

Observation on Wind-  
 Sunday, April 18, 1909.

11:22 a.m. - Feeg. 400.1 mi.  
 W.B. 562.8

Thurs 8:30 a.m. Time 70 hrs.  
 Total mileage  
 U.S.W.B. 602.25  
 Feeg. 317.1  
 W.B. 1758.75

Sat. Apr. 17. 5:45 p.m.  
 W.B. 381  
 Feeg. 194  
 Feeg. 1856.9

av. Feeg. 26.5 mi. per hr.  
 W.B. 25.1 mi. per hr.  
 1.4 mi. per hr.

Sat. 5:45 p.m. - Sunday 11:22 a.m.			
Feeg. 194	-	400.1	Total 286.1 181.8
W.B. 381	-	562.8	

av. Feeg. for 17 hrs = 12.1 mi. per hr.  
 W.B. " = 10.7 mi. per hr.  
 diff. = 1.4 mi. per hr.

Note - Pen on sheets of Feeg. Mts. has  
 traveled Sat. 5:45 p.m. - Sunday 11:22  
 a.m. 104 m.m. or 208 mi.  
 total records 206.1 mi.

Sat. Apr. 17 - 5:30 pm

Sund. " 18 - 11:22 am

17 hrs 8 min,

Meteor. 20 hrs

Gain 2. 52 min.

Net gain = .167

Thurs. April 15 - 8:30 am

Sat. April 17 - 5:30 pm

57 hrs.

Meteor. 69 hrs 12 min

Gain 12 hrs, 12 min,

Net gain - .214

Wed. Apr. 14 - 6:40 pm

Thurs. Apr. 15 - 8:30 am

13 hrs 50 min

Meteor. 16 hrs, 48 min

Gain - 2 hrs, 58 min.

Net gain .2147

Previous gain could not be determined, for drums were used during Mrs. Ferguson's experiments.

Class was wound Apr. 4 -  
with success it lost power  
& rapidly slurred down.

Need alcohol & clean pens; also blotting paper.

Thurs. Apr 22

6:15 pm, Thurs.

WB, 504.3

71 222.3

Apr 23

Fri, 9:47 am

WB, 708

Temp. 463.4

9.4 ) 103.4  
 94  
 ---  
 .94  
 94  
 ---  
 .

11

3/5 7/120

9.4 ) 120.7  
 94  
 ---  
 267  
 188  
 ---  
 790  
 752  
 ---  
 380  
 376  
 ---  
 4

24  
 3  
 ---  
 72

Apr. 20 - Tues. - 6 p.m. -  
 Apr 21 - Wed. 6:50 pm. -  
 -----  
 24 hrs 50 min -  
 Meteor. 30 hrs -

5 hrs 10 min  
 7:208  
 5 hrs 2 min  
 4

Apr 21 - Wed. 6:50 pm  
 Apr 22 - Thurs 7 am  
 -----  
 12 hrs 10 min.  
 Meteor. 15 hrs 12 min.

5 hrs  
 1998

Apr 22 - Thurs 7 am  
 " " 6:20 p.m.  
 -----  
 11 hrs 20 min  
 5 hrs 12 min  
 Loss 6 hrs 8 min  
 Out of loss, 541



Sunday Apr 18 - 11:22 am

Tue. Apr 20 6 pm

$$48 + 6 \text{ hrs. } 38 \text{ mins} = 54 \text{ hrs } 38 \text{ mins}$$

Clock - 67 hrs 12 mins.

Gain 12 hrs 34 mins  
in 54 hrs 38 mins

Gain ~~in 1 hr.~~ = .23 per cent.

U. S. DEPARTMENT OF AGRICULTURE,  
WEATHER BUREAU.

(Station) \_\_\_\_\_

(Date) \_\_\_\_\_, 190 .

(75th Meridian Time.)

	8 A. M.	8 P. M.
Dry Thermometer.....		3/10 m +12° F.
Wet Thermometer.....		
Maximum Thermometer ..		18 3/4
Minimum Thermometer ..		+7° F
Direction of Wind.....	Rest	12°
Precipitation .....		
Clouds { Upper .....		
{ Lower .....		

Compared with Form No. 1001—Met'l.

3 p.m.  
Mer. Bar. - 20.044 (20° F.)

NOTES:

Thermog - 11 3/4° F.

Mer. Bar 5:45 p.m. -  
20.022 (84° F)

Friday —

5:15 am, Therm. on barometer  
in Observatory  $13\frac{1}{2}^{\circ} F.$

5:50 am

Barom. 19,958 (200 F.)

Transfer to next <sup>record</sup> sheet.

Memoranda —

Changed record sheets

Monday night —

Cleaned ice from shelter  
vents & placed new guys  
Tuesday pm. — Meas. snow  
in forenoon. — Late afternoon  
Caplet of snow ~~was~~ <sup>was</sup> ~~shelter~~ —  
Changed records again

Thursday —

Drift Snow —

Spin drift driven over  
summit very low because  
of strong wind at apex  
of mountain —

So far, drift does not  
rise higher than my head  
on crest, tho it forms  
a deep & high cloud directly  
in the lee of the summit.  
Face is moistened merely  
by the drift. Wt of drift is  
nearer hips & so on —

After meas. pipe seems to  
take no drift down its opening.  
Broke small iron rods

Two cold — Summ bells — But 2 dog washers for rivets + large enough to slide way down



Tuesday the  
Size of Ice Plumes

Recess of observation

$1\frac{1}{2}$  -  $1\frac{3}{4}$  ax lengths

(length  $35\frac{1}{4}$  in.)

= 55 - 62 in.

Small Shelter

2 ax lengths = 70 in.

Large Shelter

$1\frac{3}{4}$  -  $2\frac{1}{2}$  lengths = 62 - 88 in.

Min. Temp. thermometer  $7^{\circ}\text{F}$ .

Max. Therm. p.m.  $11^{\circ}\text{F}$ . -  $12^{\circ}\text{F}$ .

Inches Therm.  $12^{\circ}\text{F}$ .

Monday night

Above the instrument stage.

Below a gray sea that  
shut out all the world.

Tuesday -

a strong north wind  
with breaking up of clouds  
and brightening of place.  
While snowmounds  
rose from Ross Peaks  
and adjoining points

Wind from W. at 9:30 am  
20.189 (40°F)  
Grand Survey Sheet

Faint <sup>smoke</sup> smoke none  
~~from peaks between~~  
~~Tanaka + [unclear]~~

Squaw and other peaks  
on the skyline S. of  
Tanaka.

The sun with alpine glow  
set amid the display  
of streamers and gave  
them a color setting -

Foot up wood for  
above glacier -

Break ice away for  
obs + small shelter.

Placed new + heavier  
guy wires on Tanaka pipes  
Wantan dangerous  
because of icy coating  
Have staid back for  
carry pack to summit +  
from carrying up woods

Needs - 1 of double hook  
for weighing stax  
1 dish pan -



Friday, Dec, 17 - 7:05 a.m.

Standard +2° F.

Min. stem +1½° F.

Humidity +1½° F.

Form No. 1083—Met'l.

U. S. DEPARTMENT OF AGRICULTURE,  
WEATHER BUREAU.

(Station) Mammoth Cave  
(Date) Monday, Dec. 13, 1909.  
(75th Meridian Time.)

	8 A. M.	<del>8</del> <sup>5 p. m.</sup> P. M.
Dry Thermometer.....		12.5° F. *
Wet Thermometer.....		
Maximum Thermometer ..	<i>New one installed this night.</i>	
Minimum Thermometer ..		+4° F.
Direction of Wind.....		N. W.
Precipitation .....	<i>About 10 miles</i>	
Clouds {	Upper .....	<i>Fog at Central Person</i>
	Lower .....	<i>the river at 7 p. m., almost to level of Summit.</i>
	<del>10</del>	<del>X</del> <i>Stratus 20 per cent.</i>

Compared with Form No. 1001—Met'l.

Mercur. bar. 20.02 (19° F.)

NOTES:

Day almost calm. ~~Sky~~ Atmosphere very clear to W. Profile of Sierras W. of Louisville very sharp. Fog ~~Sea~~ Clouds over <sup>lower</sup> Whites Canyon, Washedaw, etc this morning increased during day to sea of fog N. & S. of Mt. Rose, which rose to summit of lower ranges even into Fen of Lelima Creek at sunset and ~~last~~ <sup>last</sup> at 8 p. m. (Continued on other side.) has practically covered the Observatory.

Wind is rising -

Shelter (small) has filled with snow again, tho some spaces were left near door, Reason is the same apparently as conjectured last time, viz. the covering of the louvers with ice and thus preventing the entrance of wind to clear shelter. Feet or door louvers were cleared - Hence free space near it, tho entrance of wind at this side.

The tracings (thermog. & barog.) have been made, therefore, in a snow filled shelter -

The fluctuations of thermom. are shown in their larger phases, but the finer changes are lost, apparently. The snow blanket was a partial clog to its movements -

But the barog. was uninfluenced by snow & oscillated freely to high wind eddys & changing pressure.

The ice dries very slowly - Monday's barog. trace was very wet when removed after a week, Has dried in 3 hrs. in warm room,



Trip by Self + Ferd Alkines,

Sat. Reno to Ranch -

Willie, Prop, Herres Self,  
Rowdy + Billy.

Others ret'd with Rowdy -

Left Ranch 1:30 p.m. -

Reached Contact 5:45 p.m.

4 <sup>3</sup>/<sub>4</sub> hrs from Ranch

Load heavy + snow + rocks  
rather difficult.

Sunday -

Meas. - about Contact, in  
orig. glac. Forest, ~~in~~  
in Whites' Cañon.

Monday -

Photos. Film 1-4

Mt. Rose + Rippler from  
Contact Pass -

Open face + Timber Belt  
Refuge Camp Zone

5-6 - ~~See~~ Chinarr Ice

5 - with E. Cutress

6 - with W. Cutress

both from below W. Paint Pass

Meas. Kennedy Pass (Occasional)  
From Kennedy to W. Paint Pass

Photo 5 x 7 -

2 p.m. till sunset.

Observatory, Shelter,  
Tank, Rocks, Fog, Shadow of  
Mt. Rose in Sea of Fog.

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Chinook Condition at  
Contact Sunday morning  
(Temp. 35-40 estimated) ~~Temp~~  
~~on summit was~~

was accom. or preceded by  
Chinook condition on summit  
of 30°F. This temp. on  
summit must have occurred  
in part at least at night.

It seems to have ceased at  
9 a.m. Sunday morning. The  
similar condition at Contact  
~~was there~~

had given place to a noticeably  
cold wind at <sup>1:45</sup> 2 p.m. ~~reaching~~  
at least. It grew cold earlier  
probably, but we were engaged  
in men. snow + our exertions  
kept us warm.

No noticeable precip. on Mt. Rose  
but Chinook ice on summit  
has suffered weathering.



Observation - Monday, Dec. 6, 1909 (Cont.)

Caution - When Chinook occurs again hasten to summit to prevent undue loss from wrecking. Substitute rigid galv. iron pipe supports for guy wires and cables - for ex. for precip. tank pipe



This tripod construction should be strong enough to support whatever ice could form upon it.

Experiment with wood to find a material upon which ice and snow feathers will not greatly gather.

Support main portion of trap, nests against further possibility of wrecking.

#### Nature of Chinook (?)

Air not warmed from cold to warm by rapid descent, here at least. Rather a warm wave of large proportions and high altitude.

#### Precipitation Records -

See Fred. Atkins -

Up Trip - Camp Prather T. Snow - 4 in. +

Lake Seal 15 3/4 in. (in surface of ice)

Up Trip - Abelin Seal. 18 in. Snow - Refuge 30 in.

For other records, see Note Book under this general date.



U. S. DEPARTMENT OF AGRICULTURE,  
WEATHER BUREAU.

(Station) Mt. Rose  
(Date) Monday, Dec. 6, 1909.  
(75th Meridian Time.)

	8 A. M.	4 P. M.
<u>Standard</u> Dry Thermometer.....		18° F
Wet Thermometer.....		
Maximum Thermometer ..		33 1/2 *
Minimum Thermometer ..		-10 +0 **
Direction of Wind.....		19° F.
Precipitation .....		
Clouds { Upper .....		
{ Lower .....		

Compared with Form No. 1001—Met'l.

NOTES:

\* Max. broken in removal -  
But by adding column of  
mercury max. temp. for  
period was 33 1/2

Max. of thermog. was 32° F.  
Winc. Bar -  
6 p.m. - 19.636 (59° F.)

Snow storm with wind.

\*\* Min. of thermog. +2° F, tho  
it may have been -14° F. This  
could possibly have been  
caused by rubber band which  
fell down & held pen from rising.

(Continued on other side.)

Trip. Sat. Dec. 4.

Refuge Camp, Dec. 4. Wind  
drift snow.

Sunday, Dec. 5 -

Summit.

Wind + snow storm

Monday -

Trip to Refuge + Return

for camera. Reset snow  
pipe at Refuge + made  
few measurements.

Forecast overcast but calm.  
Monday night -

snow storm + wind

Sunday found

frag. upper woods torn under  
by ice.

Loose pipe badly tilted -

Ice crystals over rocks +  
trees to timber line below Ski Deck,  
3-5 feet thick on Obs. + shelters.

Caused by Chinook - Max. temp

32 - 33½° F. Sleet here, rain

at Refuge, and lower -

Therefore temp high even on

Mt. Rose - Must be much higher  
at Bend.

Was there ice last day Chinook?

Look out hereafter for damage  
by sleet during Chinook weather  
at Bend.

Tues, Wed, 28

at, 5:45 a.m. 30

Monday - fog all day +

" morning F 28, at 6 a.m.

Sunday - morning 27<sup>+</sup> Windy +  
almost 30<sup>+</sup> at one time.



Cans used to date  
12/11 (July 29)

2 cans milk.

1 can conc vegetable soup

1 " Succotash.

1 " dried beef

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7 cans tomatoes

1 can crackers

1 " Succotash

1 " salmon

1 " sardines

1 " peas.

1 " dried beef

1 box condensed

1 1/2 " evaporated

1 can maple syrup.



Bulletin 2

July 31. 09.

3 p. m.

Rain hitting cabin windows  
pretty strong. Wind slight  
for Mt. Rose. Reno enjoying  
sunshine yet. but enjoying  
it - may get cooled off a  
little later - a loud  
peal of thunder - Go it -  
ye splanpeens -

Reno street sprinklers  
have stopped - Nature  
doing the job for the city.  
Ha. Ha. Says the sprinkler  
cart.

Kennex



Note

July 31<sup>st</sup> - 1909

2:30 p.m.

It has been hot & sunny down  
in meadow this morning.

On reaching top of mountain  
storm with thunder & lightning.

Crossed over lake leaving all  
smooth & serene but Carson  
Genoa & Gardnerville see

to be having a wet time.  
Mt. Rose O.K. cloudy &

pleasantly warm - But it  
may rain yet. We'll see

Reno. looks bright &  
cheerful. Clear to the  
West especially Down Lake  
where storm has passed over.

Barometer reading 20.45

P. B. Kennedy



Meteorological  
Saturday