

AURORAL OBSERVATIONS AT THE ALASKA AGRICULTURAL
COLLEGE AND SCHOOL OF MINES, 1930-31¹

BY VERYL FULLER

Description of stations—The two points of observation used for the
auroral work are located a little over four miles from the college.

and is at a distance which has proven to be sufficient for most types of auroras.

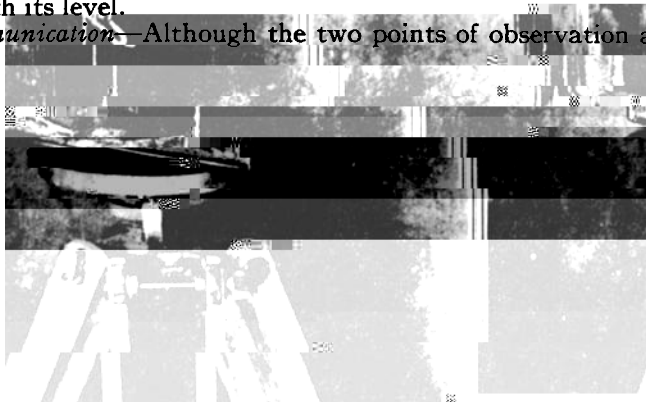
The distance between the two stations was determined quite accurately by triangulation, using data and base-lines established previously,

measuring parallax. Since the cameras are not intended to be leveled accurately when used for taking auroral pictures no leveling device was incorporated in them and for this reason the level used with the vertical circle is arranged so that it has a vertical motion about the center of

vertical rotation of the camera.

Figure 2 shows clearly the construction of the camera and also the view-finder on the upper left corner, the horizontal circle, and the vertical circle with its level.

Communication—Although the two points of observation are located



transmitter installed there was one of the lowest possible power which would give assured continuous contact with the outlying station at all

By

The same antenna and counterpoise are used for both receiving and sending as are also the "A" and "B" batteries. A push-button operated change-over switch, which is conveniently located for the operator, makes this possible.

Time was kept by a Waltham watch and checked against standard time-signals as often as possible, on an average of three times a week. Its rate was found to be fairly constant and had a mean of 0.093 second per hour. A pendulum-clock was available but its rate was unreliable and it was located in an inconvenient place for observational purposes.

"Network" charts—In order to measure the parallax shown by the

adds to the difficulty. However, the making of them by this method,

work" from the empirical equation for the distortion of the camera lens and projector lens.

So far only fifteen of these charts have been made; however, these are made for use in the part of the sky where most of the aurora photographs

Visual record of aurora—It is not always possible to send observers

Remarks

gle ray changing in
 intensity but stationary
 ray visible only short
 ; rain

ray showing some
 ion and color; rain
 seen intermittently
 through clouds; rain

intermittently through
 clouds; rain

arc; rain

out at 07^h 00^m; came
 as *G* changed to *HA*
 at 3^h 30^m
 a glow in NE
 brilliant; showing color;
 changing form
 rapidly; showing

ed to *RA* at 10^h 50^m;
 to *HA* at 11^h 00^m

Remarks

showing color

arcs

until after 12^h 00^m

^m began to fade; at
^a changed to *HA*
^c changed to *G* in
at 05^h 30^m

to *HA* at 15^h 30^m

to May 7, 1931—Continued

No. exp.	Barom-eter	Weather	Remarks
2	28.9	Pt. cloudy	Very cloudy near horizon
2	28.7f	Cloudy	Cloudy near horizon; hazy overhead; snow falling
2	29.7	Cloudy	Very brilliant at 06 ^h 30 ^m ;
2	29.1f	Clear	sky overcast by 13 ^h 00 ^m ;
			see photo notes
3	28.6r	Cloudy	
3	29.9f	Pt. cloudy	See photo notes
3	30.7	Pt. cloudy	
2	29.7f	Clear	See photo notes
3	29.3	Clear	
4	29.5r	Clear	
3	29.6	Clear	
2	28.8r	Cloudy	
2	28.9f	Pt. cloudy	See photo notes
2	28.3r	Pt. cloudy	
2	29.1f	Clear	
3	28.7r	Pt. cloudy	Much frost in air
1	28.8	Pt. cloudy	
1	28.8r	Clear	
3	28.9	Clear	Changed to DG at 08 ^h 00 ^m
1	28.9	Pt. cloudy	
1	28.8r	Clear	Corona at 08 ^h 30 ^m ; see photo notes
3	28.8f	Pt. cloudy	Rather diffuse
3	28.6f	Clear	
1	28.6r	Pt. cloudy	
1	28.7r	Fog	Changed to DS at 09 ^h 30 ^m ;
2	28.9r	Cloudy	rays at 09 ^h 40 ^m ; came and went until 17 ^h 00 ^m ;
			see photo notes

marks

s

clouds
near H; rose
m HA show-

s
8^h 00^m; HA,
12^h 40^m; in-
16^h 30^m to

1^h 30^m; HA
18^h 30^m

s

s

at G in N
ght drapes

s

s

moving rap-

S at 09^h 30^m

louds

mittently

s

4 at 09^h 00^m
ntly through

s

