.6	78.4	291.0 .
	Haystack?	786.4	233.3	82.2	291.7 ·
	Bald	788.3	233.8	84.1	292.2.
	" ? ?	786.8	233.9	82.6	292.3 ·
5 13	S Bald	793.3	234.0	89.1	292.4 ·
	Ridge	793.4	234.2.	89.2	292.6 ·
	N. Lafayette.	761.3.	235.1	57.1	293.5 ·
	" "	752.4	235.4	48.2	293.8.
	9.6. 29.3	707.0	235.4		
	Distance 3	917.4	230.1	213.2	288.5 ·
	" 2	1033.4	230.2	329.2	288.6 ·
	" 3	884.8	231.3	180.6	289.7 ·
	" 3	899.6	232.4	195.4	290.8 ·
	" " flat,	887.6	233.3	183.4	291.7 ·
	" 4	886.4	234.9	182.2	293.3 ·
	" 3	894.4	235.2	190.2	293.6 ·
	" "	899.3	296.2	195.1 (? 236.2)	294.6 · ~~3546~~
	" 4	907.3	237.4	203.1	295.8 ·
	" 3	906.4	237.7	202.2	296.1 ·
	" 3	931.1	238.6	226.9	297.0
	" 2	895.6	239.7	191.4	298.1

Sep. 12. 1885 –

5.22	9.6.	29.6	707.0	239.6	706.5	298.0
	Lafayette.		752.8	235.4	48.6	293.8.
	Tad		764.3	235.8	60.1	294.2.
	Lincoln.		760.4	236.1	56.2	294.5.
	Liberty		789.6	237.7	85.4	296.1
	Beyond?		796.8	237.8	92.6	296.2
	"		810.2	238.3	106.0	296.7
	Flume.		789.8	238.6	85.6	297.0
	Int.		786.3	239.6	82.1	298.0
	Distance 5		832.2	240.6.	128.0	299.0
	"		816.3	?1 246.1	112.1	299.5 ~~304.5~~
	"		813.1	241.4.	108.9	299.8
	" "		808.9	241.6	104.7	300.0
	" "		826.8	242.4	122.6	300.8
	" "		823.4	243.6	119.2	302.0
	" "		841.3	244.6	137.1	303.0
	" 2d summit.		831.4	245.3	127.2	303.7
	Moosilauke. 4.		784.6	246.3	80.4	304.7
	" "	3	778.4	246.6	74.2	305.0
	9.6.	29.6	707.0	247.4	706.5	
	Moosilauke 1		765.3	247.4	61.1	305.8
	" "		764.7		60.5	
	S. " "		777.3	248.4	73.1	306.8
	" "	5	850.1	249.9	145.9	308.3
	" "	6	839.4	251.2	135.2	309.6
	9.7	29.6	707.0	251.2	706.5	
	Gardner		895.6	239.6	191.4	298.0.
	Distance 4		886.4	242.8	182.2	301.2
	" "	3	923.0	243.1	219.8	301.5.

H

Sep. 12 1885

5.35	Gardner	850.4	245.7		146.2 304.1.
	Distance 4	887.8	258.6		183.6 317.0.
	" " "	869.4	250.4		165.2 308.8.
	Moosilauke	765.0	247.3		60.8 305.7.
	9.8 29.6	707.0	247.4	706.6	
	9.8 29.8	707.0.	235.4	706.7	
	Lafayette	752.8	235.4		48.6 293.8.
	Washington? JUL46	762.0	223.4		57.8 281.8.
	10.1 30.2	707.0	223.4	707.2	
	Distance 2.	953.7	222.6		249.5 281.0.
	" "	1030.6	212.2		326.4 270.6.
	" 5	826.1	208.1		12[illegible]9 266.5.
	Umpire.	819.6	189.9		115.4 248.3.
	9.6. 29.8	707.0	189.8	706.6	
	9.9 30.2	707.0	169.1	707.1	
	Distance 4	925.3	169.2		221.1 227.6.
	" " "	773.4	149.6		69.2 208.0.
	" " 5	949.6	106.3		245.4 164.7.
	9.6. 30.0	707.0	106.3	706.7	
	Mansfield. 3	~~707.0~~	~~131.6~~		
	9.9. 30.2	707.0	131.6	707.1	190.0
	Ev.	629.3			
		629.3		078 629.3	
		629.3			
5.46	10.6. 31.8	707.0	x	708.5	
	Ep. 11.5 31.8	707.0		709.2	
		634.3			
		34.3		634.1	
		633.8			
	11.5 31.6	707.0		709.1	

Sep. 12. 1585.

5.49	~~Ob~~ Ov –	11.8.	32.0	707.0	316.6	709.5
				782.3		
				782.5		84 782.4
				782.3		
		10.0	30.3	707.0		707.2
	O/r –	9.8	30.3	707.0		707.1
				786.0.		
				785.8		786.0 068
				786.2		
		9.6	29.8	707.0		706.6

I

Sep. 13 1885:

Chin Mansfield.

Left Home at 9 07 reached Chin about 10 30

10 48 Col. on [illegible] Head

Ep	10.8	29.4	707.0	1836	707.1	9°7	
			787.6				
			87.5		787.6		
			87.7				
	10.4	29.0	707.0		706.6		
E_2	10.3	28.8	707.0		706.4		
			783.6				
			83.8		783.7		
			83.8				
	10.0	28.6	707.0		706.1		
	12.7	31.6	707.0	0.0	710.0		
	10.0	28.6	707	45.0	706.1		
	8.3	28.7	7	90.0	703.7 ~~710.3~~		
	8.1	26.6	7	135.0	$70\overset{3}{8}.5$		
	9.6	28.3	7	180.0	705.6		
	12.6	31.2	7	225.0	709.8		
	11.9	30.4	710.0	270.0	711.5		
	12.0	30.6	"	315.0	711.7		
	10.3	28.9		0.0	709.6		
	12.6	31.3	707.0		709.6		
11 00 ~~S.S. Pk.~~			~~2123.1~~	~~1572~~			
~~Road~~							
Pk. ~~too low~~			too low	157.4			343.5
Road –			too low.	159.4			345.5
Butler cottage ground.			1846.6	120.6	700.9	1145.7	306.7
Hill.			1910.8	140.2	701.3	1209.6	326.3
Hill.			1936.6	137.8	701[illegible]	1235.5	323.9

September 13. 1885.

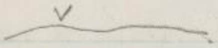
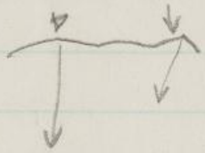
						True az.
						°
11.7	Upper lip.	Too low.	186.1	—		12.2
	Peak.	1758.1	166.8	702.3	1055.8	352.9
	Corner post piazza. Top.	2101.8	172.3	702.6	1399.2	358.4
	Camp.	1984.3	172.2	"	1281.7	358.3
	Corner post piazza. Top.	2101.4	172.2	"	1398.8	358.3
	East gable house.	2052.3	172.4	"	1349.7	358.5
	Base of nose.	1942.6	174.4	702.9	1239.7	0.5
	Top of narrow path.	1674.3	173.0	702.8	971.5	359.1
	Base of cairn on nose.	1478.3	171.8	702.5	775.8	357.9
	Distance 2.	171.6	1312.2	702.5	609.7	357.7
	Distance 3.	1348.7	163.3	702.1	646.6	349.4
	Distance 4.	1214.6	164.8	702.2	512.4	350.9
	Distance 5.	892.3	166.0	702.3	190.0	352.1
	9.0 2°6.9	707.0	166.1	702.3	~~47~~	352.2
	Distance 3.	1214.8	168.8	702.4	512.4	354.9
	Distance 2.	1310.9	171.6	702.5	608.4	357.7
	Base cairn nose.	1476.8	171.~~6~~9	702.5	774.3	358.0
	Distance 2	1528.7	176.3	702.9	825.8	2.4
	Distance 1	1572.3	178.4	703.1	869.2	4.5
	Peak. 100 yds. off.	1830.4	196.3	704.6	1125.8	22.4
	Cairn 200 yds. off Base.	1581.6	241.8	707.7	873.9	67.9
	Cairn 50 yds. off. "	Too high.	355.8 ~~[illegible]~~	—		181.9
	Distance 3	890.6	10.5	706.7	183.9	196.6
	" " "	907.4	11.2	706.7	200.7	197.3
	" " "	1000.0	16.1	705.5	293.5	202.2
	Fay Peak 3.	837.4	15.6	706.5	130.9	201.7
	" " 2	707.5	17.9	706.2	101.3	204.0
	" " 1	800.6	18.6	706.2	94.4	204.7
	[illegible].6 2[illegible]6	707.0	18.8	706.5	~~05~~	~~204.9~~

September 13. 1885.

11.30

						az
Sterling –		1326.3	17.4	706.2	6201	203°.5
" "		1354.6	19.0	706.1	648.5	205.1
" "		1555.5	28.6	705.5	850.0	214.7
" "		1256.6	41.6	704.6	552.0	227.7
" " top.		1127.6	44.6	704.2	423.4	230.7
Knob at end of ridge –		1388.6	49.4	703.9	684.7	235.5
Nearer mountain –		1475.8	54.7	703.5	752.3	240.8
" " " " top.		1366.6	56.2	703.5	663.1	242.3
" " " "		1475.4	65.8	702.9	772.5	251.9
" " " " flat		1735.0	79.6	702.1	10329	265.7
" " " "		1822.0	86.4	701.7	1120.3	272.5
" " " "		1996.7	95.6	701.5	1295.2	281.7
		~~707.0~~	~~8~~			
9.3	27.1	705.0	92.2	702.6		~~278.3~~
12.3	30.0	705.0	18.3	706.5		~~204.4~~
Jay Peak. Top –		799.6	18.7	706.2	93.4	204.8
" " 4		859.4	20.0	706.1	153.3	206.1
Distance 4. flat peak.		873.4	22.1	705.9	167.5	208.2
Distance 4. pk –		875.8	22.3	705.9	169.9	208.4
" " "		887.6	22.9	705.9	181.7	209.0
" " 2		1067.4	23.3	705.9	361.5	209.4
" " 3 pk –		876.1	25.2	705.7	170.4	211.3
" " 3 flat		877.8	25.4	705.7	1721	211.5
" " "		886.4	28.7	705.4	181.0	214.8
" " "		874.4	29.6	705.3	169.1	215.7
" " "		981.2	35.9	704.9	276.3	222.0
" " " pk.		967.0	39.6	704.6	262.4	225.7
" " 4'		935.6	43.3	704.3	231.3	229.4
" " " flat.		951.3	44.6	704.[illegible]	247.1	230.7

September 13. 1885.

						az.
11.50.	9.0 31.1	707.0	45.8	707.1		231.9
	7.8 25.7	707.0	84.8	704.7		270.9
	Elmore	1094.8	85.3	701.8	393.0	271.4
	Ditto Pk.	991.4	93.9	701.3	290.1	280.0
	Uncas	954.5	112.4	700.9	253.6	298.5
	Ca?	913.9	118.4	700.9	212.0	304.5
		887.4	125.1	700.9	188.5	~~291.2~~ 311.2
	87 26.2	705.0	124.4	701.6		
	Uncas 	900.4	130.8	701.0	200.4	316.9
		900.2	130.8	701.0	199.2	316.9
		890.0	129.6	701.0	189.0	316.7
		973.6	134.6	701.0	272.6	320.7
	Pk	1057.0	138.4	701.1	355.9	324.5
	Beyond	1089.4	140.6	701.1	388.3	326.7
	Uncas	1099.4	143.2	701.2	398.2	329.3
	19? 9.2 24.7	705.0	144.1	? 704.3		
	Butler House	1842.6	120.5	701.0	1141.6	306.6
	[illegible]	2102.6	172.2	702.7	1399.9	358.3
	N. E. knob	2111.6	172.3	702.7	1408.9	358.4
	Base Crown	1477.2	171.8	702.7	774.5	357.9
	Ditto	1003.9	171.7	702.7	301.2	357.8
	9.6 27.7	707.0	171.3	705.7		
	Ditto 3	990.6	181.2	703.3	287.3	~~36~~7.3
	" 5	777.0	182.4	703.3	73.7	8.5
	Camels Hump Range	954.2	187.1	703.7	250.5	13.2
	10.3 28.4	707.0	183.4	706.1		9.5
		785.4				
		784.7		785.0		
		785.0				
12 15	10.3 26.4	707.0		704.8		

September 13, 1885.

Hazy in morning, becoming thicker in afternoon, finally raining.

September 14, 1885.

Cloudy in morning and raining hard most of the time. Wind west and at one time a break in the clouds showed that the sun was shining at times.

Afternoon in cloud

September 14, 1885.

Data regarding Mt Mansfield furnished by Judge J. R. Bradley.

C.S. position of Mansfield is 44°31'34".3, 72°48'55".8

Mr Hosea ~~Bot~~ Doton of Woodstock, Vt. took levels from RR track Waterbury (assumed to be 425 ft above sea level according to R.R. report) to Stowe and thence to summit of Mt Mansfield and made Stowe 720 ft and Nose 4056.39, Chin 4389.08 This included Butler House east of village 858.67 ft.

Also Waterbury Meth. Church 712.53
Mansfield House, Stowe, 720.27
Junction Notch Road at foot of Mt. 1291.85
Half-way house 2305.38
Ridge S.E. of Summit House 3632.38
Summit House 3841.84
Mansfield Nose 4056.39
" Chin. 4389.08

In 1878. Judge Bradley determined height of Mansfield by survey with transit. Base of quarter of a mile at Butler House, gave Butler House to Nose 8.1295 miles, to Chin. 8.82025

Ht. Nose above House 3208.09 or 4066.76 above sea level.
" Chin " " 3535.55 " 4394.22 " " "

Course Nose to Chin N 2°6'22" W. distance 1.21 miles

Base line measured by surveyor's chain afterwards corrected by C.S. yard

See also article in Silliman's Journ. Jan. 1868

Guyot gives Mans. chin 4430, Killington 4221, Pico Camel's Hump 4088, Jay 4018 Lincoln or Potato Mt. 4078.

Data given in Almanac. Mts. Killington 4221, Pico 3938, Camel's Hump 4084, Ascutney ~~4018~~ 3165

September. 14, 1885.

Mr Edwards furnished the following azimuths

Moosilauke to Whiteface	286°	06.3'	C.S.
Bald Ledge	158	41	"
Lafayette	224	24.4	"
Black	188	27.6	"
Cube	45	27.9	"
Cardigan	9	07.2	"
Mount.	125	07.6	J.R.E.
Mansfield to Moosilauke	305	48.8	"
Cube	318	06.2	C.S.
Bald Ledge	291	17.6	"
Croydon	337	25.3	"
Dannemora N.Y.	108	49.3	"

Mr Doton writes Sep 15 to Judge Bradley that Prof. Guyot at first found 4430 but in 1866 every 15 minutes for 24 hours within two days. and the average result is only three feet below your heading which I accept as the true height 4389. Article on Mansfield was published in the Vt. Standard published at Woodstock and also in the Vermont Journal at Montpelier.

September 15, 1885

Moon Manifold

8 28 Left Hand

30 Near Nose

36 Top.

Station as before 7 ft from C.S.

8 43 Levelled

Opp. 10.6 30.2 710.0 215.6 710.5

N. Mound. 784.6 216.0 +84.6 190.0

Base Cone. 1428.6 203.9 718.6 177.9

Hot pt. lower 1478.5 208.2 768.5 182.2

9.1 30.0 710.0 709.4

8 50 disturbed

Op 9.4 29.3 710.0 709.1

786.2

786.3 786.2

786.2 708.9

8.9 29.1 710.0 216.0 708.7

Or 8.8 28.9 710.0 708.5

783.0

83.2 783.1

83.1 8.8

8.9 29.6 710.0 709.0

Op 9.6 29.7 703.0 702.5

629.2

628.9 629.1

629.1 2.8

10.1 30.2 703.0 703.2

Or 10.2 30.3 703.0 703.3

625.4 625.2

24.8 3.2

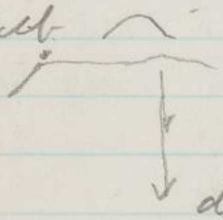
25.3

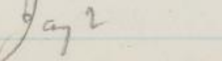
8 58 10.0 30.2 703.0 703.1

Sept. 15. 1885.

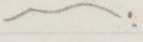
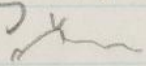
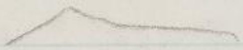
Rutherfurd.

9 01	10.4	30.6	707.0	0.0	707.7		
	11.1	31.3	707.0	45.0	708.6		
	11.6	31.6	707.0	90.0	709.1		
	11.0	31.3	707.0	135.0	708.5		
	10.4	30.5	707.0	180.0	707.6		
	10.0	30.3	707.0	225.0	707.2		
	10.3	30.5	707.0	270.0	707.5		
	10.9	31.3	707.0	315.0	708.5		
	11.4	31.5	707.0	360.0	708.9		
	7.5	27.5	712.0	"	708.7		
	12.4	32.6	706.0	"	709.3		
9 07	Mean bell.		1119.4	7.6	705.2	414.2	161.7
			1157.9	9.7	705.2	452.7	163.8
	Dub		951.2	10.8	"	246.0	164.9
			925.7	12.8	"	220.5	166.9
			925.4	"	"	220.2	"
	dim dim		924.6	13.2	"	219.4	167.3
			924.6	"	"	219.4	"
	Approx dir horiz.		1	19.3	—	—	173.4
	" " ledge			65	—	—	160.6
	9.3	29.6	708.0	12.1	707.9		166.2
	Upper ledge		801.3	16.8	"	93.4	170.9
	Cairn Peak		1865.4	6.4	"	1157.5	160.5
	Mud.		756.5	33.2	705.3	51.2	187.3
	N Mount		630.6	35.9	"	−74.7	190.0
	10.2	30.4	708.0	"	708.4		
	dist		832.2	45.5	705.3	126.9	199.6
			836.7	45.6	"	131.4	199.7
	Jay 2		779.8	53.2	"	74.5	207.3





September 15 1885

9 22	9.8 303	708.0	53.3	708.1		
		847.6	57.3	705.3	142.3	211.4
		830.6	63.8	"	125.3	217.9
	Sterling	894.8	70.6	"	189.5	224.7
		926.3	73.6	705.7	221.1	227.7
	Sterling mon.	1000.0	75.6	"	294.8	229.6
	dist Pk	831.3	87.8	"	126.1	241.9
		821.9	94.7	"	116.7	248.3
	9.1 29.3	708.0	95.7	706.9		
	Dist 4	827.4	112.4	705.1	122.3	266.5
	Elm[illegible]	1031.4	116.4	705.1	326.3	270.5
	dist 5	812.3	117.2	705.1	107.2	271.3
	Pk dist 5	824.4	119.6	705.0	119.4	273.7
	mon Pk 	954.3	126.8	705.0	249.3	280.9
	9.4 29.3	708.0	127.6	707.1		
	Gardner 1st bm	886.1	135.6 ~~133.6~~	704.9	181.2	289.7
	" last	908.2	142.1	"	203.3	296.2
	Liberty ?	791.6	143.3	"	86.7	297.4
	Wams 1	896.8	144.1	"	191.9	298.2
	Bey. Wams.	886.6	147.3	704.8	181.8	301.4
	Wams 2	851.4	150.0	"	146.6	304.1
	Beyond.	923.3	152.2	"	218.5	306.3
	"	889.6	152.9	"	184.8	307.0
	"	871.7	154.8	"	166.9	308.9
	9.3 289	708.0	154.5	706.7		
	8.6 286	708.0	180.6	706.1		
	Graefen ?	909.4	186.3	704.6	204.8	340.4
	dist 5	895.4	190.4	"	190.8	344.5
	" " high	860.3	193.2	"	155.7	347.3
	Tank dist 3	930.6	197.6	704.5	226.1	351.7

5

Sept 15. 1885

9 53	Mut disc 3	926.4	199.7	704.5	221.9	353.8°
	dist 5 ——	856.?	199.7	"	151.7	353.8
	8.9 28.6	708.0	200.4	706.3		3
	Mut Disc 3	868.7	202.0	704.5	164.2	356.1
	~ 4	844.3	202.4	"	139.8	356.5
	Dist 2 ~	1175.3	204.5	"	470.8	358.6
	Dist. 3	872.3	202.9	"	167.8	357.0
	" 4	856.3	203.4	"	151.8	357.5
	" 5	859.4	203.8	"	154.9	357.9
	" 4	850.4	204.1	"	145.9	358.2
	" 4	849.6	204.3	"	144.1	358.4
	" 3	864.6	204.4	"	160.1	358.5
	" 4	838.9	204.5	"	134.4	358.6
	" 3	839.6	205.4	"	135.1	359.5
	" 3	826.2	206.3	"	121.7	0.4
	" 3	839.3	206.7	"	134.8	0.8
	" 5 v dim.	801.1	206.8	"	96.6	0.9
		799.8	"	"	95.3	0.9
	5 dim	808.8	207.6	"	104.3	1.7
	5	818.0	208.0	"	113.5	2.1
10 6	9.3 29.2	708.0	208.0	707.0		
	Dist 5 dim	800.4	206.9	704.5	95.9	1.0
	Dist 3 flat	968.2	207.9	"	263.7	2.0
	" 3	984.4	209.4	"	279.9	3.5
	" 2	965.3	210.8	"	260.8	4.9
	" 4	829.6	208.9	"	125.1	3.0
	" 4	849.9	209.6	"	145.4	3.7
	" ⌒ ↓	823.8	210.6	"	118.3	4.7
	" ↓	828.3	211.4	"	123.8	5.5
	" 4	824.3	212.4	"	119.8	6.5
	3	840.1	212.6	"	135.6	6.7

Sept 15 1885

10 15	Q.l 28.5	708.0	212.6	706.5		
	Dist 4	818.1	213.4	704.5	113.6	7.5
	3	805.6	214.6	"	101.1	8.7
	mount	876.6	214.9	"	172.1	9.0
	dist 1	1552.8	214.6	"	848.3	8.7
	G. Mans	1770.6	232.1	"	1066.1	26.2
		1050.4	216.3	"	345.9	10.4
	Dist 4	781.9	216.3	"	~~7~~77.4	10.4
	"	785.7	215.6	"	~~7~~81.2	9.7
	Dist 4	786.9	215.7	"	~~7~~82.4	9.3
		785.5	215.4	"	81.0	9.5
	Kill? " 5 Clouds	765.2	218.4	"	60.7	12.5
	Cam Hump	795.2	218.6	"	90.7	12.7
	Dist 2	882.6	219.5	"	178.1	13.6
	Camel's Hump	727.6	220.6	"	23.1	14.7
	Q.6 29.0	704.0	220.6	707.1		
	Dist [illegible]	865.7	222.6	704.5	161.2	16.7
	" 4	875.3	223.2	"	170.8	17.3
	Cam Hump	912.4	224.4	"	207.9	18.5
	Dist 4	880.3	225.2	"	175.8	19.3
	" " flat	894.4	225.7	"	189.9	19.8
	Camel's Hump ridge	1016.4	227.7	"	311.9	21.8
	" " " "	1071.3	231.3	"	366.8	25.4
	Dist 3	939.3	231.3	"	234.8	25.4
	" 5	9~~8~~05.4	232.0	"	200.9	26.1
	Q.4 28.6	708.0	232.0	706.7	+	
	Cam H ridge	1072.2	232.2	704.5	367.7	26.3
	ditto	1280.1	233.6	"	575.6	27.7
	C. H. ridge	1155.4	233.9	"	450.9	28.0
	dist 3	1020.6	235.4	"	316.1	29.5

J

10 41	dist 5	890.6	235.6	704.5	186.1	29.7
	〃	876.6	236.3	〃	172.1	30.3
	9.5 29.1	708.0	236.2	707.1		3
	dist 3	1002.6	236.8	704.5	298.1	30.9
	dist 5	918.3	237.8	〃	213.8	31.9
	5 flat	891.5	238.6	〃	187.0	32.7
	5	885.4	239.5	〃	180.9	33.6
	5 mob	894.6	240.9	〃	190.1	35.0
		891.3	244.9	〃	186.8	39.0
	[illegible] v dist	887.3	245.4	〃	182.8	39.5
		887.8	〃	〃	183.3	
	v dist	873.6	247.1	704.6	169.0	41.2
	Mane	873.7	247.5	〃	169.1	41.6
	v dist ? [illegible]	883.8	247.8	〃	179.2	41.9
	〃	883.7		〃	179.1	〃
	dist 4	898.6	248.6	〃	194.0	42.7
	〃 5	886.4	248.6	〃	181.8	42.7
	〃 4	896.6	249.6	〃	192.0	43.7
	9.4 28.8	708.0	〃	706.8		
	dist 2	1567.6	244.5	704.5	863.1	38.6
	〃	1528.2	249.6	704.6	823.6	43.7
	〃	1408.6	253.6	〃	704.0	47.7
	dist 3, 1st hill	1129.8	247.4	〃	425.2	41.5
	last	1151.2	253.0	〃	446.6	47.1? ✓
	dist 3 hill mean the	1072.3	255.8	〃	367.7	49.9
	〃 3 Hill	1463.4	270.6	704.7	758.8	64.7 ✓
	Steeple great lace	1445.4	270.4	〃	740.8	64.5 ✓
	Hill 1	1768.6	274.2	〃	1064.0	68.3
	〃 1	1754.3	278.3	〃	1049.7	72.4
	9.6 28.6	708.0	255.0	706.8		

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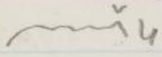
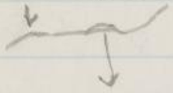
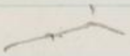
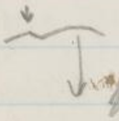
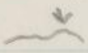
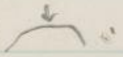
						°
11 08	Dent 5	886.3	250.6	704.6	181.7	44.7
	" 5	870.6	257.8	"	166.0	45.9
	" 4	875.6	252.4	"	171.0	46.5
	4	864.4	253.2	"	159.8	47.3
	5 flat	857.9	253.3	"	153.3	47.4
	 4	866.6	253.6	"	162.0	47.7
	5	869.1	253.8	"	164.5	47.9
9.4	28.7	708.0	~~70~~ 255.2	706.7		
	disc 4	902.8	255.7	704.6	198.2	49.9
	Hill disc 3	1071.6	255.9	"	367.0	50.0
	[illegible], disc 4	825.5	256.5	"	120.9	50.6
	"	833.1	257.2	"	128.5	51.3
	"	835.0	257.6	"	130.4	51.7
	disc 5	860.2	258.3	"	155.6	52.4
	4	851.6	258.6	"	147.0	52.7
	5	853.4	259.2	"	148.8	53.3
	"	854.3	259.3	"	149.7	53.4
	"	849.9	259.4	"	145.3	53.5
	" ^	859.2	259.6	"	154.6	53.7
	"	865.3	260.3	"	160.7	54.4
		822.3	261.3	"	117.7	55.4
		818.6	261.8	"	114.0	55.9
	 tr	781.8	262.6	"	77.2	56.7
9.2	28.9	708.0		"	706.7	
	fl ⌒	779.4	263.5	704.6	74.8	57.6
		759.7	264.3	"	55.1	58.4
	flat	757.8	264.4	"	53.2	58.5
	tr	771.8	265.6	"	67.2	59.7
		767.5	266.7	"	62.9	60.8
	 flat	757.8	267.7	704.7	53.1	61.8
9.1	29.0	708.0		"	706.7	

J

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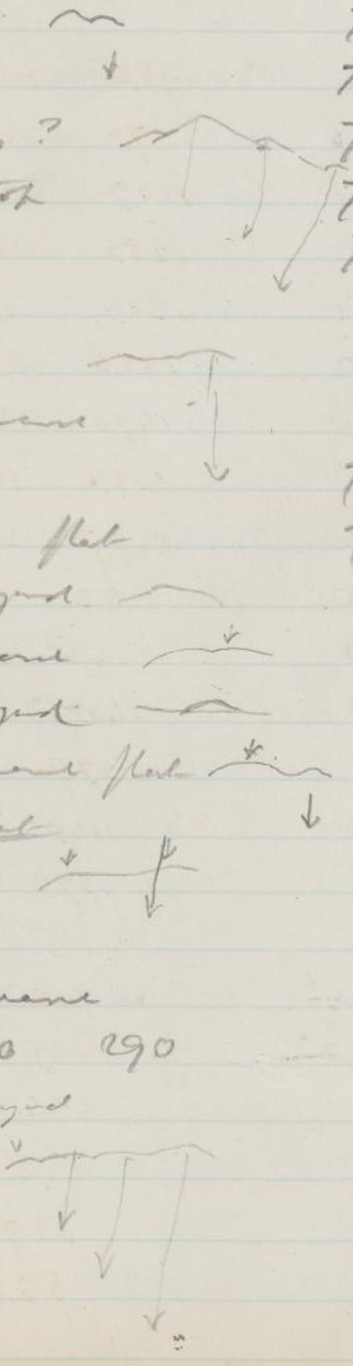

11 33	8.9 289	708.0	267.6	706.5		61.7
	beyond Mercury sp.	762.8	268.6	704.7	58.1	62.7
	"	767.3	268.9	"	62.6	63.0
	"	764.6	269.3	"	59.79 ~~60.0~~	63.4
	Mercury	747.4	269.4	"	42.7	63.5
		747.2		"	42.5	
	9.1 29.0	708.0	"	706.7		
		777.3	271.1	704.7	72.6	65.2
		783.4	271.2	"	78.7	65.3
	bey?	774.6	272.4	"	69.9	66.5
	top	762.2	272.4	"	57.5	66.5
		783.9	272.8	"	79.2	66.9
		807.0	273.3	"	102.3	67.4
		805.5	273.6	"	100.8	67.7
	mean	818.4	273.5	"	113.7	67.6
		789.4	274.1	"	87.7	68.2
	flat	789.23	274.6	"	87.6	68.7
	beyond	802.9	275.2	"	98.2	69.3
	mean	802.6	276.2	"	97.9	70.3
	beyond	810.4	276.7	"	105.7	70.8
	mean flat	802.7	277.6	"	98.0	71.7
	~~flat~~	808.1	277.8	"	103.4	71.9
		821.6	278.7	"	116.9	72.8
		816.2	278.9	"	111.5	73.0
	mean	845.4	279.2	"	140.7	73.3
	9.0 29.0	708.0	"	706.7		
	beyond	822.6	279.3	704.7	117.9	73.4
		813.4	280.1	"	108.7	74.2
		800.7	280.6	"	96.0	74.7
		800.6	280.7	"	95.9	74.8
		800.6	281.1	"	95.9	75.2

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11 53	9.2 29.3	708.0	281.1	707.0		
	Top	812.3	281.9	704.7	107.6	76.0
	[illegible]	864.6	282.9	〃	159.9	76.0
	〃 〃	879.4	282.3 ~~279.4~~	〃	174.7	76.4
	〃 〃	912.0	282.3	〃	207.3	76.4
	Same, [illegible]	910.3	282.9	〃	205.6	77.0
	〃 〃	903.0	283.6	〃	198.3	77.7
	〃 〃	900.2	284.6	〃	195.5	78.7
	〃 〃	905.3	285.6	〃	200.6	79.7
	dist	827.8	282.3	〃	123.1	76.4
	beyond.	858.2	282.7	〃	152.5	76.8
	Same	853.6	283.2	〃	148.9	77.3
		851.4	283.6	〃	146.7	77.7
	↓	837.2	283.7	〃	132.5	77.8
	beyond	843.6	283.9	〃	138.9	78.0
	〃 ?	848.6	284.2	〃	143.9	78.3
	Whiteface	812.3	284.5	〃	107.6	78.6
	〃 Top	753.2	285.4	〃	48.5	79.5
		753.0		〃	48.7	
	9.1 29.2	708.0		〃	706.9	
	Whiteface Mtn	789.8	285.9	704.7	85.1	80.0
	〃 〃	781.4	286.6	〃	76.7	80.7
	〃 〃	796.9	287.1	〃	92.2	81.2
		820.0	288.8	704.8	115.2	82.9
		819.0	289.6	704.6	114.2	83.7
	[illegible]	852.1	291.0	〃	147.3	85.1
	[illegible]	969.6	291.1	〃	264.8	85.2
		858.8	291.6	〃	154.0	85.7
	↓	837.3	291.9	〃	132.5	86.0
	↓	870.3	292.6	〃	165.5	86.7
	[illegible]	880.7	293.3	〃	175.9 ~~176.9~~	87.4

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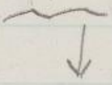
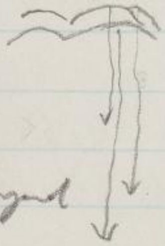
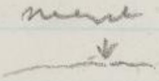
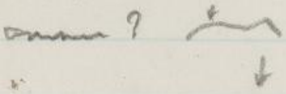
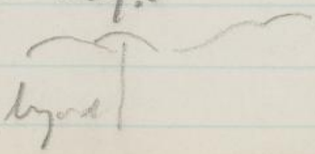
12 12

9.4 29.6	708.0	294.0	707.3		88.1
	859.4	294.7	704.9	154.6	88.8
	864.4	295.1	"	159.6	89.2
	867.4	296.4	"	162.6	90.5
	861.3	296.6	"	156.5	90.7
	886.2	297.5	"	161.4	91.6
	900.2	297.6	"	195.4	91.7
	867.7	297.8	"	162.9	91.9
beyond	868.6	297.9	"	163.8	92.0
	901.5	298.0	"	196.7	92.1
	861.1	298.4	"	156.3	92.5
	840.3	298.9	"	135.5	93.0
	845.3	299.2	"	140.5	93.3
	879.3	299.2	"	174.5	93.3
	863.9	300.2	"	159.1	94.3
	848.0	301.6	"	143.2	95.7
Mean flat-[illegible]	902.6	301.0	"	197.8	95.1
	858.6	302.3	"	153.8	96.4
9.0 29.0	708.0	"	706.7		
	853.2	304.4	704.8	148.4	98.5
	853.6	304.6	"	148.8	98.7
	852.2	305.1	"	147.4	99.2
beyond dist	884.7	306.1	704.9	179.8	100.2
① [illegible] ? 	828.4	307.6	"	123.5	101.7
	826.2	307.9	"	121.3	102.0
	805.2	309.2	"	100.3	103.3
	801.4	310.4	"	96.5	104.5
9.2 29.3	708.0	"	707.0		
	878.6	314.9	[illegible] 704.9	173.7	109.0
beyond	876.9	315.4	"	" 172.0 [illegible]	109.5
	854.3	316.0	"	" 145.4 [illegible]	110.1

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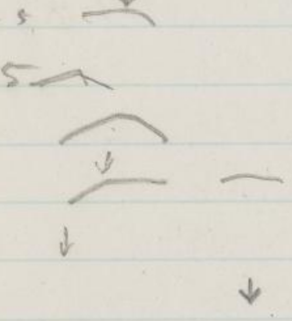

12 30	9.4	29.3		7080	315.8	707.1		
			dist 5	947.4	357.6	705.1	242.3	151.7 ·
			a 5	950.5	7.8	705.2	245.3	161.9 ·
				952.8	10.7	"	247.6	164.8 ·
				921.7	12.8	"	216.5	166.9 ·
				963.2	12.4	"	258.0	166.5 ·
				925.8	13.2	"	220.6	167.3 ·
	9.2	29.0		7080	"	706.8		
			Hill	1158.3	9.8	705.2	453.1	163.9 ·
			"	1120.6	7.5	"	415.4	161.6 ·
			"	1081.7	356.0	705.1	376.6	150.1 ·
				1091.4	357.6	"	386.3	145.7 ·
				1187.3	333.6	705.0	482.3	127.7 ·
			Island	1216.3	319.7	704.9	511.4	113.8 ·
			Hill	1259.5	314.4	"	554.6	108.5 ·
			Is. >	1273.4	305.8	"	568.5	99.9 ·
			Island	1186.1	302.9	704.8	483.3	97.0 ·
			"	1196.2	302.3	"	493.4	96.4 ·
			buoy?	1182.9	301.3	"	480.1	95.4 ·
			Island	1218.6	283.8	702.7	515.9	77.9 ·
			Island middle 3.	1172.8	282.0	"	470.1	76.1 ·
	8.9	28.9		7080	35.6	706.5		~~189.7~~
	9.8	29.6		7080		707.6		
				6296				
				6296				
				6298				
1 00	9.7	30.0		7080.0	~~35.8~~ 36.0	707.9		

F:

	10.2	30.2	708.0	0.0	708.3		
	9.8	29.8		45.0	707.7		
	9.6	29.6		90.0	707.5		
	9.4	29.3		135.0	707.1		
	9.7	296		180.0	707.5		
	10.6	30.5		225.0	708.7		
	11.2	31.1		270.0	709.5		
	10.9	30.8		315.0	709.1		
	10.3	303		0.0	708.4		
	Diff dark		831.6	45.5	705.3	126.3	199.6
	day.		773.6	53.8	"	68.3	207.9
	Washington		748.5	129.4	705.0	43.6	283.5
			748.3	"	"	43.3	
	8.6	28.5	708.0		706.1		
	[illegible]		767.2		704.8	62.4	305.9
			7.4		"	62.6	
1 07	8.7	286	708.0	157.8	706.2		

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N.E. part of piazza of Summit House

9.6	19.5	705.0	0.0	704.4 Ev			
9.7	29.6	"	315.0	704.5			
11.2	31.1	708.0	270.0	706.5			
10.0	30.3	708.0	225.0	708.2			
11.6	31.8	708.0	180.0	710.3			
11.1	31.3	708.0	135.0	709.6			
9.8	39.8	708.0	90.0	707.6			
7.7	28.3	708.0	45.0	705.3			
9.6	29.9	705.0	0.0	704.7			
N. Mansfield		154.4	352.4	702.8	-548.4	2.1	-547.7
Butler Cottage group		1749.3	106.1	702.9	1046.4	5.5	+1043.8
" " "		1746.8	"	"	1043.9	"	+1041.3
8.7	28.6	707.0		705.2			
Worcester 2		800.6	105.6	703.0	97.6	5.5	+95.1
Mt.		920.8	82.6	702.6	218.2	4.4	+216.4
Elmore		983.6	72.4	702.4	281.2	4.0	+279.6
~~Jay~~ Lowell		798.1	19.5	702.6	95.5	2.3	+95.8
7.8	28.6	705.0	"	702.6			
Sterling		781.6	26.8	702.5	79.1	2.5	+79.1
Sterling moun.		735.6	32.3	702.5	33.1	2.7	+32.9
N Mansfield		154.5	352 ±	702.8	-548.3	2.1	-547.6
Mt. on Mans. ridge		270.6	349.5	702.8	-432.2	2.1	-431.5
S.E. landing		111 ±			-		
Carriage road		115 ±			-		
Opp.		1934.2					
Cairn lighting Mt.		~~131.6~~	131.6	703.4 707.4	1226.8	10.8	1223.4
Upper lip		1636.8	150.6	703.7 707.7	929.1	11.4	925.4
Lower lip		1733.3	156.1	703.8 707.8	1025.5	11.5	1021.8

K

8.7, 29.8	707.0	180.2	706.0				
8.3, 29.2	707.0	120.0	705.3				
[illegible]	1143.6	169.3	704.0	708.0	+435.6	11.7	±431.9
Station	577.6	212.4	704.4	708.4	-139.8	11.3	+133.7
[illegible]	614.8	199.4	704.4	708.4 9.6	-93.6	11.6	+96.8
N Mauna	1258.4	172.3	704.0	708.0	+550.4	11.7	±546.7
Station	833.7	217.7	704.5	708.5	-74.8	11.1	+77.4
10.5 31.4	710.0	180.0	711.3	718.3			
10.0 31.1	710.0	225.0	710.7	714.7			
9.4 29.4	710.0	270.0	708.5	712.5			
9.1 29.9	707.0	315.0	706.3	710.3			
8.4 29.2	707.0	0.0	705.4	709.3			
8.6 29.6	707.0	45.0	705.8	709.8			
10.2 31.1	707.0	90.0	707.9	7			
9.6 30.3	710.0	135.0	709.9				
10.3 31.2	710.0	180.0	711.0				
direction side of house		329.6					
[illegible]		343° ± 1					
[illegible]	430.6	252.4	9.9 704.5	708.5	-277.9	+279.3	
Ph	492.3	262.6	9.4 704.4	708.4	-216.1	+217.1	
[illegible] 1	566.5	279.9	8.7 704.3	708.3	-141.8	+142.2	
2	614.6	285.7	8.5 704.2	708.2	-93.6	+93.9	
Gr [illegible] Chin	2074.3	159.3	11.6 703.9	707.9	+1366.4	-1362.7 ~~37.3~~	
Highest point of Chin was 2114.3							
[illegible] Chin	~~2114.3~~	163.8	11.6 703.9	707.9	+1406.4	-1402.7	
[illegible]	610.3	229.7	10.8 704.5	708.5	-98.2	+100.5	
[illegible] 2	614.8	285.7	8.5 ~~704.1~~	708.2	-93.4	+93.7	
[illegible]	546.2	288.4	8.4 "	"	-162.0	+162.2	
[illegible]	563.3	290.3	8.2 "	"	-144.9	+144.9	
[illegible] 3	642.6	292.1	8.2 "	"	-65.6	+65.6	
4	634.3	297.8	7.9 ~~704.1~~ 7.8	708.1	-73.8	+74.6 ~~+66.5~~ +166.3	
10 20± [illegible] 8.8 29.6	541.5 710.0	302.1 302.1	709.6	713.6			

23.4

5.4

18

1235 Canon - Leighton Pk Clouds

Op

Lower lip up. 1619.8 273.4 ~~704.3~~ 8.9 ~~708.3~~ ~~+911.5~~ -910.9

9.0 30.1 708.0 " 707.4

Upper lip ,,

highest pt to East 1441.3 269.8 ~~704.4~~ 9.1 ~~708.4~~ ~~+732.9~~ +732.2 ~~439.3~~

9.4 30.4 708.0 " 707.9

9.0 30.0 708.0 1.7 707.3

7.6 28.6 " 63.6 705.5

House to lum. 63.3

Clouds too thick

Level readings discordant.

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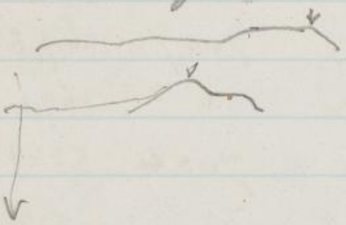
3 17	Coll & level. a h Mus.						
	Op	10.6	314	708.0	335.0		Very windy
				785.1	709.3		but sky clear to
				85.2	785.1		N.W.
				84.9	085		
		9.2	30.3	708.0	707.7		
	Or	8.9	29.9	708.0	707.2		
				781.7			
				781.6	781.6		
				781.5			
		8.6	29.7	708.0	706.9		
	Ep	9.1	30.2	708.0	707.5		
				634.4			
				634.3	634.3 77		
				634.3			
		9.4	30.4	708.0	707.9		
	Er	9.4	30.7	708.0	708.1		
				630.4			
				630.6	631.5		
				630.4			
3 26		9.5	30.7	708.0	708.1		
		8.6	29.9	708.0	0.0	707.0	
		9.1	30.4		45.0	707.7	
		9.7	31.2		90.0	708.6	
		9.7	31.2		135.0	708.6	
		9.2	30.4		180.0	707.7	
		8.8	30.1		225.0	707.3	
		8.4	29.7		270.0	706.7	
		8.5	29.6		315.0	706.7	
		8.6	30.1		0.0	707.1	



3 35 9.4 307	708.0	93.6	708.1			
vvd flats 9	853.3	97.3	706.0	247.3	132.5 ~~270.3~~ ·	R/
[illegible]	867.3		"	261.3	·	
	846.9	116.3	706.1	240.8	151.5 · ~~[illegible]~~	
	849.6	127.0	"	243.5	162.2 · ~~300.0~~	
	850.2	,	"	244.1	·	
	850.4	126.3	"	244.3	161.5 ·	
	852.6	129.8	"	246.5	165.0 ·	
	825.6	131.7	"	249.5	166.9 ·	
	825.7	"	"	249.6	"	
	825.3	132.2	"	249.2	167.4 ·	
	825.6		"	249.5	" ·	
8.6 30.3	708.0		707.3			
[illegible]	830.3	182.9	705.6	124.7	218.1 ·	
v dist	922.1	184.3	"	216.5	219.5 ·	
Shirley	896.6	185.5	705.5	191.1	224.7 ·	
[illegible]	953.0	245.8	704.3	248.7	281.0 ·	
9.6 31.2	705.0	"	705.5			
Pleasant?	798.3	250.1	704.3	94.0	285.3 ·	
	808.3	253.5	704.2	104.1	288.7 ·	
	820.6	254.0	704.2	106.4	289.2 ·	
[illegible]	789.6	261.1	704.1	85.5	296.3 ·	
	788.4	262.8	"	82.3	298.0 ·	
	896.3	263.0	"	195.2	298.2 ·	
10.3 31.5	705.0	"	706.2			
10.2 31.6	705.0	350.6	706.2		~~25.8~~	
dist	904.3	350.7	704.3	200.0	25.9 ·	
dose	907.8	352.2	"	203.5	27.4 ·	
[illegible]	675.5	354.9	704.4	171.1	30.1 – ~~29~~	

red in gap	918.8	356.0	704.4	214.4	31.2 ·
	918.8		"	214.4	·
	920.8	356.3	"	216.4	31.5 ·
Catskills	872.3	5.4 ·	704.7	167.6	41.1 ·
Same	873.8	6.3	"	169.1	41.5 ·
Rock in lake	1230.3	41.4	705.4	524.9	76.6 ·
10.8 32.3	705.0	38.3	707.1		~~73.5~~

4 08 Summit became capped by clouds which had been spreading down to the horizon. Wind became even more violent endangering the instrument, and almost rendering the descent difficult.

Oct. 1. 1885.
Distance from Mans.

Spruce Hill		
Greylock		
Potato Hill	11.45	45.80
Camel's Hump	5.98	23.92
Abraham	17.94.	71.76
Hoffman's	28.54	114.16
Marcy	25.23	100.92
Mt Tahir	26.44	105.76
Whiteface	22.60	90.40
Trembleau	13.32	53.28
Dannemora	19.2	76.8
Mt Royal	31.35	125.40
Jefferson	24.08	96.32
Jay	12.00	48.00
Montgomery	11.5	46.0
Elephant's Head	19.	76.
Owl's Head	18.	72.
Lowell	12.	48.
Hadley	10.3	41.2
Moose	9.6	38.4
Barton	14.8	59.2
Haystack	18	72
Anna	16.4	65.6
Hor	15.9	63.6
Lightning	25.39	101.56
Mt Pelee	27.92	111.68
Burke	18.5	74.0
Umpire	19.2	76.8

Oct 1 1885

[illegible]	233	93.2
Carr	229	91.6
Cape Horn	2556	102.24
Cong.	200.0	80.0
Starr King	2786	111.44
Madison	3114	124.56
Adams.	3116	124.64
	3089	123.56
Jeff	3047	121.68
Clay	3072	122.88
	3066	122.64
Wash	3094	123.76
Monroe	3077	123.08
Pleasant	30.22	120.88
N Twin	2653	106.12
S Twin	2678	107.12
Guyot	2714	108.56
Bond	2734	109.36
Haystack	2571	102.84
Laf.	2543	101.72
Lincoln	2554	102.16
Liberty	2594	103.36
Flume	2628	105.12
Osceola	2935	117.40
Black SD	3157	126.28
Cube	2380	95.20
Cardigan	30.38	121.52
Kearsarge	3712	148.48
Sunapee	3729	149.16

Oct 1. 1885

	Croydon	31.38	125.12
	Monadnock	48.36	193.44
	Ascutney	30.83	123.32
4 00	Killington	25.54	102.16

Oct 1, 1885

4 00 Distances from Moosilauke.

Wachusett	42.54	170.16
Kearsarge	17.81	71.24
Cardigan	10.55	42.20
Monadnock	32.72	130.88
Sunapee	20.67	82.68
Croydon	17.03	68.12
Ascutney	20.36	81.44
Moosh	10.22	40.88
Shrine	45.30	181.20
Greylock	47.04	188.16
Ascutney	20.36	81.44
Cube	5.40	21.60
Sunday	6.20	24.80
Lakes	12.30	49.20
Killington	23.02	92.08
[illegible]	4.53	18.12
Colton	10.80	43.20
Owl's Head	1.30	5.20
Mansey	42.42	169.64
Whiteface	42.85	171.40
[illegible]	22.30	89.20
Camel's Hump	22.64	90.56
Dannemora	43.0	172.0
Mans Nose	24.07	96.28
Chin	24.29 ~~25.11~~	97.16
Mt Royal	53.97	215.88
Johnson	45.4	181.6

Oct 1, 1885

Moose	23.9	95.6
Montgomery	27.8	111.2
Jay.	28.3	113.2
Hadley	24.5	98.0
Cornell.	24.9	99.6
Owls Head	30.2	120.8
Eleph. Head	31.7	126.8
Barlow	21.4	85.6
Har.	19.6	78.4
Oxford	37.0	148.0
Ammonoosuc	22.0	88.0
Bristol.	20.4	81.6
Haystack	21.5	86.0
Boyd Landing	1788	71.52
Buck,	15.4	61.6
Uypper	153	61.2
Seneca	180	72.0
Tug.	127	50.8
Black,	9.60	38.40
Cass	150	60.0
Greenside	15.8	63.2
Lightning	2074	82.96
Piperhill	2568	102.72
Cape Horn	16.28	65.12
N Kenny	19.60	78.40
S "	1927	77.08
Jenny	19.54	78.16
Laf	543	21.72
St Louis	7.20	28.80
Wash.	1269	50.76

Carter Dome	1483	59.32
Pequawket	1500	60.00
Chocorua Mt.	2030	81.20
G Dome	758	30.32
Jack Hill	1044	41.76
Kylomantic	2056	82.24
Kyspeak	810	32.40
Kataccama	2817	112.68
Catamount	2340	93.60
Tripl Hill	2546	101.84
Bear Hill	1830	73.20
Rattlesnake	2274	89.76
Umon	2932	117.28
Stinson	524	20.96
N. Pickering	2256	90.24
J English	2994	119.76
N. Pickering	2256	90.24
Ragged	1546	61.84
Cass	423	16.92
Cardigan	1056	42.24

			cm		
Monad to Uncan		44.549	11.14	4456	+.011
Uncan	" Kear.	49.533	12.36	4944	-.113
Kear	" Monad	61.461	15.32	6128	-.181 ~~-.333~~
Kear.	" Ascut-	48.658	12.25	4900	+.342
Ascut	" Monad	70.739	17.71	7084	+.101
Kear	" Moose	45.259	11.36	4544	+.181
Moose	" Ascutney	40.680	1016	4064	-.040
		360.899	90.30	361.200	+.301

Hence the error in scale is inappreciable, the mean value exceeding $\frac{1}{400000}$ by only $\frac{1}{1200}$ part of this quantity.

Book III p 158.

J. J. Holbrook of Keene, N.H. found altitude of ~~Mt.~~ Monadnock Mt. House 2071.984 ft above tide water.

Mt Monadnock - - - 3169.3

July 2, 1886.

Reached Mt. Washington July 1, 1886, at about 8 P.M. too dark and hazy for observation

July 2 in morning secured keys of C.S. Observatory after some difficulty, but air too hazy for observation.

4 00 P.M. After some experimenting placed a timber 9" × 9" × 30" on top of C.S. tripod and rolled Micrometer Level D on it. Mere nails ~~[illegible]~~ driven into timber caused it to set firmly. Shutters on two sides blown away on other two nailed up.

Zero of level at 7.05 micrometer screw.

Position Ep M

4 02	Level.	11.2	30.2	7.05	705.0	705.7	706.1	
	Adams top.			110.2	1131.3		425.7	425.2
					1131.6		426.0	425.5
					1131.7		426.1	425.6
	Level ~~E~~	10.6	29.7		705.0	705.2	706.1	
	Level	9.6	28.7	0.0		703.9		
		10.6	28.8	60.0		704.6		
		10.4	29.6	120.0		705.0		
		10.2	29.3	180.0		704.7		
		9.8	29.3	240.0		704.4		
		10.6	30.0	300.0		705.4		
		10.8	30.1	0.0		705.6		
	~~Adams 2?~~							
		10.3	29.5	100.0	182.6 705.0	704.9		
	Adams 2?			1033	1298.2		706.2	592.0
	Adams 1			189.4 110.1	1131.3		706.1	425.1

July 2 1886. Mr

	Madison	118.9	198.2	1346.6	706.1	640.5
	Col.	114.6	193.9	1730.4	706.1	1024.3
	Signal 10.2 29.4	115.0	–	705.0	704.7	–
	Pine	134.3	213.6	2056.4	706.0	1350.4
4 20	Pk. lig. Moriah	154.1	223.4	1654.3	705.9	948.4
	Moriah 2 ?	159.7	239.0	1399.7	705.9	693.8
	Moriah 1 ?	161.0	240.3	1372.7	705.9	666.8
	Bald ?	161.1	240.4	1340.4	705.9	634.5
	Carter 1	167.4	246.7	1377.7	705.9	671.8
	9.8 29.0	167.4	–	705.0	704.2	–
	Carter 2 one clue	170.2	249.5	1383.8	705.9	677.9
	" 3	171.1	~~[illegible]~~ 250.4	1396.5	705.9	690.6
	4	172.2	251.5	1385.3	705.9	679.4
	Carter Dome peak	187.5	266.8	1407.1	706.0	701.1
	Carter Dome notch left land	192.6	271.9	1384.8	706.0	678.8
	lower			1389.1	"	683.1
	9.8 29.0	192.8	–	705.0	704.2	–
	N Baldface Cone.	198.1	277.4	1520.6	706.1	814.5
	Carter Dome 3	199.0	278.3	1582.6	706.1	876.5
	Wildcat ± highest peak	200.3	279.6	1759.3	706.1	1053.2
	" 2 good.	203.1	282.4	1808.3	706.1	1102.2
	" 3	206.8	286.1	1872.9	706.2	1166.7
	4	207.7	287.0	1877.6	706.2	1171.4
	N Baldface 2	200.8	280.1	1422.9	706.1	716.8
	S Baldface	204.3	283.6	1393.7	706.2	687.5
	Eastman	211.0	290.3	1426.6	706.2	720.4
	Gable	216.3	295.6	1483.7	706.3	777.4
4 44	10.0 29.2	216.3	–	705.0	704.5	–

July 2, 1886. Wm

	Kearsarge range diff.	229.7	308.2	1421.6	706.4	715.0	
	Deathshead. N	230.2	309.5	1540.3	706.4	833.9	
	" S ledge	232.2	311.5	1561.4	706.5	854.9	
	another count ? long tree diff	232.2	311.5	1551.8	706.5	845.3	
	Gemini diff	230.6	309.9	1427.8	706.4	721.4	
	" "	231.5	310.8	1414.3	706.4	707.9	
	Kear. Bartlett	235.2	314.5	1409.2	706.5	702.7	
		"	~~314.5~~ "	1409.3	706.5	702.8	
	Kear. [illegible] house	238.3	317.6	1286.8	706.6	580.2	
		"	"	1286.2	706.6	579.6	
		"	"	1286.7	706.6	580.1	
4 57	11.3 30.3	238.4	–	705.0	706.1	–	
	11.6 30.6	263.3	–		708.3	–	
	Sash cuts off at 264						
	Ofran	260.9	340.2	1734.6	706.9	1027.7	
	9.7 28.6	110.0	–	705.0	704.1	–	
	Adams 1	110.2	189.5	1130.3	425.7	706.1	424.2
				1130.5	46 425.9		424.4
	~~10.4 29.6~~			1130.5	425.9		424.4
	10.4 29.6	110.2	–	705.0	705.0	–	
	Adams 2	103.4	182.7	1298.9	706.2	592.7	
	Adams 1	110.3	189.6	1130.7	706.1	424.6	
	Madison	118.9	198.2	1346.2	706.1	640.1	
	Bald?	161.1	240.4	1339.5	705.9	633.6	
	Carter 1	167.3	246.6	1377.7	705.9	671.8	
	" 4?	172.2	251.5	1384.9	705.9	679.0	
	9.7 28.8	172.4	–	705.0	704.0	–	
	9.8 29.0	210.0	–	705.0	704.2	–	
	Carter Dome pk	187.4	266.7	1406.7	706.0	700.7	
	" " Clapp ton signal	192.7	272.0	1384.2	706.0	678.2	
5 18	" " 3	199.2	278.5	1582.3	706.0	876.3	

July 2, 1886

	N Baldface	200.7	280.0 1424.3		706.1	718.2
	S Baldface diff	204.4	283.7 1398.2		706.2	692.0
	"	"	" 1399.2		706.2	693.0
	Eastman	210.9	290.2 1426.6		706.2	720.4
	Sable	216.4	295.7 1483.6		706.3	777.3
	Kearsarge	238.3	317.6 1286.6		706.6	580.0
5 25	10.4 29.6		"	705.0	705.0	
	12.3 31.4		0.0	705.0	707.5	
	11.1 30.3		60.0	"	705.9	
	9.7 29.2		120.0	"	704.3	
	9.5 28.6		180.0	.	703.7	
	10.7 29.7		240.0	"	705.6	
	12.0 31.3		300.0	"	707.2	
	12.6 31.6		0.0		707.8	
5 30	Ended					

Air uniformly hazy smoky obscuration of objects at distant but Kearsarge (N) (P.(1)) difficult

To reduce zeros of July 2 to that of July 5 add $0^\circ.5$

$\frac{99+64}{21+13} = \frac{\text{sum diff.}}{\text{no. obs.}}$

July 5. 1886 M

7 4O. Still hazy but clearer than on July 2.

	11.0	30.8	0.0	705.0	706.2		
	11.6	314	600	"	707.0		
	11.4	313	1200	"	706.8		
	10.3	312	1800	"	706.0		
	9.8	297	2400	"	704.7		
	10.1	299	3000	"	705.0		
	11.1	310	3600	"	706.4		
	11.6	314	1100	705.0	707.0		
Adams.1	189.4	110.6	1131.3		424.8	707.3	424.0
"			1131.6		425.1	"	424.3
"			1131.4		424.9		424.1
	11.0	30.6	1106	705.0	706.0		
Adams 2.	182.6	103.8	1300.0			707.3	592.7
Adams ~~Jefferson Madison~~	189.4	110.6	1132.2		707.3		424.9
~~Jefferson~~ Madison	198.2	119.4	1348.0		707.3		640.7
Pine	213.4	134.6	2056.4		707.3		1349.1
Jk. Lizard	233.2	154.4	1654.4		707.2		947.2
Moriah	245.3	166.5	1373.6		707.0		666.6
Shelburne Moriah	240.5	161.7	1341.5		707.0		634.5
	10.4	30.1	⊥ 1616	705.0	705.3		–
	9.7	29.4	– 2066	705.0	704.6		–
Carter 1	245.8	167.0	137.86	707.0	671.6		
"	249.5	170.7	13853	707.0	678.3		
"	250.4	171.6	13976	707.0	690.6		
"	251.5	172.7	13866	707.0	679.6		
Post		175.3					
		179.1					
Lizard }	261.1	182.3	13354	706.8	628.6		
} diff			13376	706.8	630.8		

July 5 1886 M

8 03	Carter Dome N	266.7	187.9	1407.4	706.6	700.8
	" " top Sig	272.1	193.2	1385.8	706.5	679.3
	base "		"	1389.2	706.5	682.7
	10.2 29.6	—	193.3	705.0	704.9	–
	low pk N Baldface	277.3	198.5	1524.2	706.4	817.8
	Carter Dome 3	278.4	199.6	1583.5	706.4	877.1
	Wildcat	279.2	200.4	1763.4	706.4	1057.0
	"	282.2	203.4	1809.1	706.3	1102.8
	"	285.0	206.2	1875.4	706.2	1169.2
	N Baldface	279.9	201.1	1423.4	706.3	717.1
	S Baldface	283.7	204.9	1392.7	706.3	686.4
	~~E~~ Royce	287.5	208.7	1478.2	706.2	772.0
	"	288.2	209.4	1480.4	706.1	774.3
	Eastman	290.1	211.3	1427.7	706.1	721.6
	Royce	294.2	215.4	1576.9	706.0	870.9
	Sable	295.6	216.8	1485.4	706.0	779.4
	Black ?	293.0	214.2	1766.6	706.0	1060.6
	"	295.3	216.5	1785.8	705.9	1079.9
	"	298.6	219.8	1786.7	705.8	1080.9
	9.4 29.2	—	219.8	705.0	704.1	– –
	9.2 28.7	—	260.0	"	703.6	– –
	Pleasant Mt ft	303.3	224.5	1488.2	705.7	782.5
	" " N diff	301.8	223.0	1515.2	705.7	809.5
	" Mn diff	303.2	224.4	1487.1	705.7	781.4
	Kear. range	308.2	229.4	1420.7	705.5	715.2
	"	308.8	230.0	1446.2	705.5	740.7
	Gemini 1	310.1	231.3	1425.1	705.4	719.7
	" 2	310.9	232.1	1415.6	705.4	710.2
	N Doublehead	309.4	230.6	1540.6	705.5	835.1
	S Doublehead	311.5	232.7	1554.4	705.4	846.0

July 5, 1886 M

8 26	9.6 29.1	—	232.6	705.0	704.1	–
	9.4 29.0	—	260.0	705.0	703.9	
	Eagle?	312.5	233.7	1871.4	705.4	1166.0
	"	313.8	235.0	1937.6	705.4	1232.2
	Tin	318.2	239.4	1802.6	705.2	1097.4
	Moun	322.4	243.6	1661.4	705.1	956.1
	"	322.8	244.0	1663.6	705.1	958.5
	Bartlett?	314.2	235.4	1410.4	705.3	705.1
	Kearsarge (N.)	318.6	239.8	1285.6	705.2	580.4
	"		"	1285.6	705.2	580.4
	9.4 29.0	—	239.8	705.0	703.9	–
	Hollis?	321.0	242.2	1412.5	705.2	707.3
	Ossipee	322.5	243.7	1315.2	705.1	610.1
	" ft.	325.2	247.4	1380.6	705.0	675.6
	"	327.5	248.7	1404.4	705.0	699.4
	Moun Hill	327.3	248.5	1815.6	705.0	1110.6
	Green low pk faint	329.1	250.3	2048.4	704.9	1343.5
	"	"	"	2057.6	704.9	1346.7
	Green	335.2	256.4	1881.4	704.8	1176.6
	"	338.5	259.7	1864.3	704.7	1159.6
	" top	341.2	262.4	1735.3	704.6	1030.7
	Patt.	—	265.0			
	"	—	268.7			
	9.2 28.6	—	264.4	705.0	704.1	–
	Open Shutter west.					
	9.0 28.6	—	268.4	705.0	703.4	—
	8.8 28.5	—	300.0	705.0	703.2	—
	[illegible]?	352.1	273.3	1691.4	704.4	987.0
	[illegible]?	358.8	279.8	1634.5	704.2	930.3
8 58		359.7	280.9	~~1963~~ 1930.4	704.2	1226.2

July 5. 1886 M

9 00	8.7 284	+		281.1	705.0	703.1	—
	9.1 286	—		330.0	705.0	703.5	—
	Bear.		359.1	280.3	12455	704.2	541.3
	ft		359.6	280.8	12464	704.2	542.2
	Silver Spring	? ✓	4.4	285.6	12425	704.1	638.4
	" "	✓	5.2	286.4	13493	704.1	645.2
	Tremont.	✓	10.0	291.2	12894	704.0	565.4
	"	✓	10.4	292.6	12972	704.0	593.2
	Parker Range		~~18.5~~ 358.5	279.7	1634.3	704.2	930.1
	" "		~~3~~ 2.7	283.9	1665.6	704.2	961.4
	" "	✓	3.8	285.0	1650.4	704.1	946.3
	2d range beyond	✓	6.8	288.0	1685.1	704.0	981.1
	" "	✓	7.7	288.9	1656.2	704.0	952.2
	Parker range?	✓	6.6	287.8	1616.3	704.0	912.3
	" "	✓	8.6	289.8	1676.3	704.0	972.3
	8.9 284	—		290.0	705.0	703.2	—
9 16	9.2 286	—		330.0	705.0	703.5	—
	Rangers ft.	✓	3.2	284.4	1132.1	704.1	428.0
	diff	✓	"		1132.4	704.[illegible]	428.3
	Pass. 2	✓	8.5	289.7	1105.3	704.0	401.3
	Pass. 1	✓	9.9	291.1	1021.3	704.0	317.3
	Whitman 1	✓	12.4	293.6	1015.6	703.9	311.7
	" 2	✓	12.7	293.9	1011.5	703.9	307.6
	Imp. 6?	✓	14.1	295.3	1057.2	703.9	353.3
	" 5	✓	15.0	296.2	1034.7	703.9	330.8
	"	✓	16.6	297.8	1034.9	703.9	331.0
	"	✓	17.7	296.9	1013.3	703.9	309.4
	"		18.6	299.8	1017.2	703.9	313.3
9 27	N. Imp.		20.2	301.4	1096.6	703.8	392.8
	9.6 283	—		301.6	705.0	703.6	—

July 5. 1886 M

9 30	88 284	—	301.4	705.0	703.1 —	
	9.2 28.6	—	340.0	705.0	703.5 —	
	Black cliff ft.	·20.9	302.1	988.7	703.8	284.9
	" " ft	"	"	987.1	703.8	283.3
	[illegible],	·16.9	298.1	1284.4	703.8	580.6
	Flatland ridge	·17.5	298.7	1425.6	703.8	721.8
	" "	·21.6	302.8	1404.4	703.8	700.6
	Nancy 2	·23.2	305.4	1387.5	703.8	683.7
	" 1	·26.0	307.2	1309.7	703.7	606.0
	Anderson	·26.2	307.4	1284.3	703.7	580.6
	Lowell	> ·27.4	308.6	1312.2	703.7	608.5
	Willey range	·24.4	305.6	1109.7	703.8	405.9
	" "	·25.6	306.8	1095.2	703.7	391.5
	" "	·27.2	308.4	1106.8	703.7	403.1
	Carrigain 2	·28.9	310.1	1102.7	703.7	399.0
	" 1a	·29.9	311.1	1050.4	703.7	346.7
	" 1b	·30.1	311.3	1049.7	703.7	346.0
9 47	83 27.4	—	311.3	705.0	702.1 —	
	89 28.3	—	350.0		703.1 —	
	Osceola ft.	·30.2	311.4	1020.0	703.7	316.3
	"	·30.6	311.8	1019.8	703.7	316.1
	~~Sec~~ Tecumseh	·30.9	312.1	1008.3	703.7	304.6
	Osceola	·32.1	313.3	991.4	703.7	287.7
	"	·33.0	314.2	1003.4	703.7	299.7
	" sub.	·33.6	~~314.8~~ 314.8	1015.3	703.7	311.6
	Hancock	·32.7	313.9	1130.4	703.7	426.7
	" flat.	·33.5	314.7	1107.3	703.7	403.6
	" pk.	·33.6	314.8	1078.6	703.7	374.9
	" lower sub.	34.9	316.1	1105.4	703.6	401.8
	" top	36.2	317.4	1062.4	703.6	358.8

July 5. 1886 M

9 59		9.6	29.1	—	317.7	703.0	702.1	—
		10.2	29.4	—	350.0	703.0	702.7	—
	Scar Ridge range			·37.0	318.2	1082.1	703.6	378.5
	"			·37.8	319.0	1104.1	703.6	400.5
	"			·38.1	319.3	1112.1	703.6	408.5
	"			·38.6	319.8	1119.7	703.6	416.1
	"			·39.1	320.3	1098.5	703.6	394.9
	Hancock peaks			·39.5	320.7	1135.2	703.6	431.6
	Scar ridge			·40.4	321.6	1061.4	703.6	357.8
	" " diff			·41.0	322.2	1058.6	703.6	355.0
	Hancock range, [illegible] diff			·41.1	322.3	1150.8	703.6	447.2
	" "			·43.4	324.6	1223.8	703.6	520.2
		9.6	29.0	—	324.8	703.0	702.1	—
		10.2	29.4	—	345.0	703.0	702.7	—
	Lean summit for Webster			26.2	307.4	2021.4	703.6	1317.8
	~~[illegible] ridge~~ beyond			·33.6	314.8	1863.2	703.6	1159.6
	"			·34.5	315.7	1856.1	703.6	1152.5
	Webster.			·39.0	320.2	~~1197~~ 1717.6	703.6	1014.0
	Clinton [illegible] ?			·45.1	326.3	1983.4	703.6	1279.8
	Pleasant			·48.5	329.7	2112.2	703.6	1408.6
	Willey.			·44.2	325.4	1390.8	703.6	687.2
	"			·47.2	328.4	1435.6	703.6	732.0
	~~Tom~~ Field			·51.4	332.6	1390.6	703.6	687.0
	Tom			·59.6	340.8	1484.3	703.6	780.7
		9.6	28.8	—	340.8	703.0	701.9	—
	~~[illegible]~~ ~~Big~~ Coolidge ?			·49.9	331.1	1178.7	703.6	475.1
	" " peak			·51.1	332.3	1109.2	703.6	405.6
	Big Coolidge ?			·53.6	334.8	1083.8	703.6	380.2
	S. J. Bond			·51.4	332.6	1176.5	703.6	472.9
	S. Bond			·52.6	333.8	1116.3	703.6	412.7

July 5 1886. M

	Bench	.54.4	335.6	1052.4	703.6	348.8
	9.4 28.6	—	333.6	703.0	701.7	—
	[illegible]	.55.2	336.4	1018.3	703.6	314.7
	N Bench	.56.1	337.3	1075.6	703.6	372.0
	Distillery top	.57.6	338.8	998.2	703.6	294.6
	Engine 1	.58.1	339.3	1085.5	703.6	381.9
	" 2	.58.4	339.6	1087.2	703.6	383.6
	S.S. [illegible]	.63.9	345.1	1051.5	703.7	347.8
	S [illegible]	.65.4	346.6	1017.4	703.7	313.7
	N [illegible] [illegible]	68.5	349.7	1079.6	703.7	375.9
	Haycleuch	69.3	350.5	1043.3	703.8	339.5
	N [illegible]	69.5	350.7	1049.4	703.8	345.6
	Pest	~~71.6~~	352.8		703.8	—
10 44	9.6 27.9	—	352.8	703.0	701.3 —	—
	9.6 28.9	—	345.0	703.0	702.0 —	—
	S End [illegible]	.62.3	$3\overset{4}{1}3.5$	964.7	703.7	261.0
	[illegible]	.63.7	$34\overset{4}{8}.9$	919.1	703.7	215.4
	Shed	.64.6	345.8	933.0	703.7	229.3
	[illegible] top	.65.9	347.1	897.3	703.7	193.6
	" N.	.67.1	348.3	926.4	703.7	222.7
	" top	.65.9	347.1	897.4	.703.7	193.7
	9.4 28.4	—	348.1	703.0	701.5 —	
	11.6 30.6	—	300	703.0	704.5 —	
	[illegible] ?	103.6	24.8	1868.6	704.7	1163.9
	Chimney	111.3	32.5	1493.6	705.0	788.6
	" top	113.0	34.2	1448.3	705.0	743.2
	[illegible] Head top	116.6	37.8	1540.3	705.3	835.0
	10.3 29.2	—	37.4	705.0	704.7 —	
11 0	11.6 30.7	—	600	705.0	706.5 —	

July 5 1886 M

	Star King 3			147.2	68.4	1332.0	706.8	625.2
	"			149.5	70.7	1280.5	706.8	573.7
	" 62?			150.4	71.6	1247.7	706.8	540.9
	"			153.4	74.6	1242.1	706.9	535.2
	"			154.1	75.3	1245.8	706.9	538.9
		11.0	30.2	—	69.2	707.0	707.8 —	
		10.4	29.6	—	110.0	710.0	710.0 —	
						~~710.0~~		
		10.4	29.7	—	110.0	710.0	710.1 —	
	Adams			189.5	110.7	1135.2	707.3 424.6	427.9
						1134.8	707.3 42~~3.8~~ 4.2	427.5
						1134.7	707.3 42~~3.7~~ 4.1	427.4
		9.7	29.0	—	110.7	712.0	711.1	
		9.6	28.7		0.0	705.0	703.9	
		9.3	28.3		60.0	710.0	707.6	
		11.1	30.2		120.0	710.0	710.9	
		9.8	28.9		180.0	710.0	709.1	
		10.1	29.3		240.0	705.0	704.6	
		8.6	27.6		300.0	705.0	702.4	
11 17		9.7	28.7		0.0	705.0	704.0	
		13.9	33.3		0.0	700.0	47.2 37	704.8
		12.3	31.2		0.0	702.0	43.5 37	704.4
		10.4	29.4		0.0	704.0	39.8 24	703.9
		9.2	28.2		0.0	706.0	37.4 39	704.2
		7.8	25.7		0.0	708.0	33.5 17	703.6
		6.6	25.2		0.0	710.0	31.8	704.6

Ended at 11 20 Air moderately hazy. [illegible] clearly visible. Images very steady. Probably level changed in last group by observer touching leg supporting instrument

July 6, 1886.

9 50 Wind high. Moderately hazy
Definition fairly seen.

9.7	19.5	29.2	707.0	0.0	706.3
10.2	19.4	29.6	707.0	60.0	706.9
11.3	19.4	30.7	707.0	~~120.0~~ 163.0	708.3
11.4	19.2	30.6	707.0	180.0	708.3
9.8	19.6	29.4	707.0	240.0	706.5
8.7	19.7	28.4	707.0	300.0	705.1
8.9	19.2	28.1	707.0	0.0	705.0
9.9	19.4	29.3	707.0	60.0	706.5
11.3	19.3	30.6	707.0	120.0	707.6
11.4	19.2	30.6	707.0	180.0	708.3
10.3	19.3	29.6	707.0	240.0	706.9
9.0	19.5	28.5	707.0	300.0	705.3
9.0	19.2	28.2	707.0	0.0	705.1
11.0	19.4	30.4	707.0	110.1	707.9

Verticals.

10 25	10.4	19.2	29.6 —	707.0		180.2 —	707.0	
	Adams 1			1131.6	189.4	110.6 —	708.8	422.8
	≠			1132.2		=	1131.9	423.4
				1131.8				423.0
	10.4	16.2	26.6	707.0 —		110.6	705.0	—
	11.2	19.1	30.3	707.0 —		160.0	708.0	—
	Adams 2 [illegible]			1299.6	182.6	103.8	708.7	590.8
	Col. Adams Madison —			1731.4	194.1	115.3	708.9	1022.5
	Madison			1348.5	198.1	119.3	709.0	639.5
	10.8	19.7	30.0	707.0 —		"	707.5	—
	11.4	19.1	30.5	707.0 —		170.0	708.3	—
	Moriah			1379.4	240.4	161.6	709.3	670.1
	Moriah Shel.			1341.6	240.5	161.7	709.3	632.3

July 6. 1886 6

10.36	Carter.	1380.8.	246.6	167.8.	709.3	671.5	
	" .	1387.7.	249.4	170.6.	709.3	678.4	
	" .	1389.4	251.5	172.7.	709.2	680.2	
	N. Carter Dome.	1410.8	266.5	187.7.	709.0	701.8	
	Carter Dome base cliff.	1391.3	272.0	193.2.	709.0	682.3	
	10.8 19.3 30.1	707.0	—	198.2.	707.6 —		
	9.6 19.4 29.0	707.0	—	240.0.	706.1 —		
	Carter Dome –	1585.6	278.4	199.6	708.8	876.8	
	Wild Cat –	1765.5	279.2	200.4	708.8	1056.7	
	Wild Cat –	1811.6	282.2	203.4	708.7	1102.9	
	" "	1876.5	285.0	206.2	708.7	1167.8	
	North Baldface –	1426.4	280.0	201.2	708.8	717.6	
	S. Baldface	1395.8	283.7	204.9	708.7	687.1	
	Eastman	1429.9	290.0	211.2	708.6	721.3	
	Sable.	1487.3	295.7	216.9	708.5	778.8	
	Doublehead S.	1554.6	312.5	233.7	708.1	846.5	
	" " N.	1542.3	309.4	230.6	708.1	834.2	
	Kearsarge Range ft.	1424.3	308.2	229.3	708.1	716.2	
	Gemini –	1427.4	310.1	231.3	708.1	719.3	
	"	1415.6	310.8	232.0	708.1	707.5	
	Bartlett (?)	1409.8	314.2	235.4	708.0	701.8	
	Kearsarge Base of house	1286.8	317.5	238.7	707.9	578.9	
	" "	1287.2			"	579.3	
	" "	1287.3				579.4	
	9.64 19.4 29.0	707.0	—	238.6	706.1		
	10.4 19.2 29.6	707.8 ~~707.0~~	—	110.6	707.0		
	Adams. 1	1131.6	289.4	110.6	708.8	1131.8	707.3
	"	1131.6				706.8	
	"	1132.3				425.0	
	10.2 19.2 29.4	707.0	—		706.7		

July 6 1886. ☉.

All the above readings are with instrument

E p.

E v. 10.4 19.2 29.6. 707.0 707.0
Adams — 1131.2 1130.9
1130.6 707.0
1130.8 423.9

10.58 10.4 19.2 29.6. 707.0 707.0
☉. p. 9.6 19.0 28.6 707.0 ~~705.5~~ 708.2 290.6
Adams — 284.5 290.6
284.5 ~~284.6~~ 284.6
284.4 ~~706.4~~ 707.6
~~424.8~~ 423.0
10.4 19.2 29.6 707.0 707.0
☉. v. 10.3 19.3 29.6 707.0 ~~706.9~~ 707.1
284.3 284.1 284.1
283.9 706.9 707.1
284.2 422.8 423.0
11.04 10.3 19.3 29.6 707.0 ~~706.9~~ 707.1

425.0 +1.3
423.9 +.2
423.0 −.7
423.0 −.7
423.7

Altitude Adams.

424.6 +.8 July 2. E p. 425.9
424.5 +.7 " " 425.8
423.6 −.2 July 5 " 424.9
423.0 −.8 " " 424.3
423.6 −.2 July 6 " 424.9
423.7 −.1 " " 425.0
50 $\frac{15-73}{6}$ " E v. 423.9
423.8 ± 0.5 " ☉ p. 423.0
" ☉ v. 423.0

∴ All the values of the level must be increased by 1.3

To reduce zero of July 6 to that of July 5 subtract 0°.03 ∴ $\frac{1-8}{21}$ To reduce to absolute az. add 79.3 on July 2, 78.8 on July 5 and 6.

July 12, 1886.

Diameter of table in C.S. room Mt-Washington	20" inches
Height " " above floor	3' 8"
" " " " window sill	4' 3"
Height sill above table	7"

A. Ht. Mt-Washington C.S. bolt.	6293
Ht. C.S. cistern above bolt.	24.3
	6317.

August 25, 1886.

Distribution of estimates of tenths July 1886

	July 2		July 5		July 6			
0		0	𝍸	5		0	.02	5
1	ll	2	𝍸 𝍸 ll	12		0	.05	14
2	𝍸 ll	7	𝍸 𝍸 𝍸 𝍸	20	llll	4	.11	31
3	𝍸 𝍸 ll	12	𝍸 𝍸 𝍸 𝍸 ll	22	𝍸 ll	7	.15	41
4	𝍸	5	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 llll	39	𝍸	5	.18	49
5	llll	4	𝍸 𝍸 lll	13	lllll	5	.08	22
6	𝍸 𝍸	10	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸	30	𝍸 𝍸	10	.19	50
7	𝍸 𝍸	10	𝍸 𝍸 𝍸	15	ll	2	.10	27
8	𝍸	5	𝍸 𝍸	10	𝍸 ll	7	.08	22
9	llll	4	ll	2	ll	2	.03	8
								269

June 27 Forenoon

Measurement of Micrometer screw of Mic. Level D upon the ~~circle~~ Merid. Circle. The tube of Microm. Level C (divested of glasses) is mounted in Y's of D, and the instrument placed on the nearly horizontal tube of the telescope of the Mer. Circ. This gives two spirit levels.

		Microscopes E	F	G	H	(R)	Level C Bubble		Level C Microm.	Level D Bubble		Level D Microm.
	4'	~~44~~ 47.0	39.0	~~65.4~~ 54.6	64.0	51.15	67.8	22.0	1-00.1	8.8	8.8	1-34.1
							69.4	23.8	0.1			
2°	~~58~~ 57'	~~82.1~~ 62.1	55.4	67.3	82.0	66.70	69.4	23.8	200.0	8.8	8.8	234.5
For Runs		64.2	~~65.6~~ 57.4	65.7	78.3	65.65	~~66.6~~ 67.0	~~24.0~~ 22.0	0.0			
3°	21'	28.3	20.9	33.6	44.8	31.90	69.8	23.8	~~300.9~~ 300.8	8.6	8.8	337.7
							68.6	23.8	0.8			
3°	44	25.0	15.6	31.6	39.6	27.95	68.0	23.2	399.9	8.8	8.8	437.0
							66.8	22.0	9.8			
4°	07	44.7	34.8	51.0	69.4	49.98	71.4	27.0	500.0	8.8	8.8	537.0
							71.0	26.8	0.0			
4	31	24.9	12.7	28.1	37.5	25.80	67.6	23.4	601.0	8.8	8.8	638.1
							68.0	23.6	1.0			
4	54	35.0	~~26.8~~ 25.8	42.6	48.0	37.85	67.8	24.0	701.0	~~4.6~~ 8.8	8.8	738.2
For Runs		37.0	26.2	40.5	49.6	38.33	~~67.8~~ 70.0	~~24.1~~ 26.2	1.0			

~~E. 54~~

44.90	-0.1	0.0
46.60	1.6	-0.1
46.60	1.6	-0.1
44.50	-0.5	0.0
46.80	1.8	-0.1
46.20	1.2	-0.1
45.60	0.6	0.0
44.40	-0.6	0.0
49.20	4.2	-0.2
48.90	3.9	-0.2
45.50	0.5	0.0
45.80	0.8	0.0
45.90	0.9	0.0
48.10	3.1	-0.1

June 27 Afternoon

		Micrometer				Mean of Micrometer	C			D		
		E	F	G	H		Bubble		Mic.	Bubble		Mic.
4	54	34.~~4~~2	23.2	40.1	47.0 8.4	38.54	68.6	24.4	700.9	8.8	8.8	738.2
				34.0	41.9	29.43	68.8	24.8	799.6	8.8	8.8	837.3
5	~~12~~ 17	~~30.1~~ 25.0	16.8				69.0	25.0	799.7			
	40	42.5	30.3	45.8	55.0	43.15	69.6	25.8	899.9	8.8	8.8	937.1
							68.2	24.8	899.8			
							~~72.8~~	~~29.2~~	~~1000.0~~	~~8.8~~	~~8.8~~	~~1037.1~~
6	0~~4~~3	~~0~~6 2.5	~~[illegible]~~ 55.0	70.5	~~75.2~~ 77.8	66.45	7~~5~~4.0	30.6	1000.0	8.8	8.8	1037.3
							72.0	28.6	1000.0			
	27	19.6	11.4	28.6	36.5	24.03	69.4	26.6	1100.0	8.8	8.8	1137.7
[illegible]		23.2	12.7	30.6	36.0	25.63	72.2	29.0	1100.0			
	50	32.3	21.0	36.7	4~~6.6~~5.8	33.95	76.4	33.6	1200.0	8.8	8.8	1237.1
							76.0	33.2	1200.0			
7	13	45.0	37.0	53.9	60.4	49.08	73.0	30.0	1300.0	8.8	8.8	1337.2
							77.~~8~~4	3~~5.0~~4.6	1300.0			
7	36	61.6	50.2	07.5	15.0	33.58	65.8	22.8	1400.0	8.8	8.8	1~~3~~437.2
							69.4	26.8	1400.0			
7	59	6~~3.5~~6.6	55.0	71.0	80.0	68.15	73.2	30.8	1500.0	8.8	8.8	1537.1
							69.0	26.4	1500.0			
4	54	29.1	19.3	36.4	42.~~8~~7	31.88	6~~4.5~~6.2	23.6	700.9			
	54	19.9	10.8	27.4	36.4	23.63	78.6	36.0	〃			

Means of Bubble ends.	Diff.—45.	Reduced Ditto
~~46.5d~~		
46.57d ~~46.53~~	+1.5	−0.1
46.8d ~~47.0d~~	1.8	−0.1
47.0d	2.0	−0.1
47.7d	2.7	−0.1
46.5d	1.5	−0.1
~~52.3d~~		
52.3d	7.3	−0.3
50.3d	5.3	−0.3
48.0d	3.0	−0.1
50.6d	5.6	−0.3
55.0d	10.0	−0.5
54.6d	9.6	−0.5
51.5d	6.5	−0.3
56.0d	11.0	−0.5
44.3d	−0.7	+0.0
48.1d	+3.1	−0.1
52.0d	7.0	−0.3
47.7d	2.7	−0.1
44.9d	−0.1	+0.0
57.3d	+12.3	−0.6

Ya Remer.

Coefficient for run very small ∴ I neglect to determine Error of Run.

June 28 (forenoon)

Level C		Micron Screen		
54.6	8.8	36.7	700.0	
78.6	33.2	55.9	701.0	19.2
56.4	10.8	33.6	700.0	22.3
~~49.0~~	~~03.8~~		~~700.0~~	
~~47.8~~	~~02.4~~		~~700.0~~	
48.8	04.4	26.6	700.0	
68.8	24.6	46.7	701.0	20.1
47.6	03.4	25.5	700.0	21.2
70.2	26.4	48.3	701.0	22.8
49.6	06.0	27.8	700.0	20.5
70.0	26.4	48.2	701.0	20.4
48.0	04.6	26.3	700.0	21.9
68.0	24.6	46.3	701.0	20.0
48.0	04.8	26.4	700.0	19.9
~~70.2~~ 68.8	26.8	47.8	701.0	21.4
48.0	05.0	26.5	700.0	21.3
50.8	09.6	30.2	699.0	
71.2	30.0	50.6	700.0	20.4
49.0	07.8	28.4	699.0	22.2
70.6	29.4	50.0	700.0	21.6
49.2	07.8	28.5	699.0	21.5
71.0	29.8	50.4	700.0	21.9
50.0	09.4	29.7	699.0	20.7
70.0	49.0	59.5	700.0	29.8
08.0	49.2	28.6	699.0	30.9
71.0	30.0	50.5	700.0	21.9
49.0	08.0	28.5	699.0	22.0
~~1435.2~~	~~549.8~~			21.16 Mean.

from p. 109
corr. for div.
of reading for 00.0

	°	′						″	c	O−C ″	″	dev.
1	2	34	51	9	12	−21	23 16		0	−9	−1	0
2	2	58	7	12	24	−17	23 15	+1	15	−8	0	0
3	3	21	22	24	36	−14	23 9	+6	30	−8	0	
4	3	44	31	36	48	−17	23 22	−13	45	−14	−6	−2
5	4	7	53	48	0	−7	23 19	+3	0	−7	+1	−2
6	4	31	12	0	12	0	23 14	+5	15	−3	+5	+1.0
7	4	54	26	12	24	+2	23 9	+5	30	−4	+4	+1.0
8	5	17	35	24	36	−1	23 11	−2	45	−10	−2	+.8
9	5	40	46	36	48	−2	23 23	−12	0	−14	−6	+.4
10	6	4	9	48	0	+9	23 18	+5	15	−6	+2	−2
11	6	27	27	0	12	+15	23 14	+4	30	−3	+5	−3
12	6	50	41	12	24	+17	23 14	0	45	−4	+4	−2
13	7	13	55		36	+19	22 39	−25	0	−5	+3	−5
14	7	36	34 +		48	+74	23 37	+2	15	~~−9~~ −11	−3	
15	8	0	11		0	+11			30	−19	−11	
							23 9	+5				
+ 14	7	37	4			+46	23 7	+2				

15)125(8″

$\frac{24-29}{15}$

±3″.5

53|15
45
80

∴ The mean value of one div. is 13″.95 of Micr. E and av. dev. of results ±3″.5

Sept 102
coll(R)

~~4° 54′ 38.″54~~

0°	04′	51.″15	100.0	134.1	35′	32″
2	58	06.70	200.0	234.5	59	42
3	21	31.90	300.7	337.7	21	22
3	44	27.95	399.8	437.0	44	28
4	07	49.98	499.8	537.0	7	50
4	31	25.80	601.0	638.1	31	11
4	54	37.85	701.0	738.2	{ 54	21
4	54	38.54	700.8	738.2	54	22
5	12 17(2)	29.43	799.6	837.3	17	26
5	40	43.15	899.8	937.1	40	42
6	04	06.45	999.7	1037.3	4	2
6	27	24.03	1099.8	1137.7	27	14
6	50	33.95	1199.5	1237.1	50	33
7	13	49.08	1299.6	1337.2	13	46
7	36	33.58×	1400.0	1437.2	36	31
8	00	08.15	1499.8	1537.1	0	7

7 36 34 1400
2 58 07 200
4 38 27 1200

~~18~~

278
60
16680
27
16707 | 12
13.92 ′
23′ 12″

4 38 57
278
60
16680
57
16737 | 12
13.95″
23°15

50 24
23 12
13 36
36 48

9 0

14
29
126
28
40.6

35

7 13 55
3 21 22
3 52 33
232
6
13.953
2

1400
23 20

×? 7

1890

Dec. 15, Forenoon

Micrometer Level B on cube of Merid^n Circle.

Micrometer readings for swinging of bubble.

End of bubble ~~toward~~ away from micrometer read first, both ends increasing from the micrometer, so that an increase of micrometer reading will be necessary to swing the bubble in middle when ~~first~~ mean bubble reading is in excess of 5

Microm.	Bubble	Mean	Circle Microscope	H.	F.	
~~267.0~~			°	′ ″	′ ″	
68.0	7.0 2.2	4.6	5	45 2 8.0	45 2 2.7	
467.5	7.4 3.0	5.2		30 0 28.2 ~~28 2~~	30 0 25.2	
2867.5	6.8 2.4	4.6		30 2 41.4	30 2 38.0	
~~(4)~~ 3267.	7.0 2.6	4.8	321	0 2 43.0	0 2 40.4	321°02′41.″7
(5) 2867.5 ~~2868.0~~	7.4 3.0	5.2	319	30 3 4.3	30 2 59.3	319°33′01.″8
~~(6)~~ 467.0 ~~467.0~~	7.6 3.0	5.3	310	20 0 33.5	20 0 30.9	310°20′32.″2
~~67.0~~	~~7.2 2.6~~		~~310~~	~~20 0 26.6~~	~~15 4 21.8~~	
67.5	7.0 2.6	4.8	308	45 2 52.7	45 2 49.8	308°47′51.″2
67.5	7.2 2.6	4.9	308	45 2 40.4	45 2 35.8	308°47′38.″1
468.0	7.0 2.4	4.7	310	15 5 14.3	15 5 10.1	310°20′12.″7
2867.5	7.6 3.0	5.3	319	30 2 47.6	30 2 43.7	319°32′45.″6
3267.	7.0 2.6	4.8	321	0 $\overset{2.2'}{1}$ 52.3	0 $\overset{2.2'}{1}$ 46.5	321°$\overset{+02'}{01'}$49.″4

Note. 67 and 467 are equidistant from 267, when the bubble swings during reversal in azimuth.

175
250

~~Subtracting~~ from 320° 17′ 51.″75

30 16
37 40

~~−0° 44′ 50.″7~~
~~+ 0 44 50.~~
~~9° 57′ 19½″~~

~~11° 30′ 00½″~~

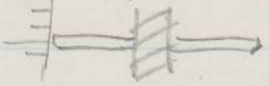
~~11° 30′ 13½″~~
~~9° 56′ 39″~~
~~+0° 45′ 06″~~
~~−0° 43′ 58″~~

D

1890

Dec 16 Forenoon Micrometer-level D

Note. Placing micrometer head at 0 div. the scale mark of turns comes opposite the middle of the thickness of the head



Bubble swings for reversal in azimuth when micrometer reads 647.

~~147.0 11.0 11.2 112 40 1 42.8 40 1 40.3~~

					Mean	Bubble corr. to Microm.					
1	*	147.0	11.0	11.2	−.1	−.1	146.9	312°	40 1 42.8	40 1 40.3	41' 41".6
2	†	647.0	11.2	11.0	+.1	+.1	647.1	314°	35 0 57.8	35 0 56.3	35' 57".0
3	†	1147.0	11.4	10.8	+.3	+.4	1147.3	316°	30 2 17.0	30 2 13.4	32' 15".2
4	†	1647.0	10.8	11.4	−.3	−.4	1646.6	318°	25 2 42.5	25 2 39.6	27' 41".0
5	†	2147.0	11.2	11.0	+.1	+.1	2147.1	320°	20 2 31.0	20 2 28.5	22' 29".8
6	‡	2147.0	11.0	11.2	−.1	−.1	2146.9	320°	20 2 24.5	20 2 22.8	22' 23".6
7	§	1647.0	11.6	10.8	+.4	+.6	1647.6	318°	30 0 20.0	30 0 17.8	30' 18".9
8	§	1147.0	11.0	11.2	−.1	−.1	1146.9	316°	30 4 53.0	30 4 50.0	34' 51".5
9	§	647.0	11.4	10.8	+.3	+.4	647.4	314°	35 3 43.9	35 3 39.9	38' 41".4
10	§	147.0	11.2	11.0	+.1	+.1	147.1	312°	40 2 1.7	40 1 59.2	42' 00".4
11	†	147.0	10.8	11.4	−.3	−.4	146.6	312°	40 1 39.8	40 1 38.7	41' 39".2
12	†	1647.0	11.4	10.8	+.3	+.4	1647.4	318°	25 4 30.8	25 4 26.5	29' 28".6
13	†	2147.0	11.6	10.8	+.4	+.6	2147.6	320°	20 3 36.9	20 3 34.8	23' 35".8
14	§	2147.0	10.8	11.6	−.4	−.6	2146.4	320°	20 3 25.1	20 3 22.6	23' 23".8
15	§	647.0	11.4	10.8	+.3	+.4	647.3	314°	35 4 57.2	35 4 53.2	39' 55".2
16	§	147.0	11.2	11.0	+.1	+.1	147.1	312°	40 3 16.2	40 3 13.1	43' 14".6

*Micrometer probably moved downward in setting it. † Microm. moved upward.
‡ Microm. not disturbed since preceding. § " " downward.
Bubble reads + & −

~~N. B. April 1891. I have no doubt~~ think ~~these were settings on a collimator (not for swinging of bubble)~~

Setting.	Corrected Micrometer Diff	Circle Diff		Averages	
1 & 5	2000.2	7° 40′ 48″.2	Ascending	2000.0 7° 40′ 35″.7	
6 & 10	1999.8	7° 40′ 23″.2	Descending		
11 & 13	2001.0	7° 41′ 56″.6	Ascending	2000.15 7° 41′ 02″.9	
14 & 16	1999.3	7° 40′ 09″.2	Descending		
				2000.1 7° 40′ 49″.3	Coefficient = 13″.82

				Coefficient
1 & 3	1000.4	3° 50′ 33″.6	Ascending	13″.83
8 & 10	999.8	3° 52′ 51″.1	Descending	13.97
1 & 2	500.2	1° 54′ 15″.4	Ascending	13.71
9 & 10	500.3	1° 56′ 41″.0	Descending	13.99
15 & 16	500.2	1° 56′ 40″.6	Descending	13.99
2 & 3	500.2	1° 56′ 18″.2	Ascending	13.95
8 & 9	499.5	1° 56′ 10″.1	Descending	13.95
4 & 5	500.5	1° 54° 48″.8	Ascending	13.76
6 & 7	499.3	1° 52° 04″.7	Descending	13.47
12 & 13	500.2	1° 54′ 07.2	Ascending	13.69

D

Dec. 16 Evening. 1890 Micrometer reading which allows bubble to swing during reversal in azimuth now seems to be 653. So we will make 650 our zero for convenience.

1	2150.4 .8 .7 .5	~~323° 04'~~ ~~322° 59'~~ 10".5 322° 59' ~~12.3~~ 07.7	2150.6	322° 59' 09".1
2	1650.2 49.9 49.9 50.0	321° 04' 02.2 3 58.9	1650.0	321° 04' 00".5
3	1149.6 9.9	319 08 35".3 8 32.5	1149.7	319° 08' 33".9
4	649.9 50.0 50.2	317 12 25".3 22.6	650.0	317° 12' 24.0
5	149.7 50.0 (1)49.9	315 16 13.7 11.0	149.9	315° 16' 12".4
~~5~~ 6	2150.5 0.5 0.8 1.0	322° 59' 41.3 39.4	2150.7	322° 59' 40".4
7	150.9 0.1 49.7 50.1	315 16 33.3 29.4	150.2	315° 16' 31".4

N.B. (~~Aff~~) Surely settings on collimator – not for moving bubble. (April 1891)

Series Continued

8	2149.6 9.8 9.9 9.9	322 59 39.7 36.0	2149.8	322° 59' 37".8
9	150.3 0.0 0.0 49.8	315° 16 27.9 23.8	150.0	315° 16' 25".8

Temperature at close of series (11 P.M.) = 40° F.

Consider series 1 to 5 as giving differential results, while 5 to 9 give absolute.

5 & 6	2000.8	7°43' 28".0	Ascending	27808".0
6 & 7	2000.5	7°43' 09".0	Descending	789.0
7 & 8	1999.6	7°43' 06".4	Asc.	786.4
8 & 9	1999.8	7°43' 12".0	Desc.	792.0

5 & 6	6 & 7	7 & 8	8 & 9	
4.444170	4.443873	4.443826	4.443920	log Circle Diff
3.301204	3.301139	3.300943	3.300987	" Micro "
1.142966	1.142734	1.142883	1.142933	" Coefficient
13.898	13.891	13.896	13.897	Coefficient

Average log = 1.142879 Average coefficient = 13".896

1 & 5 { 7°42'56".7 = 27776".7 ; 2000.7

$$\begin{array}{r} 4.443670 \\ 3.301182 \\ \hline 1.142488 \end{array} = \log 13''.883$$

$$\begin{array}{r} \text{log tan} \\ 1.142879 \\ 1.142488 \\ \hline 0.000391 \end{array}$$

Differential series may be corrected by multiplying by factor whose log = 0.000391

Factor = 1.0009

Result most easily reached by subtracting the log of factor from the logs of Micron. Diff's.

	Micron. Diff.	Circle Diff	log Micr.	Corrected	log tan.	log ratio.	Ratio
2+1	−500.6	−1° 55′ 08.″6	2.699491	2.699100	8.525128	5.826028	0.000066993
2+3	+499.7	+1° 55′ 26.″6	2.698709	2.698318	8.526258	5.827940	67288
2+4	1000.0	3° 51′ 36.″5	3.000000	2.999609	8.829138	5.829529	67535
2+5	1500.1	5° 47′ 48.″1	3.176120	3.175729	9.006543	5.830814	67735

Above attempt to find ratio of tangent to screw shows it to vary systematically.

	Circle Diff.	log	log coeff.	Coefficient.	13.″845 + the following	
2+1	−6908.″6	3.839390	1.140290	13.″813	−.032	twice = .065
2+3	+6928.6	3.840645	1.142327	13.878	+.033	
2+4	13896.5	4.142900 2.6	1.143291	13.909	.064	~~1/2 = .032~~
2+5	20868.1	4.319483	1.143754	13.924	.079	2/3 = .053

If φ = vert. ang. (in seconds) from position for Micron = 650, and M = Micron. excess over 650.
Then $\varphi = 13.845 M + 0.000064 M^2$ holds up to 16 or 17 turns of screw.
(To test, remember that results of formula must be divided by 1.0009, or else the observed circle differences in series 1 to 5 inclusive must be multiplied by that factor, before subtracting "calculated" from "observed".)
"With such a law, of course the ratio of tangent to micrometer difference is far from constant, as found above.
Assuming the coefficients to have been correctly calculated above, the value of the formula may be tested at once; for Coefficient $= \frac{\varphi}{M} = 13.845 + 0.000064 M$

	M	0.000064M	Calculated Coeff.	Error	13.″85 + 0.00006 M	
1	−500.6	−0.032	13.813	.000	13.82	+.007
3.	+499.7	+0.032	13.877	−.001	13.88	+.003
4	1000.0	+0.064	13.909	.000	13.91	+.001
5	1500.1	+0.096	13.941	+.017	13.94	−.001

Simpler + Better. Extends throughout the scale.

Remember. The above at 40° Fahrenheit.

Tangents having failed, the possibility of chords was examined. In fact, however, the coefficient decreases faster than the ratio of sine to arc for the full angle.

Page 116 was wrong, because 4 and not 2 is the zero position.

	Microm. Diff.	Circle Diff.	log Microm.	Corrected	log tan.	log Ratio	Ratio 0.0000
4 + 5	-500.1	-1° 56′ 11″.6	2.699057	2.698666	8.529073	5.831407	67828
3 + 4	+499.7	+1° 56′ 09″.9	2.698709 ~~2.999870~~	2.698318 ~~2.999479~~	8.528967	5.830649	67709
2 + 4	1000.0	3° 51′ 36″.5	3.000000	2.999609	8.829138	5.829529	67535
1 + 4	1500.6	5° 46′ 45″.1	3.176265	3.175874	9.005221	5.829347	67507

		log Seconds	log Coeff.	Coefficient
4 + 5	-6971″.6	3.843332	1.144666	13″.953
3 + 4	+6969.9	3.843227	1.144909	13.961
2 + 4	13896.5	4.142906	1.143297	13.909
1 + 4	20805.1	4.318170	1.142296	13.877

This is not sufficiently regular to be expressed by a formula.

~~If φ~~ = Vert. Ang., M = Div. of Microm., $T = \frac{M}{100}$ = Turns all counted from the horizontal (when M = 650±)

~~$\log \tan \varphi = 5.83065 + 0.0001$~~ $\log \tan \varphi = (5.83103 + 0.0001T) + \log M$

$$\log \tan \varphi = \left(5.83103 + \frac{T}{10000}\right) + \log M$$

Example	-M.1	-0.0001T		log M (corrected)	
5	-500.1	+0.00050	5.83153	2.69867	8.53020
4	0	0	5.83103	~~1.00000~~	
3	+499.7	-0.00050	5.83053	2.69832	8.52885
2	1000.0	-0.00100	5.83003	2.99961	
1	1500.6	-0.00150	5.82953	3.17587	

67828		5.831407	
67709	119	30649	758
67535	174	29529	1120
67507	28	29347	182

Dec. 17, 1890 Evening.

D

Multiples of 5' will be disregarded to save time.

												Microm.	Angle.	
1	057.0		4'	17.4"	13.5"	15.4"								
2	150.4	150.7	2	32.3	29.2	30.8	33.0"	150.6	2'	31.9"		-499.9	-8'47".3	-527.3
3	250.4	250.6	0	52.8	48.4	50.6	51.9	250.5	0*	51.2		-400.0	-7 06.6	-426.6
4	350.9	350.9	4	15.0	11.1	13.0	00.2	350.9	4	06.6		-299.6	-5 22.0	-322.0
5	450.5	450.5	2	12.0	07.7	09.8	12.0	450.5	2	10.9		-200.0	-3 26.3	-206.3
6	550.0	550.6	0	20.7	17.3	19.0	28.6	550.3	0	23.8		-100.2	-1'20".8	-80.8
7	650.6	650.4	3	49.5	45.1	47.3	42.0	650.5	3	44.6		~~+100.0~~ 0	0	0
8	750.8	750.2	2	06.2	03.7	05.0	1' 55.7"	750.5	2	00.4		+100.0	+1'44".2	+104.0
9	849.8	850.4	0	05.3	02.9	04.1	12.5"	850.1	0	08.3		199.6	3 36.3	216.3
10	950.0	950.0	3	25.2	21.3	23.2	24.2	950.0	3	23.7		299.5	5 20.9	320.9
11	1050.1	1050.1	1	46.0	42.8	44.4	38.4	1050.1	1	41.4		399.6	7 03.2	423.2
12	1150.2	1150.0	4	55.3	52.0	53.6	49.8	1150.1	4	51.7		499.6	8 42.9	522.9
13	1250.0	1250.4	2	56.3	54.0	55.2	3'05.8"	1250.2	3	00.5		599.7	10 44.1	644.1
14	1350.5	1350.0	1	19.8	16.4	18.1	03.9"	1350.2	1	11.0		699.7	12 33.6	753.6
15	1450.0	1450.2	4	14.3	10.9	12.6	15.0	1450.1	4	13.8		799.6	14 30.8	870.8
16	1549.8	1550.0	2	13.7	10.3	12.0	12.6	1549.9	2	12.3		899.9	16 32.3	992.3
17	1650.0	1649.9	0	14.0	11.0	12.5	14.1	1650.0	0	13.3		999.5	18 31.3	1111.3
18	1750.0	1750.4	3	17.8	14.6	16.2	17.6	1750.2	3	16.9		1099.7	20 27.7	1227.7
19	1850.7	1850.3	1	24.4	21.2	22.8	17.4	1850.5	1	20.1		1200.0	22 24.5	1344.5
20	1950.5	1950.1	4	20.4	16.6	18.5	07.9	1950.3	4	13.2		1299.8	24 31.4	1471.4
21	2049.5	2050.1	1	54.1	52.1	53.1	2' 05.7"	2049.8	1	59.1		1399.3	26 45.5	1605.5
22	2149.7	~~2149.9~~ 2150.0	4	54.3	49.4	51.8	4' 56.4"	2150.0	4	56.4		1499.5	28'48".2	1728".2
23	2150.4	?	0	02.1	00.1	01.1								
24	1650.0		0	01.5	(5)8.6	0'00".0								
25	1150.0		4	37.8	34.3	36.0								
26	649.9		3	22.1	18.0	20.0								
27	149.3 next	149.6	3	09.2	06.0	07.6 ~~next~~	08.2"							

Series continued on next page.

Series continued from previous page.

28	149.9		3′ 10.″2	07.″3		08.8	
29	2149.0	2149.8	4 57.0	53.5		55.2	0ᵈ 03.″8
30	2150.6		0 13.7	11.1		12.4	
31	149.3	~~149.4~~	~~2~~ 1 58.4	54.6	Minute specially noted	56.5	
32	149.6	149.6	2 25.6	22.2		23.9	2′ 17.″2
39	150.0		2 32.2	30.0		31.1	

Temperature throughout the series = 40° F.

When braces do not indicate averages of consecutive observations, the red figures are the average of the two black figures, one on the line next preceding and one on the line next following.

The means of red and black, placed on right of wavy red line, give a sort of "smoothed curve", which may be further corrected to conform to absolute scale and to conform to the other means at every five turns. ~~First, however, the zero point (set No. 7) was subtracted, supplying the omitted multiples of 5′ and the result placed at the right hand of the page (118).~~

On page 115 we found for temp. 40° F the average coefficient 13.″896 (log = 1.142879) from 150 to 2150 on the micrometer scale.

Let us now ~~take~~ Σ^* (2) for the "smoothed curve" figures on the line of observation 2 etc.

~~(2)~~, (27,8), (32) (Averages) 149.93 2′ 39.″1

(22,3), (29,30) " 2149.90 0′ 00.″1

1999.97 2′ 39.″0 i.e. 7° 42′ 39.″0 = 27759.″0 log = 4.443404

log 1999.97 = 3.301028

~~1.140028~~ 1.142376

From Dec. 17's work ~~we~~ accordingly got an average coefficient for the same range = ~~13.880~~ 13.″880 (log = 1.142376)

$$\begin{array}{r} 1.142879 \\ 1.142376 \\ \hline 0.000503 \end{array}$$

Let us adopt for the absolute coefficient at 40° F for micrometer range 50 to 2150 (and 150 exactly conforming)

13.″890 log = 1.14270

$$\begin{array}{r} 1.142702 \\ 1.142376 \\ \hline 0.000326 \end{array}$$

Then we are to add 0.000326 to our logs of work of Dec. 17.

~~However, we may not have occasion to use this logarithmic correction~~
~~throughout.~~

(2) + (7) 499.9 3′47.″3 i.e. 1°53′47.″3 = 6827.3 log arc 3.836181
[26] + (27,8) 500.3 4′48.″2 1°54′48.″2 = 6888.2 " mic. 2.699057
500.1 6857.75 1.137124
~~326~~
~~1.137450~~

~~(2) + (12)~~ ~~999.5 2′40.″2 i.e. 3°52′40.″2~~
~~[25] + (27,8)~~ ~~1000.7~~

(7) + (12) 499.6 3′52.″9 1°53′52.″9 6832.9 log arc. 3.834351
[25] + [26] 500.1 3′44.″0 1°53′44.″0 6824.0 " mic. 2.698840
499.85 6828.9 1.135511
~~326~~
~~1.135837~~

~~(17) + (22,3)~~
(17),[24] + (22,3) 500.0 0′10.″2 1°55′10.″2 6910.2 log arc. 3.839491
" mic. 2.698970
1.140521
~~326~~
~~1.140847~~

(2) + (22,3) 1999.4 2′33.″5 7°42′33.″5 27755.5 log arc 4.443349
log mic. 3.300900
1.142449

The interval 1150 to 1650 has not been convenient to directly calculate

1.142449
4
4.569796
3.413156
1.156640

1.137124
1.135511
1.140521
3.413156

[Continued from opposite page.]

For whole range
7° 22′ 31.9
4′ 56.4
7° 17′ 45.5
60
437
60
1999.4) 26265.5 (13.137
19994
62715
59982
27330
19994
73360
59982
133780

Combination	Coefficient	Range
(2) + (7)	13.057	150 to 650
(7) + (12)	13.076	650 " 1150
(12) + (17)	13.159	1150 " 1650
(17) + (22,3)	13.236	1650 " 2150
(2) + (22,3)	13.137	150 " 2150

~~(22,3) + (17) 500.0 1° 50' 16.9~~ Some greater care will be necessary to avoid errors of 5". As absolute circle readings are an immaterial ~~may be anything~~, call the readings for "micrometer" at 2150 the actual circle readings. Then we have

(22,3) 4 56.4
22 02.7
(21) 25'+1' 59.1
22 14.1
(20) 45'+4' 13.2
22 06.9
(19) 1°10'+1' 20.1
21 56.8
(18) 1°30'+3' 16.9
21' 56.4
(17) 1°55'+0' 13.3

(17) 1°55'+0' 13.3
21' 59.0
(16) 2° 15'+2' 12.3
22' 01.5
(15) 2° 35'+4' 13.8
21' 57.2
(14) 3° 00'+1' 11.0
21' 49.5
(13) 3° 20'+3' 00.5
21 57.2
(12) 3° 40'+4' 51.7
~~21' 49.7~~
~~(11) [illegible]~~
(12) 3° 40'+4' 51.7
21 49.7
(11) 4° 05'+1' 41.4
21 43.3
(10) 4° 25'+3' 23.7
21 44.6
(9) 4° 50'+0' 08.3
21 52.1
(8) 5° 10'+2' 44.4
21 [illegible]
(7) 30'+3' 44.6

(7) 5° 30'+3' 44.6
21 39.2
(6) 55'+0 33.8
21 47.1
(5) 6° 15'+2 10.9
21 55.7
(4) 35'+4' 06.6
21 44.6
(3) 7° 00'+0 57.2
21 40.7
(2) 7° 20'+2' 31.9

Evidently about 22' is the correct arc for 1 turn, rather than 5' more or less.

This is the sum of the five intervals added at the left }
1° 55' 13.3
4' 56.4
1° 50' 16.9
60
110
60
500.0) 6616.9
13.236

3 44 51.7
1 55 13.3
Confirmed by adding five at left } 1° 49' 38.4
60
109
60
499.9) 6578.4 (13.159
4999
15794
14997
7970
4999
29710
24995
47150

5° 33' 44.6
3° 44' 51.7
1° 48' 52.9
60
108
60
~~499.6~~) 6532.9 (~~12.976~~
4996
15369
14988
[illegible]
38060
34972
30880

499.6) 6532.9 (13.076
4996
15369
14988
38100
34972
3128

~~7° 19' 31.5~~
~~5° 33~~

7° 22' 31.9
5° 33' 44.6
1° 48' 47.3
60
108
60
499.9) 6527.3 (13.057
4999
15283
14997
28600
24995
36050

Mch. 4, 1897

Determination of the level constant of the Russian Transit Level. The level is hung on the arm of the Meridian Circle that carries the index.

Being repeated since the microscopes not in use for Meridian Circle work, I am limited to the lower southern one, as the gas will not turn on to light the field of the upper northern one.

Bubble at N. end of level tube
Level readings.

N.	S.	
37.7	25.2	62.9
37.5	25.5	63.0

Microscope set upon circle divis. 229°45'

	Unit for mid. 24	vv
6' 24".7	+2.7	0.~~2209~~ 072
6' 24".9	+4.7	0.2209
24.5	+0.7	0.0049
24.1	-3.3	0.1089
24.0	-4.3	0.1849
24.5	+0.7	0.0049
24.3	-1.3	0.0169
24.2	-2.3	0.0529
24.8	+3.7	0.1369
24.3	-1.3	0.0169
10) 4.3		[vv]=0.8210
24.43		

Least Square determination. See Chauv. Vol. II p. 497

$$\varepsilon = \sqrt{\frac{0.821}{9}} = 0''.302$$ mean error

$$r = 0''.302 \times 0.6745 =$$
$$= 0''.204$$

probable error of a single setting.

$$r_0 = \frac{0''.204}{\sqrt{10}} = 0''.06$$

probable error of the [illegible] of the settings.

Telescope is moved so that bubble goes to the south end of level tube.

Level readings.

N.	S.		
21.6	41.3	62.9	5' 50".1
			5' 49.0
			5' 50.0
			5' 49.8 9
			5' 48.8
			48.9
			48.9
			48.2
			48.9
			49.1
			10) 1.8
21.4	41.6	63.0	49.18

6' 24".43
5' 49.18
0 35".25 Motion of circle

37.7 37.5 41.3 41.6
21.6 21.4 25.2 25.5
16.1 16.1 16.1 16.1

Motion of bubble

16.1) 35.25 (2".189 or
322
305
161
1440
1288
1520
1449

$\frac{2''.189}{15} = 0^s.146$ value of one division of the level of the Russian transit.

April 1, 1897

A second observation for determining the level constant of the Russian Transit Level. Adjustments as in preceding observation. The gas has been fixed so that the upper northern microscope can be read.

Bubble at N. end

Level readings.

Circle reading 229°45'

N.	S.	Lower S. Micros.	Upper N. Micr.
36.9	25.2	6' ~~8'~~ 20".0	
36.9	25.2	~~6' 00".0~~	6' 00".0
36.6	25.6	6' 19".6	
36.6	25.5	~~6' 00".6~~	6' 00".6
36.6	25.6	6' 20".2	
36.5	25.6	~~6' 00".0~~	6' 00".0
6) 0.05	6) 0.07	3) -0.2	6' 00".2
36.68	25.61	20.0 - 0.07 = 19.93	
		6' 19".93	

April 1. 1897.

Telescope is now moved enough to make the bubble go to the South end of tube.

Bubble at S. end
Level readings.

N.	S.	Lower S. micro.	Upper N. micr
21.4	40.6	5' 48".1	
21.3	40.7		5' 23".3
21.3	40.7	5' 47".7	
20.9	41.1		5' 24".5
		~~5' 46".8~~	
20.9	41.0		
		5' 46".9	
20.9	41.0		5' 23".0
20.9	41.1		

6) 1.3
20.9+0.22 = 21.12

6) -.9
41.0 − 0.15 = 40.85

3) +1.7
47.0 + .56
5' 47".56

3) +0.3
23.5 +0.10
5' 23".60

36.68
21.12
15.56
15.24
15.40

40.85
25.61
15.24

6' 19".93
5' 47".56
32".37
36".60
2) 68.97
34.48

6' 00".2
5' 23".6
36".6

15.4) 34.48 (2".239
308
368
308
600
462
1380

15) 2.239
0".149 = value of one division of level of Russian Transit.

April 1, 1897.

Error of runs.

	Lower S. Microm.	Upper N. Microm
229° 45'	5' 48".2	
229° 40'	0' 49".2	
	-1".0	
49° 40'		0' 21".8
45'		5 25".2
		5) +3".4
		+0".68
204° 5'	0' 13".5	
0'	5 10.9	
	+ 1".9	
24° 5'		4' 43".7
10		9 47.2
		5) +3".5
		~~+0.68~~
		+0.70
		+0.68
		+0".69