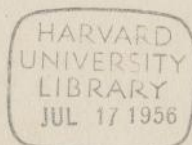


KG  
11365  
929





KB 11365.929



## Schilt Photometer Brook I

In previous record, see 2.5 K's Brook 5.

1

Tuesday August 30, 1927

Time

Schilt Photometer with full light (ap. 1 Dns plate)  
 2 07 the reading is 17.00 zero = 4.00

|      | Zero | Full light |
|------|------|------------|
| 2 08 | 4.00 | 16.81      |
| 2 09 | 4.00 | 16.90      |
| 2 10 | 4.00 | 16.90      |

AB 5801 Film ~~test~~ adjustment as above

14.65

14.66

14.67

14.68

14.70

14.70

14.70

Zero = 4.00

Same fixture (no change)

Aperture moved to deflect  
galv. momentarily & obtain new readings

Same. Full aperture.

Full light 22.32

Zero = 4.08

Film = 17.15

Aperture 1 used

Same fixture

By use of 2 of apert.

Found that the following made a very satisfactory  
 adjustment & give dead beat action



adjusting magnetic shunt until  
 action showed no periodic swing

Tuesday August 30, 1927  
 Schmitt Photometer (ap. 1) In adj. of gal. R. sec  
 [Bottom of preceding page]

Obs 5801

|       |       |       |       |
|-------|-------|-------|-------|
| 6.25  | 20.10 | 17.25 | 20.64 |
| 6.25  | 17.90 | 17.20 | 20.10 |
| 6.30  | 20.05 | 17.34 | 20.12 |
| 6.27  | 20.02 | 17.26 | 20.09 |
| 13.75 |       | 2.83  |       |
| 7.72  | 20.08 | 18.50 | 20.20 |
| 7.80  | 20.10 | 18.70 | 20.32 |
| 7.80  | 20.20 | 19.02 | 20.36 |
| 7.77  | 20.13 | 18.74 | 20.29 |
| 12.36 |       | 1.55  |       |
| 10.18 | 20.12 | 19.78 | 20.40 |
| 10.08 | 20.15 | 19.30 | 20.15 |
| 10.10 | 19.90 | 19.60 | 20.14 |
| 10.12 | 20.06 | 19.56 | 20.23 |
| 9.94  |       | 0.67  |       |
| 12.08 | 19.88 |       |       |
| 12.50 | 19.95 |       |       |
| 12.35 | 20.24 |       |       |
| 12.31 | 20.02 |       |       |
| 7.71  |       |       |       |
| 14.90 | 20.12 |       |       |
| 14.62 | 20.15 |       |       |
| 14.70 | 20.30 |       |       |
| 14.74 | 20.19 |       |       |
| 5.45  |       |       |       |

In plot see page 220  
 of Book V

|   |    |       |      |                               |
|---|----|-------|------|-------------------------------|
| 2 | 57 | Begun | Zen  | Full light (ap. 1 + no plate) |
|   |    |       | 4.40 | 23.12                         |
| 3 | 06 | End   | 4.50 | 23.05                         |

Wednesday August 31 1927

Returned electrical shunt to original arrangement. Adjusted magnetic shunt to kill the oscillation.

Made rough measure on AB 98 to determine faintness of measurable image.

Image <sup>200</sup> marked with a dot heads

On off again  
15.48 16.74 ~~above dot~~ Below dot <sup>Faint 200 on</sup> at 5001

AB 98

|         |       |       |       |       |       |
|---------|-------|-------|-------|-------|-------|
| Star 30 | 13.90 | 13.55 | 13.90 | 13.75 | 18.60 |
|         | 11.20 | 11.40 | 11.00 | 11.20 | 18.60 |
|         | 1.30  | 1.85  | 1.10  | 1.45  | 18.64 |
|         | 14.51 | 14.95 | 14.60 | 14.75 | 18.61 |
| 29      | 13.01 | 12.75 | 13.15 | 13.11 | 18.04 |
|         | 1.80  | 2.20  | 1.42  | 1.67  | 0.57  |
|         |       |       |       |       | 16.80 |
|         |       |       |       |       | 16.55 |
|         |       |       |       |       | 16.68 |
|         |       |       |       |       | 203   |

|       |      |       |       |       |       |       |       |       |
|-------|------|-------|-------|-------|-------|-------|-------|-------|
| 1     | 2    | 3     | 4     | 5     | 6     | 7     | 8     | 9     |
| 1.75  | 1.17 | 14.92 | 16.66 | 14.55 | 16.94 | 14.89 | 16.47 | 15.25 |
| 2.56  | 2.64 | 2.30  | 14.92 |       | 14.53 |       | 14.85 | 16.68 |
| 1.85  | 1.70 | 1.96  | 1.74  | 1.74  | 2.39  |       | 2.08  | 15.25 |
| 2.01  | 1.22 | 1.28  | 2.39  | 2.39  |       |       | 1.58  | 1.43  |
| 18.07 | 6.80 | 1.03  | 2.08  | 1.58  |       |       |       |       |
|       |      | 65.7  | 1.43  | 1.43  |       |       |       |       |
|       |      |       | 17.63 | 71.4  |       |       |       |       |
| 2.04  | 1.70 | 1.64  | 1.91  | 1.78  |       |       |       |       |
| 2.02  |      |       |       |       |       |       |       |       |

Tuesday August 30, 1927  
Schmitt Plate (ap) 1) In a.s. of gal. H. den  
Bottom of Plate's face

alg 5801

|       |       |       |       |
|-------|-------|-------|-------|
| 6.25  | 20.10 | 17.25 | 20.04 |
| 6.25  | 17.20 | 17.20 | 20.10 |
| 6.30  | 20.05 | 17.34 | 20.12 |
| 6.27  | 20.02 | 17.26 | 20.09 |
| 13.75 |       | 2.83  |       |
| 7.72  | 20.08 | 18.50 | 20.20 |
| 7.80  | 20.10 | 18.70 | 20.32 |
| 7.80  | 20.20 | 19.02 | 20.36 |
| 7.77  | 20.13 | 18.74 | 20.29 |
| 12.36 |       |       |       |
| 10.18 | 20.   |       |       |
| 10.08 | 20.   | 18.3  | 13.2  |
| 10.10 | 19.   |       |       |
| 10.12 | 20.   |       |       |
| 9.94  |       |       |       |
| 12.08 | 18.   |       |       |
| 12.50 | 19.   |       |       |
| 12.35 | 20.   |       |       |
| 12.31 | 20    |       |       |
| 7.71  |       |       |       |
| 14.40 | 20.   |       |       |
| 14.62 | 20.1  |       |       |
| 14.70 | 20.30 |       |       |
| 14.74 | 20.19 |       |       |
| 5.45  |       |       |       |

2 57 Pagen  
3 06: End

Zen  
4.40  
4.50

Full light (ap 1) (the plate)  
23.12  
23.05

Wednesday August 31, 1927

Returned Electrical shunt to original  
arrangement. Adjusted magnetic shunt  
to kill the oscillation.

Made rough measure on AB98  
to determine faintness of measurable  
image.

Image <sup>20</sup> marked with a dot heads

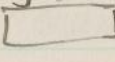
| On    | off                        | again | above dot | below dot | Right off | Left off |
|-------|----------------------------|-------|-----------|-----------|-----------|----------|
| 15.48 | 16.74                      |       |           |           |           |          |
| 14.72 | 16.61                      |       |           |           |           |          |
| 14.40 | 16.85 <sup>+6</sup><br>-28 |       |           |           |           |          |
| 14.81 | 16.51                      |       |           |           |           |          |
| 14.50 | 16.70 <sup>-9</sup><br>+21 | 729   | 57394     |           |           |          |
| 14.69 | 17.00 <sup>+9</sup>        | 14.58 |           |           |           |          |
| 14.49 | 16.88                      |       |           |           |           |          |
|       |                            |       |           |           | 16.79     |          |
|       |                            |       |           |           | 14.58     |          |
|       |                            |       |           |           | 2.21      |          |
|       |                            |       |           |           |           | 18.04    |
|       |                            |       |           |           |           | 18.61    |
|       |                            |       |           |           |           | 18.04    |
|       |                            |       |           |           |           | 0.57     |

Again

| above dot | off   | below dot | off   | Right off | Left off |
|-----------|-------|-----------|-------|-----------|----------|
| 14.85     | 16.60 | 14.80     | 16.66 | 14.83     | 16.60    |
| 15.50     | 16.67 | 14.38     | 17.02 | 14.20     | 16.60    |
| 14.40     | 16.70 | 14.97     | 16.93 | 14.92     | 16.20    |
|           |       |           |       |           | 15.74    |
|           |       |           |       |           | 33       |
| 14.92     | 16.66 | 14.55     | 16.94 | 14.89     | 16.97    |
|           | 14.92 |           | 14.53 |           | 15.25    |
|           | 17.4  |           | 23.9  |           | 18.85    |
|           | 2.3   |           |       |           | 2.44     |
|           | 2.08  |           |       |           | 1.58     |
|           | 1.43  |           |       |           |          |
|           | 17.63 |           | 7.14  |           |          |
|           |       |           | 1.91  |           |          |
|           |       |           | 1.78  |           |          |

Wednesday ~~Sept~~ Aug. 31. 1927

Difficulty found by Dr. Stigley that readings varied with movement of plate carrier although no plate was in apparatus, proved to be due to flexure of bed-plate. When pillars holding aperture & thermocouple were braced by means of a wooden strip placed between, the readings were <sup>practically</sup> almost constant.

Evidently, some framework like a  or  should be used to keep pillars in constant uniform relation.

Thursday Sept 29. 1927

A new pedestal (distinct & not touching  
the parts of the apparatus) has been made  
to carry plate carriage.

It is now in place & the photomultiplier  
adjusted. Probably a firm bed plate to  
hold both sections of the photomultiplier  
be necessary to avoid accidental  
displacements.

Thursday Oct 6, 1927

- A marble base has been provided for the Schott Photometer.

It was found that jacking moving  
Carriage displaced the obs. tube & its connection  
with thermo-couple so that the latter  
had a varying effect on the galvanometer -  
A steady note under the obs. tube  
eliminated this difficulty. A permanent  
arm or steady support is being constructed.

Meusnier mit Schults Proben in Leipzig für

second set made  
with just desired  
and for cond. 1

1<sup>st</sup> 13.95- 18.36 3.25 9.17 5.00 17.95-  
 13.65 18.48 5.42 12.61 17.70  
 13.80 4.62 18.42 14.22 8 16 9.48 18.50  
 11.10 18.29 9.25 8.94 18.10  
 11.00 18.40 5.15 9 15 12.80 18.10  
 11.05 7.29 18.34 14.14 12.80 5.41 18.32  
 8.40 18.39 7.04 10 16 9.32 18.15  
 8.39 18.81 7.04 10 16 9.42 18.50  
 8.40 10.20 18.60 14.40 9.37 8.95 18.82 14.12 6.35  
 6.15 18.18 5.53 12.72 18.30  
 6.30 18.32 5.50 18.22 14.02 9.08  
 6.22 12.03 18.25 14.05  
 5.00 18.26  
 5.10 18.65  
 5.05 13.41 18.46 14.26 9.41  
 4.65 17.60  
 4.60 13.12 17.88 13.54 9.70

Thursday Oct 6, 1927

alt 6123 light at mt station

Zone = 4.10

Monitors by 4.10 full

st sd 4.91 18.00 Car and 4.20

$\frac{5.00}{4.96}$  12.89  $\frac{17.70}{17.85}$  13.65  $\frac{9.44}{6.94}$

Sdy

$\frac{8.92}{8.98}$  8.35  $\frac{17.00}{17.60}$  13.10  $\frac{6.36}{9.44}$

Thursday Oct 6, 1927  
Schmitt P.M.

296124

|             |      |       |       |      |
|-------------|------|-------|-------|------|
| 3d          | Feb  | Feb   | Feb   | Feb  |
| 7.15        |      | 15.52 |       |      |
| 7.14        |      | 15.45 |       |      |
| <u>7.14</u> |      | 15.48 |       |      |
|             | 8.34 |       | 11.28 | 7.38 |

|             |       |       |       |      |
|-------------|-------|-------|-------|------|
| 17          |       |       |       |      |
| 4.92        |       | 15.50 |       |      |
| 4.99        |       | 15.52 |       |      |
| <u>4.96</u> |       | 15.51 |       |      |
|             | 10.55 |       | 11.31 | 9.34 |

|              |             |       |       |      |
|--------------|-------------|-------|-------|------|
| 16           |             |       |       |      |
| 7.89         |             | 15.38 |       |      |
| 7.90         |             | 15.40 |       |      |
| <u>7.90</u>  | 7.49        | 15.39 |       |      |
|              | <u>7.49</u> |       | 11.19 | 6.70 |
| 15           |             |       |       |      |
| 10.80        |             | 15.69 |       |      |
| 10.80        |             | 15.50 |       |      |
| <u>10.80</u> |             | 15.60 | 11.40 | 4.21 |
|              | 4.80        |       |       |      |

8.56 pm slant  $Z_{\text{iso}} = 4.20$   
9.05 pm slant  $Z_{\text{iso}} = 4.20$

Thursday Oct 6 1927

Sun

Oct 6 1927

|    |       |       |       |      |       |      |
|----|-------|-------|-------|------|-------|------|
| 1d | 11.70 | 15.10 | 1     | 8.60 | 15.30 |      |
|    | 11.69 | 15.19 |       | 8.58 | 15.26 |      |
|    | 11.70 | 15.14 | 3.14  | 8.59 | 15.28 | 6.04 |
|    | 3.44  | 10.94 | 8     | 6.69 | 11.08 |      |
| 2d | 9.21  | 15.10 | 2     | 8.10 | 15.10 |      |
|    | 9.30  | 15.10 | 5.36  | 8.17 | 15.30 |      |
|    | 9.26  | 15.10 | 10.90 | 8.14 | 15.20 | 6.51 |
|    | 5.84  |       |       | 7.06 | 11.00 |      |
| 3d | 7.40  | 15.55 |       |      |       |      |
|    | 7.42  | 15.30 | 7.14  |      |       |      |
|    | 7.41  | 15.42 | 11.22 | 7.50 | 14.90 |      |
|    | 8.01  |       | 3     | 7.50 | 15.03 | 6.95 |
| 4d | 15.50 | 15.46 |       | 7.50 | 14.96 |      |
|    | 5.54  | 15.40 | 8.83  | 7.50 |       |      |
|    | 5.52  | 15.43 | 11.23 | 7.46 | 10.76 |      |
|    | 4.99  |       |       |      |       |      |
| 5d | 5.65  | 15.57 |       |      |       |      |
|    | 4.70  | 15.70 | 9.61  |      |       |      |
|    | 4.68  | 15.64 | 11.44 |      |       |      |
|    | 109.6 |       |       |      |       |      |

9 07 Begin  $\Sigma = 4.18$   
 9 20 End  $\Sigma = 4.20$

Friday Oct 14, 1927

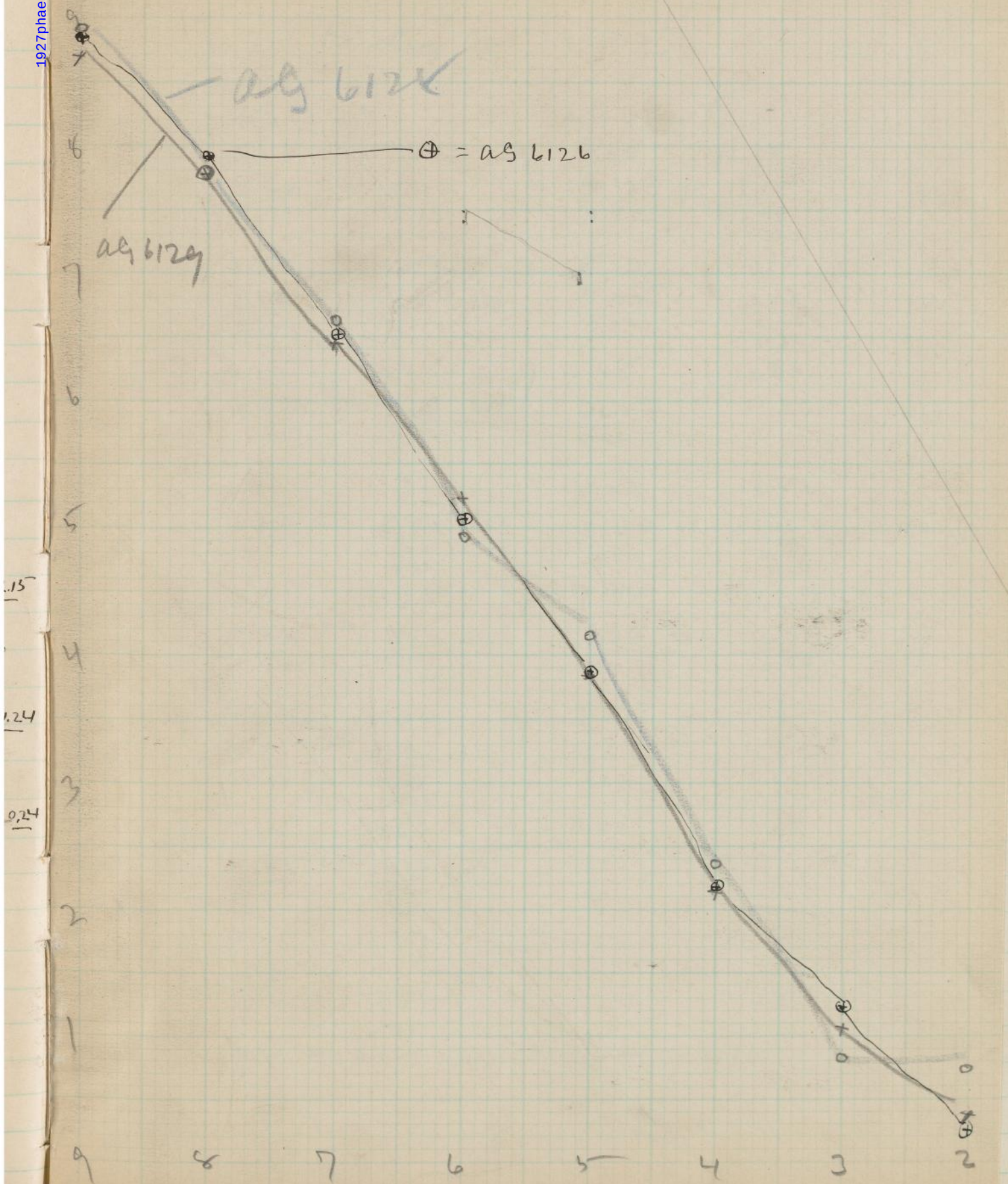
Schiller Photometer has now been provided with steady for observing telescopes. A new reticle has been put in, & the apparatus generally adjusted. Some features should still be replaced in more permanent form.

AG 6126  
Zero = 3.02

| af |             | It    |              |      |
|----|-------------|-------|--------------|------|
| 9  | 4.08        | 12.00 |              |      |
|    | 4.08        | 7.72  | 11.60        | 8.86 |
|    | <u>4.08</u> |       | <u>11.80</u> | 8.70 |
| 8  | 5.08        | 12.20 |              |      |
|    | 4.90        |       | 11.90        | 7.90 |
|    | <u>4.99</u> | 7.06  | <u>12.05</u> | 8.95 |
| 7  | 6.55        | 12.47 |              |      |
|    | 5.80        |       | 11.32        | 6.50 |
|    | <u>6.18</u> | 5.72  | <u>11.90</u> | 8.80 |
| 6  | 7.98        | 12.96 |              |      |
|    | 7.12        | 4.58  | 11.30        | 5.07 |
|    | <u>7.55</u> |       | <u>12.13</u> | 9.03 |
| 5  | 8.35        | 12.12 |              |      |
|    | 8.60        |       | 11.64        | 3.87 |
|    | <u>8.48</u> | 3.40  | <u>11.88</u> | 8.78 |

| af |              |       |              |       |
|----|--------------|-------|--------------|-------|
| 4  | 10.05        | 11.92 |              |       |
|    | 9.75         | 1.86  | 11.60        | 2.15  |
|    | <u>9.90</u>  |       | <u>11.76</u> | 8.66  |
| 3  | 10.80        | 11.80 |              |       |
|    | 11.00        |       | 12.20        | 1.24  |
|    | <u>10.90</u> | 1.10  | <u>12.00</u> | 8.90  |
| 2  | 11.50        | 11.60 |              |       |
|    | 11.92        |       | 12.25        | 0.24  |
|    | <u>11.71</u> | 0.21  | <u>11.98</u> | 11.92 |
|    |              |       |              | 8.82  |

Zero = 3.10



Friday Oct 14 1927

| Aug 29 |       |       |       |
|--------|-------|-------|-------|
| 9      | 5.06  | 19.06 |       |
|        | 5.20  | 13.60 | 18.40 |
|        | 5.13  |       | 18.73 |
|        |       |       | 15.63 |
| 8      | 6.80  | 12.46 | 19.42 |
|        | 6.50  |       | 18.80 |
|        | 6.65  |       | 19.11 |
|        |       |       | 16.01 |
| 7      | 9.25  |       | 19.98 |
|        | 8.54  | 10.49 | 18.80 |
|        | 8.90  |       | 19.39 |
|        |       |       | 16.29 |
| 6      | 11.40 |       | 19.30 |
|        | 10.04 | 8.33  | 18.80 |
|        | 10.72 |       | 19.05 |
|        |       |       | 15.95 |
| 5      | 12.65 |       | 19.25 |
|        | 13.22 | 6.20  | 19.02 |
|        | 12.94 |       | 19.14 |
|        |       |       | 16.04 |
| 4      | 15.70 |       | 19.50 |
|        | 16.15 | 3.43  | 19.20 |
|        | 15.92 |       | 19.35 |
|        |       |       | 16.25 |
| 3      | 17.88 |       | 19.60 |
|        | 17.43 | 1.74  | 19.20 |
|        | 17.66 |       | 19.40 |
|        |       |       | 16.30 |
| 2      | 18.85 |       | 19.37 |
|        | 18.35 | 0.61  | 19.05 |
|        | 18.60 |       | 19.21 |
|        |       |       | 16.11 |

Zur = 3.10

| Aug 28 |       |      |       |
|--------|-------|------|-------|
| 9      | 4.00  |      | 11.85 |
|        | 4.95  | 7.92 | 12.15 |
|        | 4.08  |      | 12.00 |
|        |       |      | 8.90  |
| 8      | 5.30  |      | 12.75 |
|        | 5.05  | 7.28 | 12.18 |
|        | 5.18  |      | 12.46 |
|        |       |      | 9.36  |
| 7      | 6.48  |      | 12.96 |
|        | 6.05  | 6.17 | 11.90 |
|        | 6.26  |      | 12.43 |
|        |       |      | 9.33  |
| 6      | 8.00  |      | 12.52 |
|        | 7.00  | 4.27 | 11.02 |
|        | 7.50  |      | 11.77 |
|        |       |      | 8.67  |
| 5      | 7.80  |      | 11.07 |
|        | 7.60  | 3.28 | 10.90 |
|        | 7.70  |      | 10.98 |
|        |       |      | 7.88  |
| 4      | 9.65  |      | 11.65 |
|        | 9.62  | 2.04 | 11.70 |
|        | 9.64  |      | 11.68 |
|        |       |      | 8.58  |
| 3      | 11.00 |      | 11.75 |
|        | 11.10 | 0.70 | 11.75 |
|        | 11.05 |      | 11.75 |
|        |       |      | 8.65  |
| 2      | 12.02 |      | 12.80 |
|        | 11.06 | 0.66 | 11.60 |
|        | 11.54 |      | 12.20 |
|        |       |      | 9.10  |

Zur = 3.10

Thursday Oct 20. 1927  
Schult's Potometer readjusted

|   | ag 6132                                                                                                       | ag 6133                                                                                     | ag 6134                                                                                      | ag 6135                                                                                      |
|---|---------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| 9 | 5.90 <sup>(8.72)</sup> 22.75<br>5.68 22.00<br><u>5.79</u> <sup>14.69</sup> 22.38<br>19.01                     | 4.20 <sup>(8.92)</sup> 13.70<br>5.15 16.45<br><u>4.65</u> <sup>15.08</sup><br>10.43 11.71   | 6.90 <sup>(8.40)</sup> 23.40<br>8.50 24.40<br><u>6.70</u> <sup>23.90</sup><br>17.20 20.53    | 6.95 <sup>(8.31)</sup> 27.25<br>7.68 26.10<br><u>7.32</u> <sup>19.36</sup> 26.68<br>23.31    |
| 8 | 8.30 <sup>(7.65)</sup> 23.10<br>7.48 21.90<br><u>7.89</u> <sup>14.61</sup> 22.50<br>19.13                     | 5.85 <sup>(7.60)</sup> 14.90<br>6.75 16.30<br><u>6.30</u> <sup>15.60</sup><br>9.30 12.23    | 10.10 <sup>(7.07)</sup> 24.78<br>9.20 25.60<br><u>9.65</u> <sup>25.19</sup><br>15.54 21.82   | 9.42 <sup>(7.44)</sup> 27.00<br>9.45 27.00<br><u>7.42</u> <sup>27.00</sup><br>17.58 23.63    |
| 7 | 11.14 <sup>(5.83)</sup> 22.80<br>10.75 <sup>14.90</sup> 22.65<br><u>10.94</u> <sup>22.72</sup><br>11.88 17.35 | 8.30 <sup>(5.91)</sup> 15.55<br>8.28 15.30<br><u>8.29</u> <sup>15.42</sup><br>7.13 12.05    | 12.82 <sup>(5.90)</sup> 25.40<br>12.35 26.20<br><u>12.58</u> <sup>25.80</sup><br>13.22 22.43 | 12.52 <sup>(6.76)</sup> 26.95<br>12.40 27.10<br><u>12.46</u> <sup>27.02</sup><br>14.56 23.65 |
| 6 | 13.75 <sup>(4.52)</sup> 22.45<br>14.00 22.80<br><u>13.88</u> <sup>22.62</sup><br>8.74 19.25                   | 10.55 <sup>(4.47)</sup> 16.50<br>9.55 14.45<br><u>10.05</u> <sup>15.48</sup><br>5.43 12.11  | 15.50 <sup>(4.50)</sup> 25.25<br>15.30 25.25<br><u>15.40</u> <sup>25.25</sup><br>9.85 21.88  | 15.40 <sup>(4.43)</sup> 26.75<br>15.10 26.90<br><u>15.25</u> <sup>26.82</sup><br>11.57 23.45 |
| 5 | 19.32 <sup>(1.76)</sup> 22.85<br>17.90 21.80<br><u>18.61</u> <sup>22.32</sup><br>3.71 18.95                   | 12.45 <sup>(2.55)</sup> 16.40<br>10.60 13.10<br><u>11.52</u> <sup>14.75</sup><br>3.23 11.38 | 17.65 <sup>(3.40)</sup> 24.85<br>17.90 25.60<br><u>17.78</u> <sup>25.22</sup><br>7.44 21.85  | 18.94 <sup>(3.46)</sup> 26.85<br>18.25 26.40<br><u>18.60</u> <sup>26.65</sup><br>8.05 23.27  |
| 4 | 21.48 <sup>(0.65)</sup> 22.52<br>20.60 22.00<br><u>21.04</u> <sup>22.26</sup><br>1.22 18.89                   | 12.50 <sup>(1.43)</sup> 14.30<br>14.80 16.65<br><u>13.65</u> <sup>15.48</sup><br>1.73 12.11 | 21.40 <sup>(2.02)</sup> 25.90<br>21.10 25.50<br><u>21.25</u> <sup>25.70</sup><br>4.35 22.33  | 23.00 <sup>(1.94)</sup> 27.00<br>22.10 27.10<br><u>22.45</u> <sup>27.05</sup><br>4.60 23.68  |
| 3 | —                                                                                                             | 13.95 <sup>(1.07)</sup> 15.50<br>15.20 16.35<br><u>14.58</u> <sup>15.92</sup><br>1.34 12.55 | 24.32 <sup>(0.85)</sup> 25.95<br>23.60 25.70<br><u>23.96</u> <sup>25.82</sup><br>1.86 22.45  | 25.30 <sup>(0.75)</sup> 27.00<br>25.30 27.15<br><u>25.30</u> <sup>27.08</sup><br>1.78 23.71  |
| 2 | —                                                                                                             | —                                                                                           | —                                                                                            | —                                                                                            |
| 1 | —                                                                                                             | —                                                                                           | —                                                                                            | —                                                                                            |

Report from  
Museum of  
Sci & 13.

3 25

Start

Only 6132

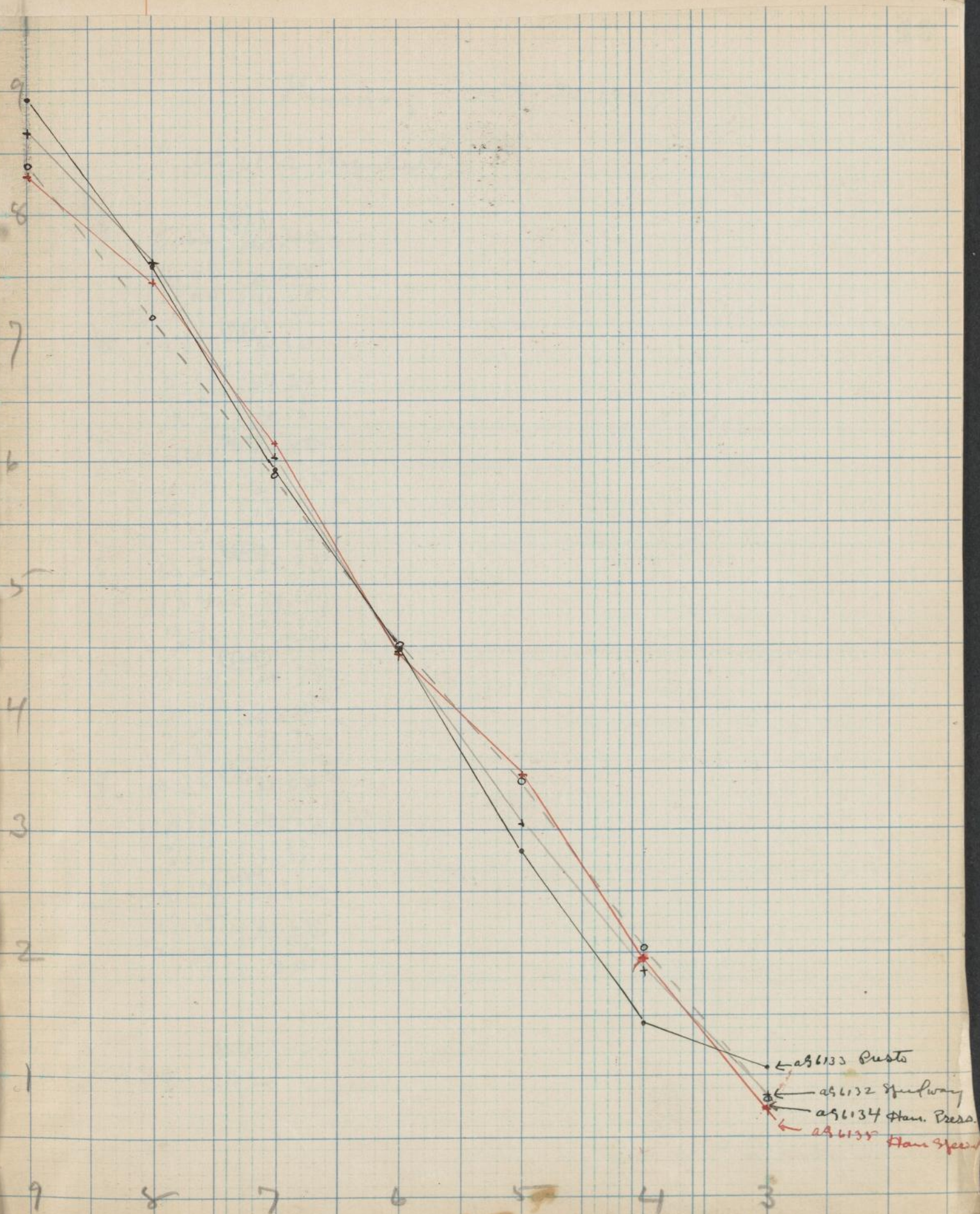
4 21

Ended

3.42  
3.42  
3.30  
3.30  
3.30  
3.32  
3.37

3.35  
3.35

3.42  
3.30  
3.50  
3.35  
3.35  
3.32  
3.37



Thursday Oct 20. 1927

all 6132 (Reputed)

$$\begin{array}{r}
 9 \quad 5.65 \quad \textcircled{8.65} \quad 21.40 \\
 \underline{6.06} \quad 21.75 \\
 57.86 \quad 21.58 \\
 15.72 \quad 18.21
 \end{array}$$

$$\begin{array}{r}
 8 \quad 7.60 \quad \textcircled{7.61} \quad 21.60 \\
 \underline{8.15} \quad 22.30 \\
 7.82 \quad 21.95 \\
 14.13 \quad 18.58
 \end{array}$$

$$\begin{array}{r}
 7 \quad 10.48 \quad \textcircled{6.06} \quad 21.80 \\
 \underline{11.10} \quad 22.05 \\
 10.79 \quad 21.92 \\
 11.13 \quad 18.55
 \end{array}$$

$$\begin{array}{r}
 6 \quad 13.30 \quad \textcircled{4.46} \quad 21.35 \\
 \underline{13.40} \quad 21.40 \\
 13.35 \quad 21.38 \\
 8.03 \quad 18.01
 \end{array}$$

$$\begin{array}{r}
 5 \quad 15.10 \quad \textcircled{3.06} \quad 20.75 \\
 \underline{16.00} \quad 21.10 \\
 15.55 \quad 20.92 \\
 5.37 \quad 17.55
 \end{array}$$

$$\begin{array}{r}
 4 \quad 18.38 \quad \textcircled{1.84} \quad 21.80 \\
 \underline{17.70} \quad 20.90 \\
 18.04 \quad 21.35 \\
 3.31 \quad 17.98
 \end{array}$$

$$\begin{array}{r}
 3 \quad 20.50 \quad \textcircled{0.84} \quad 21.80 \\
 \underline{19.85} \quad 21.65 \\
 20.18 \quad 21.72 \\
 1.54 \quad 18.35
 \end{array}$$

3.32

Friday Oct 21, 1925

| E.T. | Schuler Photometer |          |            |             |
|------|--------------------|----------|------------|-------------|
| 9 22 | Pentam light       | volt 5.6 | No light   | 6.6         |
|      | Ready (no plates)  | 20.35    |            |             |
| 9 25 | 20.70              | 5.5      | Charger on |             |
| 26   | 20.80              |          | No charger |             |
| 27   | 20.90              |          | 9 51       | 20.85 volt. |
| 30   | 20.94              | 5.4      | 52         | 20.50 5.3   |
| 32   | 21.00              |          | 53         | 20.25       |
| 34   | 21.05              |          | 54         | 20.02 5.2   |
| 34.5 | 21.02              |          | 55         | 19.82       |
| 35   | 21.05              |          | 56         | 19.67 5.1   |
| 36   | 21.05              | 5.4      | 57         | 19.50       |
| 36.5 | 21.00              |          | 58         | 19.35       |
| 37   | 21.05              |          | 59         | 19.22       |
| 37.5 | 21.08              |          | 1000       | 19.15 5.0   |
| 38   | 21.10              |          | 01         | 19.12       |
| 39   | 21.05              |          | 02         | 19.10       |
| 40   | 21.11              |          | 03         | 19.10       |
| 41   | 21.12              |          | 04         | 19.11       |
| 42   | 21.11              |          | 05         | 19.11 5.0   |
| 43   | 21.10              |          | 06         | 19.15       |
| 44   | 21.15              | 5.4      | 07         | 19.18       |
| 45   | 21.10              |          | 08         | 19.15       |
| 46   | 21.08              |          | 09         | 19.14       |
| 47   | 21.10              |          | 10         | 19.15 5.0   |
| 48   | 21.11              |          |            | 19.10       |
| 49   | 21.11              | 5.4      | How here   | 19.20       |
| 50   | 21.10              | 5.4      | 15         | 19.15 5.0   |

charged turned up

Friday Oct 21, 1927

Continued

10 16 19.15-  
Charger just on.

|      |        |     |
|------|--------|-----|
| 17   | 19.35- |     |
| 18   | 19.50  |     |
| 19   | 19.53  |     |
| 20   | 19.60  | 5.1 |
| 21   | 19.68  |     |
| 22   | 19.72  |     |
| 23   | 19.75- |     |
| 24   | 19.79  |     |
| 25   | 19.80  | 5.2 |
| 26   | 19.85  |     |
| 27   | 19.90  |     |
| 28   | 19.90  |     |
| 29   | 19.95- |     |
| 30   | 19.93  | 5.2 |
| 32   | 20.00  |     |
| 35   | 20.10  | 5.2 |
| 37.5 | 20.10  |     |
| 40   | 20.10  | 5.2 |

voltage (light off) = 6.3

Zero = 4.10    Sat = 4.05-

10 42 volt. (light off) = 6.4

Left charger on.

Tuesday Nov ~~28~~<sup>29</sup>, 1927

Measuring 213252 made with Schmitt  
Lamp on Lamp off Photometer, first zoom focusing.

Zero 6.08  
Start below 4.9 5.9  
Zero 4.8 0.0  
4.84 5.12  
# 5.04

~~Galvanometer stuck~~  
Stuck again

|      | 19    | 11    | 21    | 31    | 41    | 51    | 61    | 71    |       |       |       |       |       |       |       |       |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 29 | 9.61  | 16.74 | 10.10 | 16.88 | 10.42 | 16.74 | 10.50 | 17.00 | 10.40 | 17.16 | 10.42 | 16.95 | 10.28 | 16.98 | 10.50 | 16.82 |
| 1 42 | 10.02 | 17.00 | 10.33 | 17.00 | 10.82 | 17.01 | 10.60 | 17.02 | 10.38 | 16.85 | 10.14 | 16.97 | 10.50 | 16.80 | 10.30 | 17.04 |
| 2 11 | 9.87  | 16.59 | 10.04 | 17.18 | 9.90  | 17.00 | 9.76  | 16.95 | 9.66  | 16.95 | 9.62  | 16.80 | 9.81  | 16.62 | 9.94  | 16.50 |
| 2 16 | 10.08 | 17.02 | 10.21 | 17.22 | 10.00 | 16.92 | 10.00 | 16.65 | 9.65  | 16.82 | 9.54  | 16.67 | 10.00 | 16.18 | 10.17 | 16.70 |
| 2 35 | 9.72  | 16.68 | 9.65  | 17.07 | 9.46  | 16.85 | 9.52  | 16.80 | 9.32  | 16.75 | 9.30  | 16.70 | 9.40  | 16.30 | 9.52  | 16.20 |
| 3    | 10.05 | 17.00 | 9.75  | 16.92 | 9.73  | 17.00 | 9.53  | 16.65 | 9.31  | 16.82 | 9.32  | 16.58 | 9.47  | 16.48 | 9.70  | 16.95 |
| 4    | 9.52  | 16.89 | 9.12  | 17.20 | 9.42  | 17.22 | 9.40  | 16.90 | 9.20  | 16.78 | 9.10  | 16.58 | 9.25  | 16.52 | 9.40  | 16.24 |
|      | 9.78  | 17.05 | 9.65  | 17.37 | 9.44  | 16.87 | 9.32  | 16.68 | 9.20  | 16.86 | 9.15  | 16.45 | 9.30  | 16.37 | 9.35  | 16.38 |
| 5    | 9.45  | 16.98 | 9.30  | 17.05 | 9.15  | 16.70 | 9.23  | 16.85 | 8.98  | 16.60 | 9.20  | 16.38 | 9.04  | 16.27 | 9.15  | 16.07 |
|      | 9.68  | 17.28 | 9.45  | 17.20 | 9.30  | 16.86 | 9.16  | 16.64 | 9.00  | 16.61 | 8.89  | 16.35 | 9.00  | 16.30 | 9.25  | 16.37 |
| 6    | 9.70  | 16.90 | 9.54  | 17.30 | 9.35  | 16.90 | 9.20  | 16.92 | 8.95  | 16.45 | 8.86  | 16.50 | 9.05  | 16.46 | 9.10  | 16.26 |
|      | 10.00 | 17.35 | 9.65  | 17.37 | 9.40  | 16.80 | 9.18  | 16.58 | 9.05  | 16.53 | 8.87  | 16.25 | 9.05  | 16.38 | 9.20  | 16.40 |
| 7    | 9.92  | 17.18 | 9.24  | 17.24 | 9.60  | 16.94 | 9.38  | 16.80 | 9.20  | 16.68 | 9.10  | 16.45 | 9.32  | 16.50 | 9.59  | 16.12 |
|      | 10.10 | 17.22 | 9.94  | 17.50 | 9.63  | 16.85 | 9.36  | 16.53 | 9.04  | 16.40 | 8.98  | 16.48 | 9.25  | 16.30 | 9.50  | 16.42 |
| 8    | 9.65  | 16.76 | 10.45 | 17.44 | 9.88  | 16.98 | 9.78  | 16.81 | 9.45  | 16.80 | 9.60  | 16.75 | 9.50  | 16.60 | 9.64  | 16.45 |
|      | 9.85  | 17.18 | 10.28 | 17.06 | 9.88  | 17.15 | 9.67  | 16.80 | 9.49  | 16.75 | 9.18  | 16.66 | 9.50  | 16.56 | 9.60  | 16.62 |
| 9    | 9.09  | 16.08 | 10.00 | 16.94 | 10.09 | 16.78 | 10.28 | 17.00 | 10.22 | 16.85 | 10.00 | 16.92 | 9.92  | 16.97 | 10.18 | 16.76 |
|      | 9.42  | 16.72 | 10.10 | 16.90 | 10.05 | 17.00 | 9.98  | 16.78 | 9.90  | 16.68 | 10.00 | 16.90 | 9.72  | 16.75 | 9.98  | 16.66 |
| 10   | 8.75  | 15.74 | 9.22  | 16.70 | 9.58  | 16.52 | 9.94  | 16.68 | 10.12 | 16.88 | 10.25 | 16.90 | 10.35 | 17.00 | 10.34 | 16.20 |
|      | 8.90  | 16.07 | 9.40  | 16.74 | 9.60  | 15.70 | 10.00 | 16.70 | 10.27 | 16.77 | 10.20 | 16.30 | 10.24 | 16.65 | 10.40 | 16.40 |
|      | 10    | 20    | 30    | 40    | 50    | 60    | 70    | 80    |       |       |       |       |       |       |       |       |

Compilation for ESK's Book No 6 Aug 16.  
Meaning 2 13252

NOV 29 1927

| I    | II   | 2I   | 3I   | 4I   | 5I   | 6I   | 7I   |                    |
|------|------|------|------|------|------|------|------|--------------------|
| 7.13 | 6.78 | 6.32 | 6.50 | 6.76 | 6.52 | 6.70 | 6.32 | 4 <sup>9</sup> 418 |
| 6.98 | 6.67 | 6.79 | 6.52 | 6.47 | 6.83 | 6.30 | 6.74 | 5318               |
| 7.06 | 6.72 | 6.56 | 6.57 | 6.62 | 6.68 | 6.50 | 6.53 | 6.64               |
| -6   | -40  |      |      |      |      |      |      |                    |
| 6.72 | 7.14 | 7.10 | 7.19 | 7.32 | 7.18 | 6.81 | 6.56 | 4728               |
| 6.94 | 7.01 | 6.92 | 6.65 | 7.17 | 7.13 | 6.18 | 6.53 | 6.91               |
| 6.83 | 7.08 | 7.01 | 6.92 | 7.24 | 7.16 | 6.50 | 6.54 |                    |
| -29  | -4   |      |      |      |      |      |      |                    |
| 6.92 | 7.42 | 7.39 | 7.28 | 7.43 | 7.40 | 6.90 | 6.68 | 87949              |
| 6.95 | 7.17 | 7.27 | 7.12 | 7.51 | 7.26 | 7.01 | 7.25 |                    |
| 6.94 | 7.30 | 7.33 | 7.20 | 7.47 | 7.33 | 6.96 | 6.96 | 67.19              |
| -18  | +18  |      |      |      |      |      |      |                    |
| 7.37 | 8.08 | 7.80 | 7.50 | 7.58 | 7.48 | 7.27 | 6.84 | 11.37              |
| 7.27 | 7.72 | 7.43 | 7.36 | 7.66 | 7.30 | 7.07 | 7.03 | 42                 |
| 7.32 | 7.90 | 7.62 | 7.43 | 7.62 | 7.39 | 7.17 | 6.94 | 7.58               |
| +20  | +78  |      |      |      |      |      |      |                    |
| 7.53 | 7.75 | 7.55 | 7.12 | 7.62 | 7.18 | 7.23 | 6.92 |                    |
| 7.60 | 7.75 | 7.86 | 7.48 | 7.61 | 7.46 | 7.30 | 7.12 |                    |
| 7.52 | 7.75 | 7.70 | 7.55 | 7.12 | 7.32 | 7.26 | 7.02 |                    |
| +44  | +63  |      |      |      |      |      |      |                    |
| 7.20 | 7.76 | 7.55 | 7.72 | 7.49 | 7.64 | 7.41 | 7.16 |                    |
| 7.35 | 7.72 | 7.40 | 7.40 | 7.48 | 7.38 | 7.33 | 7.20 |                    |
| 7.28 | 7.74 | 7.48 | 7.56 | 7.48 | 7.51 | 7.37 | 7.18 |                    |
| +16  | +62  |      |      |      |      |      |      |                    |
| 7.26 | 8.00 | 7.34 | 7.42 | 7.48 | 7.35 | 7.18 | 6.53 |                    |
| 7.12 | 7.56 | 7.22 | 7.17 | 7.36 | 7.50 | 7.05 | 6.92 |                    |
| 7.19 | 7.78 | 7.28 | 7.30 | 7.42 | 7.42 | 7.12 | 6.72 |                    |
| +7   | +66  |      |      |      |      |      |      |                    |
| 7.11 | 6.99 | 7.10 | 7.03 | 7.40 | 7.35 | 7.10 | 6.81 |                    |
| 7.33 | 6.78 | 7.27 | 7.13 | 7.26 | 7.48 | 7.06 | 7.02 |                    |
| 7.22 | 7.88 | 7.19 | 7.08 | 7.33 | 7.42 | 7.08 | 6.92 |                    |
| +10  | +76  |      |      |      |      |      |      |                    |
| 6.99 | 6.94 | 6.69 | 6.72 | 6.63 | 6.92 | 7.05 | 6.58 | 57                 |
| 7.30 | 6.80 | 6.95 | 6.80 | 6.78 | 6.90 | 7.03 | 6.68 | 3874               |
| 7.14 | 6.87 | 6.82 | 6.76 | 6.70 | 6.91 | 7.04 | 6.63 | 807870             |
| +2   | -25  |      |      |      |      |      |      | 7.12               |
| 6.99 | 7.48 | 7.04 | 6.74 | 6.76 | 6.65 | 6.65 | 5.86 |                    |
| 7.17 | 7.34 | 7.10 | 6.70 | 6.50 | 6.60 | 6.41 | 6.00 |                    |
| 7.08 | 7.41 | 7.07 | 6.72 | 6.68 | 6.38 | 6.53 | 5.93 |                    |
| -4   | +    |      |      |      |      |      |      |                    |
| 362  | 1006 | 1411 | 1914 | 2432 | 2884 | 3237 | 3874 |                    |

Wednesday Dec 7, 1927

Stutter Photometer.

Attempted to use the photometer, & as  
on several previous occasions, found  
galvanometer sticking.

There is an unaccountable amount  
of about 10 mm on the scale,  
produced by a sharp jolt of  
the table on which the photometer  
is mounted. Examination of  
this communication to the lamp  
seemed to indicate  
greater difficulty for the latter.

Tightening the lamp in the socket  
& even putting in a new bulb  
did not give a complete remedy.

After some more adjustment, the  
galvanometer remained quite steady  
even when table was sharply rattled.

Wednesday Dec 7 1927

| E-1325-2  |      |       | Tinty micrometer |      |                      |      |
|-----------|------|-------|------------------|------|----------------------|------|
| Sey. film |      |       | (again 17 Sey)   |      | film                 |      |
| 14.41     |      |       |                  |      | 14.36                |      |
|           |      |       |                  |      | again. (upside down) |      |
|           |      |       |                  |      | Sey. film            |      |
|           |      |       |                  |      | 14.20                |      |
| 41        | 8.78 | 14.48 | 41               | 8.11 | 14.50                | 8.10 |
| 42        | 7.58 | 14.42 | 42               | 7.42 | 14.36                | 8.40 |
| 43        | 7.30 | 14.40 | 43               | 7.15 | 14.26                | 7.91 |
| 44        | 7.08 | 14.22 | 44               | 7.06 | 14.20                | 7.53 |
| 45        | 7.19 | 14.13 | 45               | 6.86 | 14.10                | 7.20 |
| 46        | 6.94 | 13.99 | 46               | 6.86 | 13.90                | 7.16 |
| 47        | 6.90 | 13.90 | 47               | 6.88 | 13.89                | 7.10 |
| 48        | 7.33 | 14.18 | 48               | 7.16 | 13.95                | 7.22 |
| 49        | 7.70 | 14.00 | 49               | 7.68 | 14.03                | 7.36 |
| 50        | 7.98 |       | 50               | 8.06 |                      | 7.71 |

Gen 3.42

Wednesday Dec 7, 1927

E 13252 from east array to give full time  
Test of uniformity of film

434

Syn.

Film

14.25

41 8.45

14.60

2 7.57

14.31

3 7.31

13.89

4 6.72

14.15

5 6.61

14.05

6 6.70

13.85

7 6.95

13.90

8 7.30

14.06

9 7.70

14.36

50 7.85

—

443

Start

Close

Zero

3.60

3.57

No glass

15.94

15.84

Film array

17.24

17.11

Wednesday Dec 7 1927

Sum plate  
 Horizontal plate  
 between col. 4/751

14.48

14.30

14.60

14.71

14.25

14.20

14.11

14.30

14.07

13.95

14.20

13.69

14.15

14.08

13.80

13.90

14.24

14.35

14.40

14.24

Repeated  
 at stated interval

10 14.37 14.36

14.40

11 14.55 14.51

.71

12 .60 14.68

.46

13 .39 14.31

.57

14 .40 14.35

.32

15 .44 14.37

.36

16 .44 14.15

.32

17 .41 14.20

.38

18 .35 14.28

.12

19 .08 14.02

.12

20 .12 14.22

14.22

21 13.92 13.90

14.05

22 14.00 13.86

22.1  
23 13.73

13.70 13.65

24 14.00

13.98 13.92

25 13.85

13.90 13.90

14.00

26 14.63 13.85

14.05

27 14.10 13.97

14.08

28 14.12 14.15

14.12

29 14.13 14.10

14.22

30 14.12 14.11

Close

5-10 km

No glass = 15.90

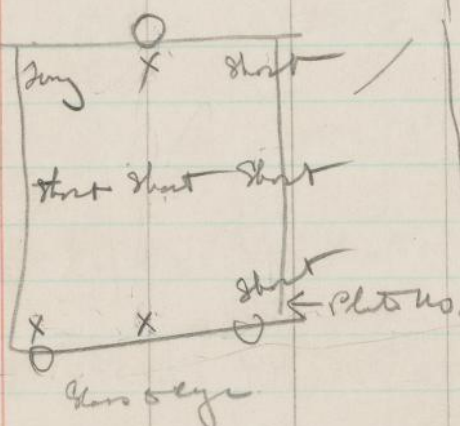
The above are the  
 principal variations  
 noted.

Monday Jun 16, 1928

Schmitt Plateholder

Found much dust in instrument. It had fallen on one of the diagonal mirrors & blocked the field of view, giving a granular appearance.

Put in I 46193 (Sext. glass) with numbers and down thus:

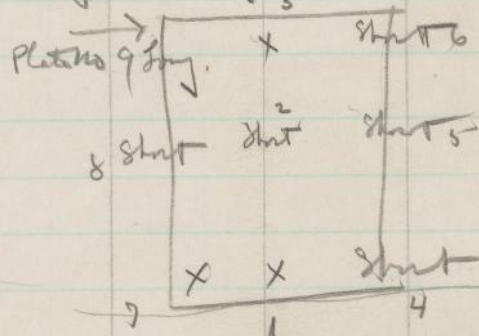


X = Good focus

Long = plate must be pulled away from lamp

Short = plate must be pushed toward lamp

Set plate upside down



Focusing threads are about 18 to 20 inches

1  $\neq 0.0$

8  $+0.1$

1 rev = 0.7 mm.

2  $+0.2$

9  $-0.3$

3  $-0.1$

Range =  $0.7 = 0.5$  mm

4  $+0.2$

5  $+0.4$

6  $+0.25$

7  $0.0$

Tuesday Jan 17, 1928

Spent day in adjusting galvanometer  
so that mirror would swing free.  
There is so little clearance that the  
adjustment is very delicate.

It now swings free & swings through  
a range of about 15 cm (by the scale)  
for light to dark.

Wednesday Jan 18, 1927

Post in Balthus B für Schults Photomato

After about  $\frac{1}{2}$  hr voltants reading  
Low in 5.2

|        |     |
|--------|-----|
| Lang m | 5.2 |
|--------|-----|

|    |    |     |
|----|----|-----|
| 11 | 76 | 6.2 |
|----|----|-----|

Mermin shows tendency to drift

Reading of plate 2 13252 joints under  
upper clamp.

| Leather board (0.4mm thick) | Setting | plate | Tagam |
|-----------------------------|---------|-------|-------|
| Inward thermocouple         | Ready   | 21.90 | 21.80 |
| Leather board removed       | "       | 22.46 | 22.50 |

|                        |    |       |       |
|------------------------|----|-------|-------|
| Leather bound personal | cc | 22.46 | 22.50 |
|------------------------|----|-------|-------|

LB/

Leather bound in front

with 12.07

Writings: 1388

Large amount

E 13252 Index 7.25 - 7.25 -

50

fin.  
30-60

23, 23

12, 32

23, 23

7.25

6.85

LB in 12,30

23.38

1091

12.35

23.12

12.32

23.28

23. 82

13.9

23. 86

7. 25

5.95

LB out

14.60

23.86

12 01

3.9

9.89

1

16.61

Wednesday, Jan. 18, 1927

| a 96174 |                  |                  | Zero = 7.23 |                  |                  | No flake = 26.75 |       |       |
|---------|------------------|------------------|-------------|------------------|------------------|------------------|-------|-------|
| 3.11 pm | L.B              | in               |             | L.B              | out              |                  | width | 27.10 |
|         | sq.              | John             |             | sq.              | John             |                  |       |       |
| 9       | 8.09             | 21.20            |             | 9.15             | 22.00            |                  |       |       |
|         | 8.37             | 21.15            |             | 9.22             | 22.22            |                  |       |       |
|         | 8.23             | 21.18            |             | 9.18             | 22.11            |                  |       |       |
|         | <del>7.30</del>  | <del>7.30</del>  |             | <del>22.11</del> | <del>7.30</del>  |                  |       |       |
|         | 12.95            | 13.88            | 9.33        | 12.93            | 14.81            |                  | 8.74  |       |
| 8       | 9.10             | 21.05            |             | 10.16            | 22.10            |                  |       |       |
|         | 9.12             | 21.13            |             | 10.28            | 22.10            |                  |       |       |
|         | 9.11             | 21.09            |             | 10.22            | 22.10            |                  |       |       |
|         | <del>21.09</del> | <del>7.30</del>  | 8.65        | <del>22.10</del> | <del>7.30</del>  |                  | 8.03  |       |
|         | 11.98            | 13.79            |             | 11.88            | 14.80            |                  |       |       |
| 7       | 10.71            | 21.10            |             | 12.05            | 22.04            |                  |       |       |
|         | 10.68            | 21.20            |             | 12.21            | 22.20            |                  |       |       |
|         | <del>10.70</del> | <del>21.15</del> |             | <del>12.13</del> | <del>22.12</del> |                  |       |       |
|         | <del>21.15</del> | <del>7.30</del>  | 7.56        | <del>22.12</del> | <del>7.30</del>  |                  | 6.74  |       |
|         | 10.48            | 13.88            |             | 9.99             | 14.82            |                  |       |       |
| 6       | 10.52            | 21.11            |             | 11.60            | 21.90            |                  |       |       |
|         | 10.52            | 21.16            |             | 11.59            | 21.88            |                  |       |       |
|         | 10.52            | 21.10            |             | 11.60            | 21.89            |                  |       |       |
|         | <del>21.10</del> | <del>7.30</del>  | 7.65        | <del>21.89</del> | <del>7.30</del>  |                  | 7.51  |       |
|         | 10.58            | 13.80            |             | 10.29            | 13.59            |                  |       |       |
| 5       | 16.70            | 20.98            |             | 18.40            | 21.71            |                  |       |       |
|         | 16.78            | 20.70            |             | 18.48            | 21.71            |                  |       |       |
|         | 16.74            | 20.84            |             | 18.44            | 21.71            |                  |       |       |
|         | <del>20.84</del> | <del>7.30</del>  | 3.03        | <del>21.71</del> | <del>7.30</del>  |                  |       |       |
|         | 4.10             | 13.54            |             | 3.27             | 13.41            |                  | 2.44  |       |

End of  
3.30 pm

Zero at end = 7.36

No flake = 27.05

Mean zero = 7.30

Wednesday Jan 18, 1928

8 41

ac 6039

Large af.

No plate 27.00 + 26.20

Zero = 7.15

Leather Band in

Leather Band out

2y Film

2y Film

9

7.90 17.15

8.11 18.75

7.65 17.20

8.16 18.51

7.82 17.18 10.05

8.14 18.63 11.50

9.36 9.33

10.49

9.11

- 8

8.38 17.36

9.11 18.68

8.30 17.46

9.07 18.50

8.34 17.41 10.28

9.09 18.59 11.46

9.07 8.83

9.50 8.30

- 7

9.65 17.50

10.75 18.70

9.60 17.43

10.58 18.36

9.62 17.46 10.33

10.66 18.53 11.40

7.84 7.59  
8.77

7.87 6.91

- 6

11.71 17.25

12.94 18.38

11.62 17.17

12.80 18.40

11.66 17.21 10.08

12.87 18.39 11.26

5.55 5.50

5.52 4.90

- 5

13.22 17.10

14.45 18.21

13.24 17.00

14.55 18.28

13.23 17.05 9.92

14.50 18.24 11.11

3.82 3.85

3.74 3.36

ended

9.00 +

No plate 26.94

Zero = 7.11

General Result:- Diffusion sum to give most accurate values. 27

Page 26

Plot of direct readings

+ ← L.B in  
 8 ← LB mt

9

10

11

12

13

14

9

← 1 mag →

← 1 mag →

l.

20/1

10/1

General Rem

R 6039

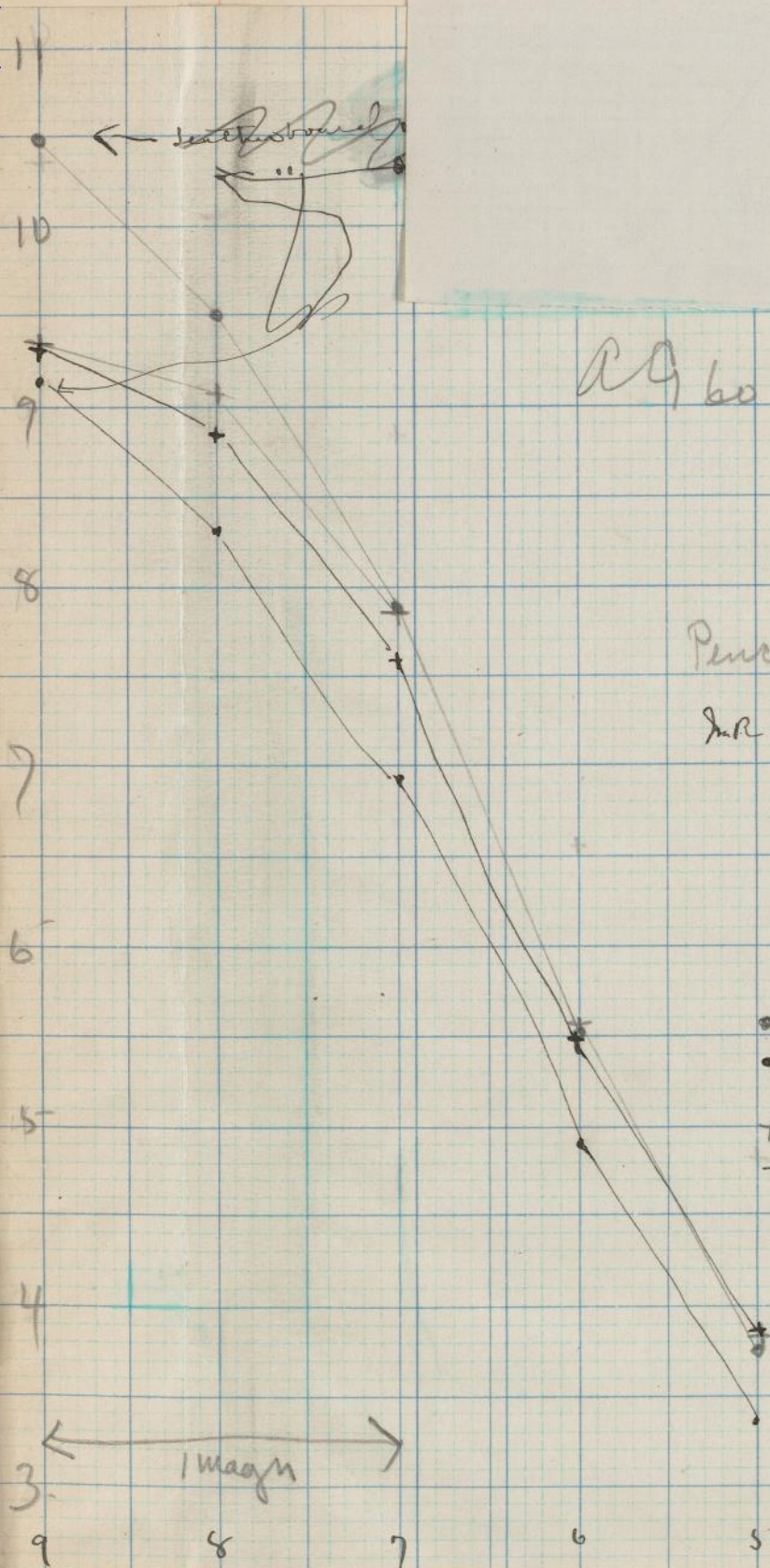
ESK 6-27

Pencil Diff

In R. Reduced

+ Leatherboard

- - - - - Leatherboard out (Diff)  
 . . . . . " " " (Reduced)  
 + - + - + Leatherboard in (Diff)  
 + - + - + " " " (Reduced)



841 acb

No fl  
Zoo =  
Leather  
29

$$\begin{array}{r} 9 \quad 7.90 \\ 7.66 \\ \hline 7.82 \end{array}$$

|   |      |
|---|------|
| 8 | 8.38 |
| 8 | 8.30 |
|   | 8.84 |

$$\begin{array}{r} - 7 \quad 9.65 \\ \quad 9.60 \\ \hline \quad 9.62 \end{array}$$
$$\begin{array}{r} 6 \phantom{00} 11.71 \\ - \phantom{00} 11.62 \\ \hline 11.66 \end{array}$$
$$\begin{array}{r} - 5 \quad 13.22 \\ 13.24 \\ \hline 13.23 \end{array}$$

subd  
9.00 to w. No flat  
low =

Ag 6049

2.512 6-27

General Result:- Diffusion sum to give most abundant <sup>values</sup> 27

Wednesday Jan 18 1928

|                  |       |                                                            |      |         |       |       |      |
|------------------|-------|------------------------------------------------------------|------|---------|-------|-------|------|
| AG 6049          |       | Large aperture                                             |      |         |       |       |      |
| Juv = 7.18       |       | No plate                                                   |      | = 26.48 |       |       |      |
| L.B in           |       | $\begin{array}{r} 7.18 \\ 7.30 \\ \hline 7.24 \end{array}$ |      | L.B out |       |       |      |
| Sq.              | Jth   |                                                            |      | Sq.     | Jth   |       |      |
| 8.36             | 20.77 |                                                            |      | 9.18    | 21.80 |       |      |
| 8.43             | 20.80 |                                                            |      | 9.20    | 22.11 |       |      |
| 8.40             | 20.78 | 13.54                                                      |      | 9.19    | 21.68 | 14.44 |      |
|                  | 12.30 |                                                            | 9.10 |         | 12.49 |       | 8.65 |
| 8.97             | 21.01 |                                                            |      | 10.06   | 21.60 |       |      |
| 9.04             | 21.06 |                                                            |      | 10.11   | 21.75 |       |      |
| 9.00             | 21.04 | 13.80                                                      |      | 10.08   | 21.68 | 14.44 |      |
|                  | 12.04 |                                                            | 8.74 |         | 11.60 |       | 8.04 |
| 10.14            | 20.65 |                                                            |      | 11.50   | 21.60 |       |      |
| 10.19            | 20.58 |                                                            |      | 11.42   | 21.40 |       |      |
| 10.16            | 20.62 | 13.28                                                      |      | 11.46   | 21.50 | 14.26 |      |
|                  | 10.46 |                                                            | 7.80 |         | 10.04 |       | 7.05 |
| 11.51            | 19.95 |                                                            |      | 12.67   | 20.83 |       |      |
| 11.59            | 19.81 |                                                            |      | 12.76   | 20.81 |       |      |
| 11.55            | 19.88 | 12.64                                                      |      | 12.72   | 20.82 | 13.58 |      |
|                  | 8.33  |                                                            | 6.60 |         | 8.10  |       | 5.96 |
| 13.16            | 19.36 |                                                            |      | 14.20   | 20.45 |       |      |
| 13.19            | 19.76 |                                                            |      | 14.14   | 20.38 |       |      |
| 13.18            | 19.56 | 12.32                                                      |      | 14.17   | 20.42 | 13.18 |      |
|                  | 6.38  |                                                            | 5.16 |         | 6.25  |       | 4.75 |
| 16.25            | 20.70 |                                                            |      | 17.67   | 21.42 |       |      |
| 16.20            | 20.56 |                                                            |      | 17.82   | 21.60 |       |      |
| 16.22            | 20.63 | 13.39                                                      |      | 17.77   | 21.51 | 14.27 |      |
|                  | 4.41  |                                                            | 3.29 |         | 3.74  |       | 2.62 |
| 18.26            | 20.09 |                                                            |      | 19.35   | 21.10 |       |      |
| 18.22            | 20.20 |                                                            |      | 19.51   | 21.10 |       |      |
| 18.24            | 20.14 | 12.80                                                      |      | 19.43   | 21.10 | 13.86 |      |
|                  | 1.90  |                                                            | 1.47 |         | 1.67  |       | 4.21 |
| No plate = 26.50 |       | No plate                                                   |      |         |       |       |      |
| Juv = 7.38       |       |                                                            |      |         |       |       |      |

Wednesday Jan 25, 1928

Mr Mann took the galvanometer  
apart & adjusted it.

Stand placed near electrical chumt,  
after we had focused a charge by  
scrapping feet on floor, then needle  
left when it would stick.

Ground with resistance on thermos circuit  
remedied the effect

In every find galvanometer (meters  
up on) moving through 1 to 3 mm,  
as if responding to various strength of  
current

Disconnected the ground, & then  
found mirror stuck

Friday Jan 27, 1928

The galvanometer was opened up by Mr. Mann & Prof. Garrison. The coil which had a slight bend at one side was straightened.

After many experiments, it was found that the best method to avoid charges being communicated by touching electrical shut was to ground it with the frame of galvanometer, which is also grounded.

As it appeared that the ground for galvanometer was faulty, a new connection was made with the telephone system. Previously, it had been joined to the hot water pipe, as is the Riff photometer.

After light has been on for 7 hrs. the full light with no plate in reads 20.09 on the scale.

Zero = 2.92

mm readings

| Full light | Zero |
|------------|------|
| 20.16      | 3.00 |
| 20.17      | 2.98 |
| 20.21      | 2.95 |

Friday Jan 27, 1928

But from  
at 0 thickness

all 6065

No plate or fuel light

Zero

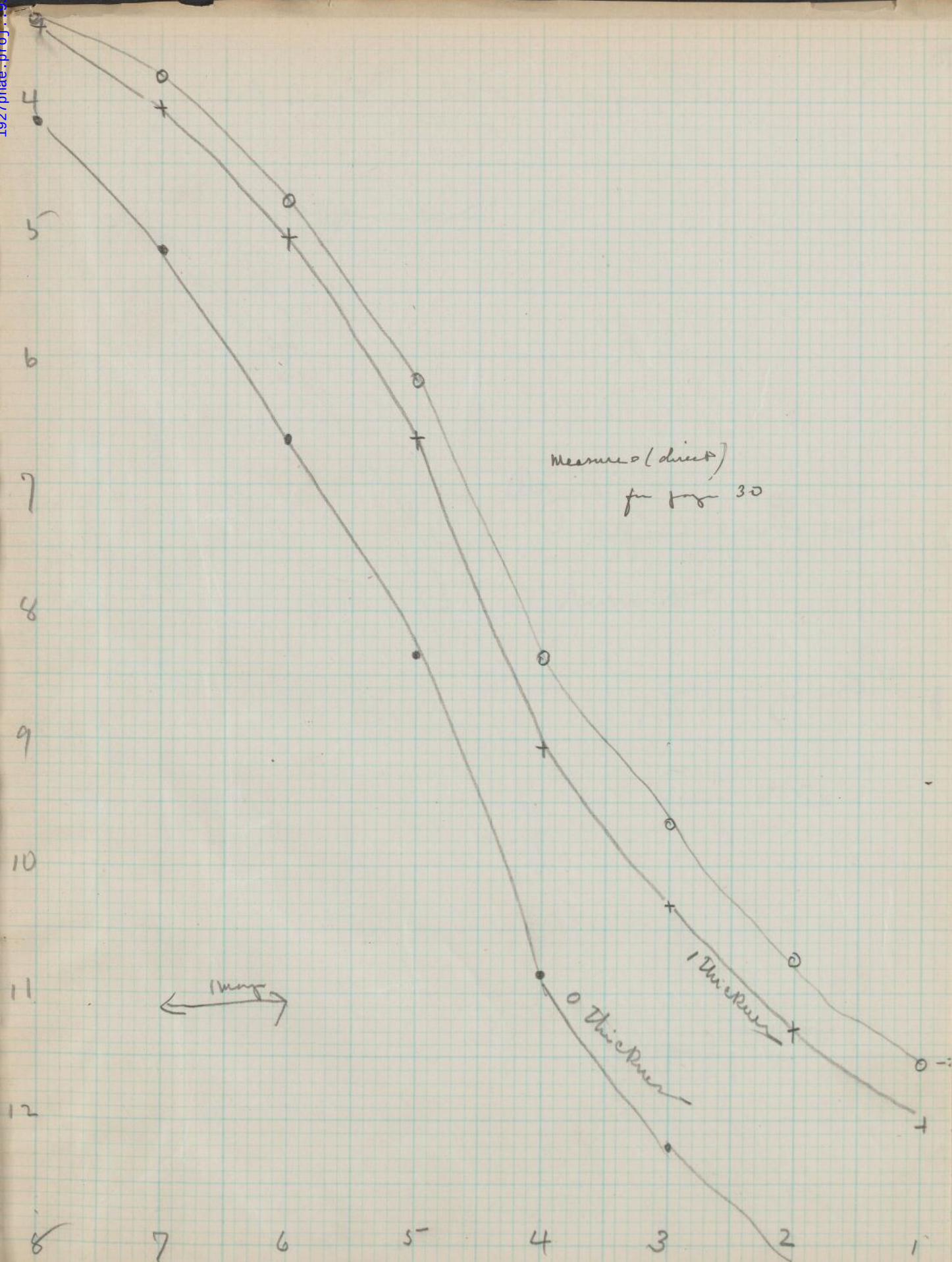
2 18 km

20.22

3.00

|   | 2 thickness L.B.                                   |                                                    | 0            | 1 thickness                                        |                                                    | +            | 0 thickness                                        |                                                    |                         |
|---|----------------------------------------------------|----------------------------------------------------|--------------|----------------------------------------------------|----------------------------------------------------|--------------|----------------------------------------------------|----------------------------------------------------|-------------------------|
| 9 | 3.10<br>3.07<br>3.08                               | 11.36<br>11.29<br>11.32                            | 8.24         | 3.03<br>3.05<br>3.04                               | 11.70<br>11.75<br>11.72                            | 8.68         | 3.44<br>3.57<br>3.50                               | 13.60<br>13.55<br>14.10<br>13.58<br>14.17<br>13.92 | 10.08<br>10.08<br>10.14 |
| 8 | 3.33<br>3.30<br>3.32                               | 12.10<br>11.84<br>11.97                            | 8.65         | 3.40<br>3.40<br>3.40                               | 12.23<br>12.11<br>12.17                            | 8.77         | 4.10<br>4.14<br>4.12                               | 13.92<br>14.36<br>14.26                            | 10.14                   |
| 7 | 3.80<br>3.80<br>3.80                               | 12.32<br>12.25<br>12.28                            | 8.48         | 4.02<br>4.06<br>4.04                               | 12.60<br>12.66<br>12.63                            | 8.59         | 5.10<br>5.25<br>5.18                               | 14.60<br>14.54<br>14.57                            | 9.39                    |
| 6 | 4.78<br>4.81<br>4.79                               | 12.30<br>12.16<br>12.23                            | 7.44         | 5.07<br>5.10<br>5.08                               | 12.59<br>12.75<br>12.67                            | 7.59         | 6.30<br>6.70<br>6.62                               | 14.60<br>14.50<br>14.53                            | 7.93                    |
| 5 | 6.19<br>6.18<br>6.18                               | 12.64<br>12.50<br>12.57                            | 6<br>4.39    | 6.60<br>6.66<br>6.63                               | 12.89<br>13.05<br>12.97                            | 6.34         | 8.36<br>8.36<br>8.36                               | 14.28<br>14.25<br>14.26                            | 5.90                    |
| 4 | 8.40<br>8.36<br>8.38                               | 12.05<br>12.42<br>12.23                            | 3.85         | 9.08<br>9.02<br>9.05                               | 12.74<br>12.81<br>12.78                            | 3.73         | 10.94<br>10.77<br>10.86                            | 14.26<br>14.50<br>14.39                            | 3.53                    |
| 3 | 9.69<br>9.64<br>9.66                               | 11.96<br>11.97<br>11.96                            | 2.30         | 10.26<br>10.35<br>10.30                            | 12.50<br>12.50<br>12.50                            | 2.20         | 12.29<br>12.16<br>12.22                            | 14.18<br>14.18<br>14.18                            | 1.96                    |
| 2 | 10.81<br>10.72<br>10.76<br>11.50<br>11.60<br>11.58 | 11.90<br>11.76<br>11.83<br>12.18<br>11.98<br>12.08 | 1.07<br>0.58 | 11.32<br>11.26<br>11.29<br>12.06<br>11.96<br>12.01 | 12.40<br>12.32<br>12.36<br>12.52<br>12.40<br>12.46 | 1.07<br>0.43 | 13.38<br>13.10<br>12.96<br>13.75<br>13.71<br>13.73 | 14.08<br>14.07<br>14.07<br>14.20<br>14.19<br>14.20 | 0.84<br>0.47            |
| 9 | 11.58                                              | 12.08                                              |              | 12.01                                              | 12.46                                              |              | 13.73                                              | 14.20                                              |                         |

at 3.10  
fuel light 20.18  
No plate



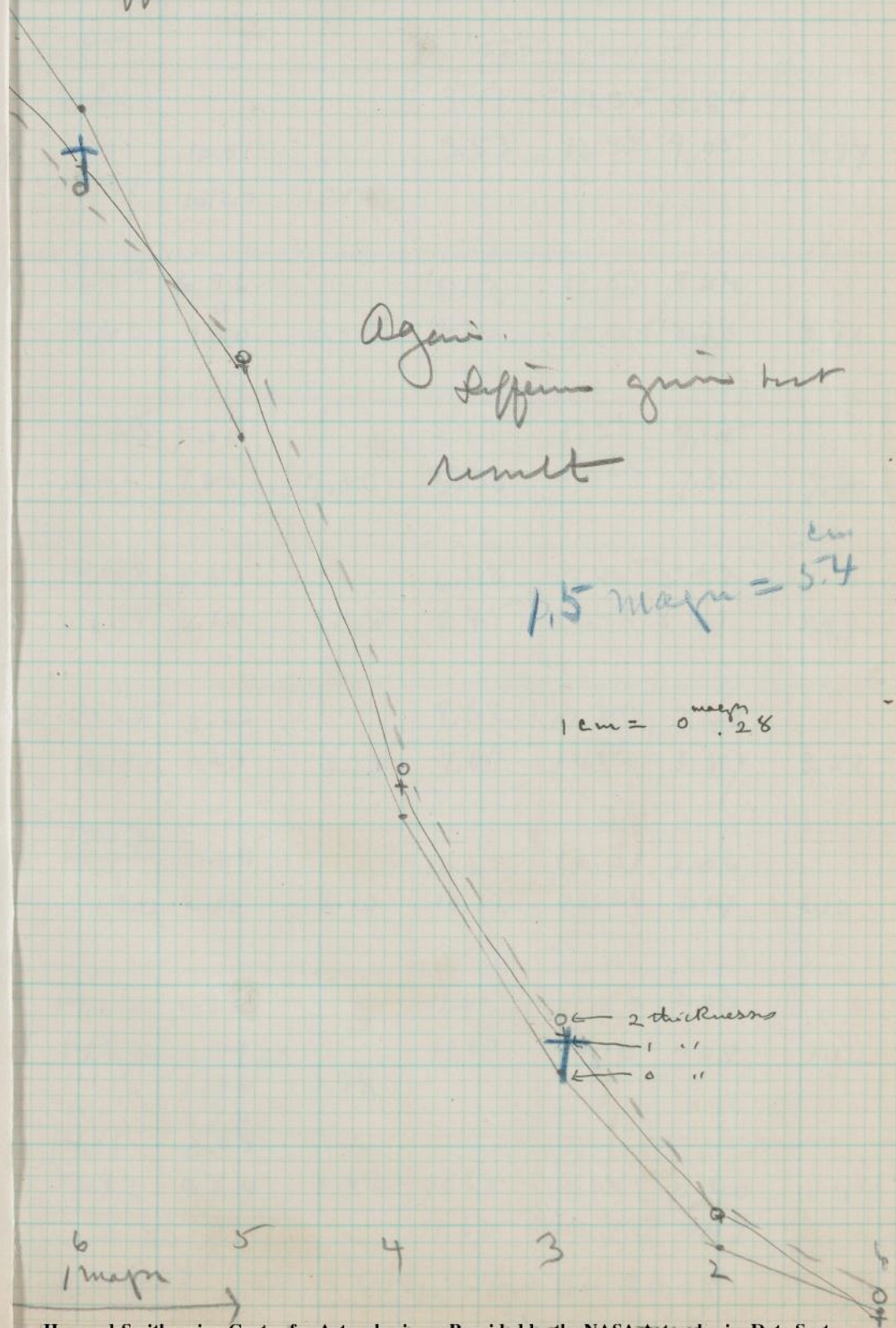
196065 2512 No 6 page 30

Differences.

Again.  
Differences given but  
result

$$1.5 \text{ mag} = 5.4^{\text{cm}}$$

$$1 \text{ cm} = 0.28^{\text{mag}}$$



Friday Jan 27, 1928  
 a96065 focused with 1 thickness LB w/  
 4.44 pm full brightness = 20.12  $\bar{J}_{\text{ave}} = 2.75$

| as met                        |       |                  |                     | 1 thickness removed           |       |       |      |
|-------------------------------|-------|------------------|---------------------|-------------------------------|-------|-------|------|
|                               | Seq.  | Full             |                     |                               |       |       |      |
| 8                             | 4.00  | 14.01            | 10.01               | 3.51                          | 12.35 | 8.84  |      |
|                               | 4.01  | 14.21            | 10.20               | 3.53                          | 12.58 | 9.05  | 8.94 |
|                               |       |                  | 10.10               |                               |       |       |      |
| 7                             | 4.98  | 13.94            | 8.96                | 4.19                          | 12.83 | 8.64  |      |
|                               | 5.00  | 14.40            | 9.20 <sup>4</sup>   | 4.20                          | 12.98 | 8.78  | 8.71 |
| 6                             | 6.48  | 14.28            | 7.80                | 5.10                          | 12.55 | 7.46  |      |
|                               | 6.62  | 14.42            | 7.80                | 5.30                          | 12.65 | 7.35  | 7.40 |
|                               |       |                  | 7.80                |                               |       |       |      |
| 5                             | 8.56  | 14.49            | 5.93                | 6.48                          | 12.45 | 5.97  |      |
|                               | 8.23  | 14.35            | 6.13                | 6.45                          | 12.42 | 5.97  | 5.97 |
|                               |       |                  | 5.98                |                               |       |       |      |
| 4                             | 11.02 | 14.25            | 3.23                | 9.32                          | 12.80 | 3.48  |      |
|                               | 11.20 | 14.43            | 3.23                | 9.09                          | 12.66 | 3.57  | 3.52 |
|                               |       |                  | 3.23                |                               |       |       |      |
| 3                             | 12.08 | <del>14.13</del> | 2.04                | 10.25                         | 12.31 | 2.06  |      |
|                               | 12.05 | 14.20            | 2.15                | 10.12                         | 12.26 | 2.14  | 2.10 |
|                               |       |                  | 2.10                |                               |       |       |      |
| 2                             | 13.26 | 14.02            | 0.76                | 11.05                         | 12.28 | 1.23  |      |
|                               | 13.08 | 14.22            | 1.14 <sup>394</sup> | 11.10                         | 12.10 | 1.00  | 1.12 |
|                               | 12.20 | 14.16            | 1.26 <sup>394</sup> |                               |       |       |      |
|                               | 13.28 | 14.06            | 0.78                |                               |       |       |      |
| 1                             | 13.42 | 14.11            | 0.69                |                               |       |       |      |
|                               | 13.38 | 13.92            | 0.54                | 0.62                          | 11.68 | 12.08 | 0.40 |
|                               |       |                  |                     |                               |       |       | 0.44 |
|                               |       |                  |                     |                               | 11.65 | 12.12 | 0.47 |
| Full Brightness = 20.18       |       |                  |                     | 5.18 pm Full B = 20.09        |       |       |      |
| $\bar{J}_{\text{ave}} = 2.92$ |       |                  |                     | $\bar{J}_{\text{ave}} = 2.98$ |       |       |      |

Saturday Jun 28, 1928

Experimented as to best position for plate in Schmitt Photometer.

Found that movement of plate, either from or toward the thermocouple decreased the reading, for the most part. Examination by the microscope showed that the plate was not quite in focus for the maximum of reading.

On previous days (30 & 31) it appears that change in readings is less for faint than for dark areas. I.E. when compared with film, the diff is more nearly alike.

Put AB 212 in instrument. Setometer 46. Although clearly visible on plate in ordinary light, without using a glass the disk is difficult to see in field. Marked disk with an ink point in center.

| Means                       | Mean        | Dark        | Film | Sum = 2.73  |
|-----------------------------|-------------|-------------|------|-------------|
| 14.14 16.70 <sup>2.56</sup> | 13.97 14.31 | 16.06 17.33 |      |             |
| 14.04 16.96 <sup>2.92</sup> | 14.11 13.96 | 17.08 16.84 |      | 16.92 17.01 |
| 14.39 17.14 <sup>2.75</sup> | 14.38 14.40 | 17.32 16.97 |      | 14.18 14.22 |
| 14.21 17.06 <sup>2.85</sup> | 14.23 14.19 | 17.21 16.90 |      | 2.78 2.79   |
| 14.20                       | 71.69 71.86 | 27.67 27.04 |      |             |
|                             | 14.15 14.22 | 16.92 17.01 |      |             |

Revol,

30, 1928.

Full adjustment

6 p.m. 9 conditions

|      |      |      |
|------|------|------|
| 3.24 | 3.18 | 3.05 |
| 3.01 | 2.95 | 2.82 |
| 3.06 | 3.00 | 2.87 |

|     |     |
|-----|-----|
| +22 | -1  |
| +4  | -7  |
| +16 | -2  |
| +3  | -20 |
|     | -15 |

|      |      |      |
|------|------|------|
| 9.31 | 9.13 | 8.74 |
|------|------|------|

|      |     |
|------|-----|
| +45  | -45 |
| 2/90 |     |
| ±10  |     |

9.13  
8.74

9/2718

3.02

|      |      |      |      |
|------|------|------|------|
| Ar 1 | 2.33 | 2.24 | 2.28 |
|      | 2.20 | 2.27 | 2.25 |
|      | 2.23 | 2.37 | 2.38 |

|     |    |
|-----|----|
| +5  | -8 |
| +9  | -5 |
| 0   | -4 |
| +10 | -1 |
|     | -3 |

|      |      |      |
|------|------|------|
| 6.76 | 6.88 | 6.91 |
|------|------|------|

|      |     |
|------|-----|
| +24  | -21 |
| 2/45 |     |
| ±5   |     |

6.88

6.91

9/2055

2.28

|      |      |      |      |
|------|------|------|------|
| af 2 | 1.32 | 1.26 | 1.20 |
|      | 1.34 | 1.28 | 1.22 |
|      | 1.45 | 1.39 | 1.34 |

|     |     |
|-----|-----|
| +1  | -5  |
| +3  | -3  |
| +14 | -11 |
| +8  | -9  |
| +2  |     |

|      |      |      |
|------|------|------|
| 4.11 | 3.93 | 3.75 |
|------|------|------|

|      |     |
|------|-----|
| +28  | -28 |
| 2/56 |     |
| ±6   |     |

9/1179

1.31

adjustment appears best

|       |       |       |
|-------|-------|-------|
| 10.69 | 10.58 | 10.56 |
| 9.24  | 9.30  | 9.26  |
| 1.45  | 1.28  | 1.20  |

|      |      |      |                  |      |
|------|------|------|------------------|------|
| mean | 1.31 | Res. | +14<br>-3<br>-11 | 2/28 |
|      |      |      |                  | ±9   |

various adjustments, measured  
linearity of dot in center  
idyl

sum X Y  
2.80 4.82 20.6

|       |     |
|-------|-----|
| 16.86 | -8  |
| 16.92 | -2  |
| 17.05 | +11 |
| 16.94 | ±7  |

19.92 -4

19.87 -9

|       |     |
|-------|-----|
| 20.10 | +14 |
| 19.96 | ±9  |

19.96  
2.78  
17.18

12.91 -8

13.04 +5

|       |    |
|-------|----|
| 13.01 | +2 |
| 12.99 | ±5 |

15.38 -3

15.38 +1

|       |    |
|-------|----|
| 15.29 | +2 |
| 15.27 | ±2 |

15.27  
2.78  
12.49

9.24 -6

9.30 +6

|       |    |
|-------|----|
| 9.36  | ±4 |
| 10.69 | +8 |
| 10.58 | -3 |
| 10.56 | -5 |
| 10.61 | ±5 |

10.61  
2.78  
7.83

sum = 2.76

2.76  
2.80  
mean 2.78

|       |       |       |       |
|-------|-------|-------|-------|
| 10.71 | 10.71 | 10.25 | 10.59 |
| 10.78 | 10.70 | 10.31 | 10.65 |

30, 1928.

Star # B 212

various adjustments, measured  
 on glass side of image 46 (marked dot in center)

AB 212 Image 46

Full adjustment

|             |       |       |
|-------------|-------|-------|
| 19.92       | 19.87 | 20.10 |
| 16.86       | 16.92 | 17.05 |
| 3.06        | 2.95  | 3.05  |
| Residual    |       |       |
|             | +4    | +14   |
|             | -7    | -5    |
|             | +3    | +5    |
| Mean = 3.02 |       |       |

adjustment 1

|             |       |       |
|-------------|-------|-------|
| 15.24       | 15.28 | 15.29 |
| 12.91       | 13.04 | 13.01 |
| 2.33        | 2.24  | 2.28  |
| Res.        |       |       |
|             | +5    | +14   |
|             | -4    | -5    |
|             | 0     | +3    |
| Mean = 2.28 |       |       |

adjustment 2

|       |       |       |
|-------|-------|-------|
| 10.69 | 10.58 | 10.56 |
| 9.24  | 9.30  | 9.36  |
| 1.45  | 1.28  | 1.20  |

|      |      |      |     |     |
|------|------|------|-----|-----|
| Mean | 1.31 | Res. | +14 | +12 |
|      |      |      | -3  | -3  |
|      |      |      | -11 | +9  |
|      |      |      |     | +9  |

|       |      |      |
|-------|------|------|
| 2.80  | 4.82 | 20.6 |
| 16.86 | -8   |      |
| 16.92 | -2   |      |
| 17.05 | +11  |      |
| 16.94 | +7   |      |

19.92 -4

19.87 -9

|       |     |
|-------|-----|
| 20.10 | +14 |
| 19.96 | +9  |

|       |
|-------|
| 19.96 |
| 2.78  |
| 17.18 |

12.91 -8

13.04 +5

|       |    |
|-------|----|
| 13.01 | +2 |
|-------|----|

|       |    |
|-------|----|
| 12.99 | +5 |
|-------|----|

|       |    |
|-------|----|
| 15.24 | -3 |
|-------|----|

|       |    |
|-------|----|
| 15.38 | +1 |
|-------|----|

|       |    |
|-------|----|
| 15.29 | +2 |
|-------|----|

|       |    |
|-------|----|
| 15.27 | +2 |
|-------|----|

|       |
|-------|
| 15.27 |
| 2.78  |
| 12.49 |

9.24 -6

9.30 +6

|      |     |
|------|-----|
| 9.36 | +12 |
|------|-----|

|       |    |
|-------|----|
| 10.69 | +8 |
|-------|----|

|       |    |
|-------|----|
| 10.58 | -3 |
|-------|----|

|       |    |
|-------|----|
| 10.56 | -5 |
|-------|----|

|       |    |
|-------|----|
| 10.61 | +5 |
|-------|----|

|       |
|-------|
| 10.61 |
| 2.78  |
| 7.83  |

|           |
|-----------|
| 2.76      |
| 2.80      |
| Mean 2.78 |

|       |       |       |       |
|-------|-------|-------|-------|
| 10.71 | 10.71 | 10.25 | 10.59 |
| 10.78 | 10.70 | 10.31 | 10.65 |

day Jan 30, 1928.

to Polaris

After making various adjustments, measured  
to AB 212 Image 46 (marked dot in center  
on glass side)

| Above | Below | Right | Left  | Zero  | X    | Y    |
|-------|-------|-------|-------|-------|------|------|
| 17.14 | 16.84 | 16.93 | 16.52 | 2.80  | 4.82 | 20.6 |
| 17.28 | 16.85 | 16.82 | 16.72 | 16.86 | -8   |      |
|       |       |       |       | 16.92 | -2   |      |
|       |       |       |       | 17.05 | +11  |      |
| 17.32 | 17.12 | 16.95 | 16.80 | 16.94 | 2121 |      |
| 17.25 | 16.94 | 16.90 | 16.68 |       | ±7   |      |

|       |       |       |       |       |     |       |
|-------|-------|-------|-------|-------|-----|-------|
| 19.52 | 19.48 | 19.72 | 19.79 |       |     |       |
| 20.07 | 20.20 | 19.72 | 19.69 | 19.92 | -4  |       |
| 20.30 | 19.70 | 19.32 | 20.15 | 19.87 | -9  |       |
| 20.28 | 20.17 | 19.81 | 20.12 | 20.10 | +14 |       |
| 20.32 | 20.02 | 19.62 | 19.99 | 19.96 | 227 | 19.96 |
|       |       |       |       |       | ±9  | 2.78  |
|       |       |       |       |       |     | 17.18 |

|       |       |       |       |       |     |  |
|-------|-------|-------|-------|-------|-----|--|
| 13.02 | 12.86 | 13.05 | 12.72 | 12.91 | -8  |  |
| 13.30 | 12.88 | 13.30 | 12.70 | 13.04 | +5  |  |
| 13.24 | 12.95 | 12.92 | 12.89 | 13.01 | +2  |  |
| 13.20 | 12.90 | 13.09 | 12.77 | 12.99 | 315 |  |
|       |       |       |       |       | ±5  |  |

|       |       |       |       |       |     |       |
|-------|-------|-------|-------|-------|-----|-------|
| 15.26 | 15.19 | 15.22 | 15.30 | 15.24 | -3  |       |
| 15.24 | 15.34 | 15.45 | 15.10 | 15.28 | +1  |       |
| 15.38 | 15.30 | 15.19 | 15.30 | 15.29 | +2  |       |
| 15.29 | 15.28 | 15.29 | 15.23 | 15.27 | 216 | 15.27 |
|       |       |       |       |       | ±2  | 2.78  |
|       |       |       |       |       |     | 12.49 |

|       |       |       |       |       |     |           |
|-------|-------|-------|-------|-------|-----|-----------|
| 9.22  | 9.20  | 9.10  | 9.46  | 9.24  | -6  |           |
| 9.20  | 9.29  | 9.20  | 9.10  | 9.30  | +6  |           |
| 9.28  | 9.20  | 9.23  | 9.27  | 9.36  | 212 | 10.61     |
| 9.40  | 9.23  | 9.27  | 9.31  | 9.30  | ±4  | 2.78      |
| 10.78 | 10.84 | 10.48 | 10.67 | 10.69 | +8  | 2.76      |
| 10.85 | 10.55 | 10.20 | 10.70 | 10.58 | -3  | 2.80      |
| 10.71 | 10.71 | 10.25 | 10.59 | 10.56 | -5  | mean 2.78 |
| 10.78 | 10.70 | 10.31 | 10.65 | 10.61 | 316 |           |
|       |       |       |       |       | ±5  |           |

Tuesday Jan 31, 1928

Form of record for AB plate measure  
with Scheuch Plate

| AB 845 |       | Time  | Reading | Zero | Zero |
|--------|-------|-------|---------|------|------|
| Center | $x =$ | $y =$ |         |      |      |
| Star   | $x$   | above | Image   | Film |      |
|        | $y$   | below |         |      |      |
|        |       | Right |         |      |      |
|        |       | Left  |         |      |      |

Tuesday May 1, 1924

Izern

Clear Glass 16.20

12.3

3.80

12.5 ~~16.20~~ Clear glass

16.20

12.6 Dark mark

4.35

13.0

4.45

13.5 25.5

4.42 4.52

14.0 26.0

4.40 4.51

14.5 26.5

4.40 4.40

15.0 27.0

4.42 4.42

15.5 27.5

4.45 4.39

16.0

4.48

16.5

4.50

17.0

4.52

17.5

4.58

18.0

4.58

18.5

4.60

19.0

4.60

19.5

4.62

20.0

4.63

20.5

4.68

21.0

4.68

21.5

4.72

22.0

4.75

22.5

4.73

23.0

4.70

23.5

4.73

24.0

4.68

24.5

4.62

25.0

4.58

27.35 Clear glass

15.89

4.59

27

Tuesday, May 1, 1928.

|             | Zero    | Reading |      |                   |
|-------------|---------|---------|------|-------------------|
|             | Setting | → 3.95  |      |                   |
| Clear glass | 12.5    | 15.86   |      |                   |
| Inc         | 13.0    | 4.45    |      |                   |
|             | 13.5    | 4.40    | 25.5 | 4.60              |
|             | 14.0    | 4.40    | 26.0 | 4.58              |
|             | 14.5    | 4.41    | 26.5 | 4.47              |
|             | 15.0    | 4.42    | 27.0 | 4.48              |
|             | 15.5    | 4.45    | 27.5 | 4.40              |
|             | 16.0    | 4.48    | 28.0 | .                 |
|             | 16.5    | 4.49    |      | .                 |
|             | 17.0    | 4.49    | 17.5 | 15.90 clear glass |
|             | 17.5    | 4.49    |      |                   |
|             | 18.0    | 4.52    |      |                   |
|             | 18.5    | 4.56    |      |                   |
|             | 19.0    | 4.60    |      |                   |
|             | 19.5    | 4.57    |      |                   |
|             | 20.0    | 4.61    |      |                   |
|             | 20.5    | 4.59    |      |                   |
|             | 21.0    | 4.64    |      |                   |
|             | 21.5    | 4.65    |      |                   |
|             | 22.0    | 4.69    |      |                   |
|             | 22.5    | 4.70    |      |                   |
|             | 23.0    | 4.74    |      |                   |
|             | 23.5    | 4.73    |      |                   |
|             | 24.0    | 4.75    |      |                   |
|             | 24.5    | 4.65    |      |                   |
|             | 25.0    | 4.60    |      |                   |

Tuesday May, 1, 1928.

Zero 4.00

|             | Setting | Reading |      |              |
|-------------|---------|---------|------|--------------|
| Clear glass | 12.5    | 15.90   |      |              |
| Ink mark    | 12.6    | 4.35    | 24.0 | 4.75         |
|             | 13.0    | 4.45    | 24.5 | 4.70         |
|             | 13.5    | 4.46    | 25.0 | 4.66         |
|             | 14.0    | 4.45    | 25.5 | 4.66         |
|             | 14.5    | 4.42    | 26.0 | 4.58         |
|             | 15.0    | 4.42    | 26.5 | 4.51         |
|             | 15.5    | 4.42    | 27.0 | 4.50         |
|             | 16.0    | 4.49    | 27.5 | 4.45         |
|             | 16.5    | 4.50    | 28.0 | 4.46         |
|             | 17.0    | 4.50    | 28.5 | 4.44         |
| Ink marks   | 17.7    | 4.11    |      |              |
| Clear glass | 17.8    | 15.85   | 3    | Zero<br>3.99 |
|             | 18.0    | 4.66    |      |              |
|             | 18.5    | 4.64    |      |              |
|             | 19.0    | 4.64    |      |              |
|             | 19.5    | 4.70    |      |              |
|             | 20.0    | 4.70    |      |              |
|             | 20.5    | 4.71    |      |              |
|             | 21.0    | 4.70    |      |              |
|             | 21.5    | 4.75    |      |              |
|             | 22.0    | 4.70    |      |              |
|             | 22.5    | 4.76    |      |              |
|             | 23.0    | 4.80    |      |              |
|             | 23.5    | 4.76    |      |              |

Thursday May 1, 1928

*from*  
 $4 \times 2$

|                             |       |      |                   |
|-----------------------------|-------|------|-------------------|
| clear glass <del>12.5</del> | 15.09 |      |                   |
| mark 12.6                   | 4.42  | 17.6 | 4.54              |
| 12.8                        | 4.46  |      |                   |
| 13.0                        | 4.45  | 17.8 | 14.89 clear glass |
| 13.2                        | 4.45  | 18.0 | 14.65             |
| 13.4                        | 4.45  | 18.2 | 4.62              |
| 13.6                        | 4.46  | 18.4 | 4.63              |
| 13.8                        | 4.45  | 18.6 | 4.61              |
| 14.0                        | 4.45  | 18.8 | 4.64              |
| 14.2                        | 4.45  | 19.0 | 4.63              |
| 14.4                        | 4.44  | 19.2 | 4.62              |
| 14.6                        | 4.43  | 19.4 | 4.60              |
| 14.8                        | 4.46  | 19.6 | 4.62              |
| 15.0                        | 4.45  | 19.8 | 4.65              |
| 15.2                        | 4.45  | 20.0 | 4.70              |
| 15.4                        | 4.48  | 20.2 | 4.70              |
| 15.6                        | 4.48  | 20.4 | 4.70              |
| 15.8                        | 4.47  | 20.6 | 4.71              |
| 16.0                        | 4.50  | 20.8 | 4.69              |
| 16.2                        | 4.53  | 21.0 | 4.73              |
| 16.4                        | 4.52  | 21.2 | 4.75              |
| 16.6                        | 4.50  | .4   | 4.75              |
| 16.8                        | 4.49  | .6   | .76               |
| 17.0                        | 4.50  | .8   | .73               |
| 17.2                        | 4.51  | 22.0 | 4.73              |
| 17.4                        | 4.51  | 22.2 | 4.72              |

Tuesday, May 1, 1928

|      |      |
|------|------|
| 22.4 | 4.71 |
| 22.6 | 4.71 |
| 22.8 | 4.76 |
| 23.0 | 4.75 |
| 23.2 | 4.72 |
| 23.4 | 4.72 |
| 23.6 | 4.71 |
| 23.8 | 4.71 |
| 24.0 | 4.68 |
| 24.2 | 4.70 |
| 24.4 | 4.66 |
| 24.6 | 4.69 |
| 24.8 | 4.63 |
| 25.0 | 4.66 |
| 25.2 | 4.61 |
| 25.4 | 4.60 |
| 25.6 | 4.60 |
| 25.8 | 4.56 |
| 26.0 | 4.56 |
| 26.2 | 4.54 |
| 26.4 | 4.50 |
| 26.6 | 4.50 |
| 26.8 | 4.48 |
| 27.0 | 4.47 |

4.04 *Igor*

Monday May 28, 1928

Schult Photometer

Removed additions (which were to bring the plate into constant focus)

Adjusted both microscopes & also the illumination.

Large circle (no aperture stop) = 0.2 mm on plate.

Zero = 3.95 Light cut off by brass plate  
 later Zero = 3.80. Oscillates  
 2.58 Zero = 3.67 No light on.

Galvanometer not working. Reminded by lightning  
 connection with thermocouple

No. end down. Focus in center  
 Start at ends (more at end of plate is 0.2 at top)

Are turning plate other end up, the  
 top is more out of focus

4.01

Zero 2.82  
 Center 6.90, 7.08 Pressure with in or out decrease  
 readings

Bottom (No end up) 7.20 Decrease in or out  
 Top " " 6.28 Out increase nearly slightly

No. end down  
 Center 7.20 Slight increase in  
 Bottom 6.92 Decrease in and out  
 Top 7.15 " " " "

1928

To 578'0

change  $\frac{1}{2}$  m

19.51

19.50

19.35

19.39  
 $\frac{4}{175}$   
 19.44

39 14.64

59 11.97

9 6.37

8 1.86

5  
 9

12.48  
 $\frac{1287}{175}$   
 = 12.68

S.S.K. 6 - Page 41  
 a56213

Differences

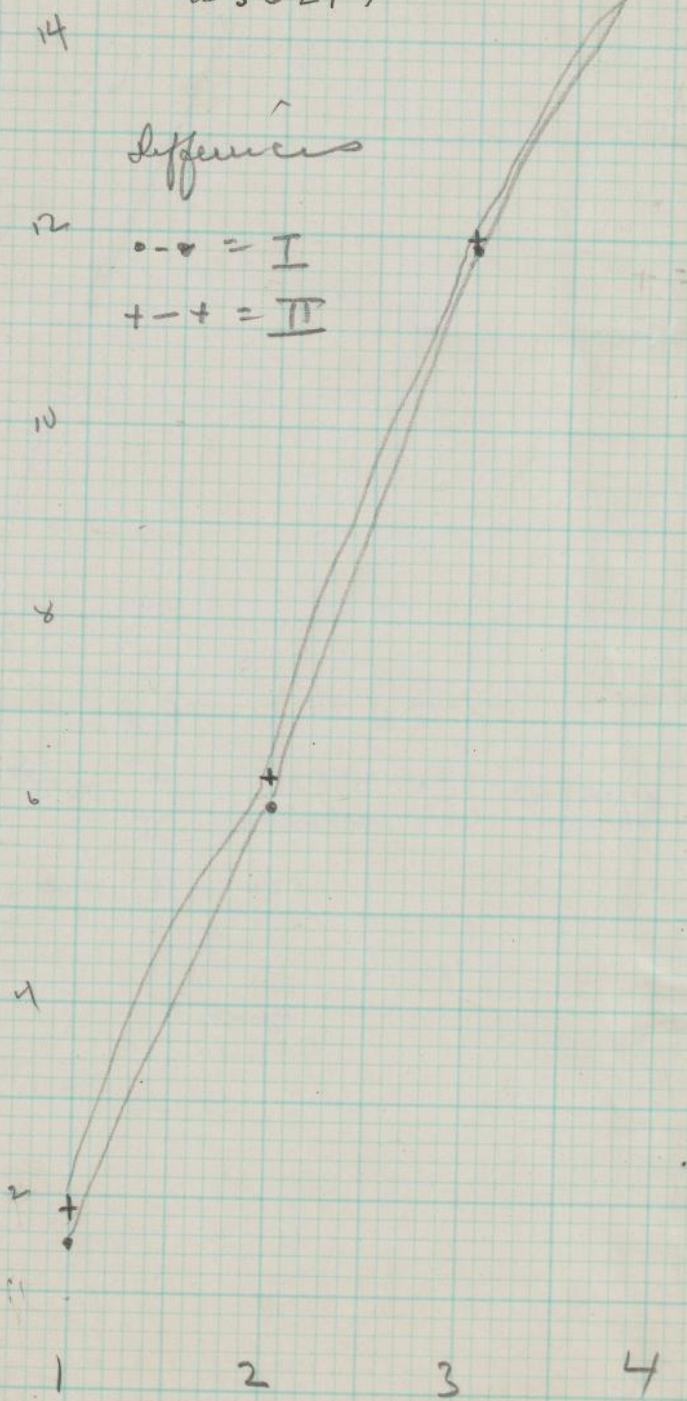
$\circ - \circ = I$   
 $+ - + = II$

a56213  
 Hyd Process (not an

scale =

$\frac{1}{2.69}$        $\frac{2}{3.44}$

1 3 . . . . 3.5



1928

a56213

Hynd Process (not ammoniated)

Density of general run of magis

|       |    |                    |       |
|-------|----|--------------------|-------|
| Range | I  | 9.32 - 9.00 = 0.32 | } 0.0 |
|       | II | 9.20 - 8.90 = 0.30 |       |

|           |    |        |
|-----------|----|--------|
| Range for | I  | = 0.32 |
| film      | II | = 0.16 |

$$\text{scale} = \frac{4.45 - 2.89}{12.68} = 0.123$$

$$\frac{1}{2.89}$$

$$\frac{2}{3.44}$$

$$\frac{3}{3.97}$$

$$\frac{4}{4.45}$$

1 1 3 . . . 3.5 . . . 4 . . . 4.5

$$= 12.68$$

~~Monday~~ Wednesday June 13, 1928

trial measures of 65 6213 cut into 5x8's

6 Bolt = 5.1      Zero = 2.29

I

| Sum |            |             | Space         |
|-----|------------|-------------|---------------|
| 70  | 9.19       | 9.32        | 19.50         |
| 60  | 9.10       | 9.11        | 19.50         |
| 50  | 9.09       | 9.00        | 19.48         |
| 40  | 9.1        |             |               |
| 40  | 9.12       | 9.10        | 19.50         |
|     | <u>5.0</u> | <u>4.53</u> | <u>9.23 6</u> |
|     | 9.12       | 9.13        | 19.59         |

II

Adj. sec. change  $\frac{1}{2}$  in

|             |               |
|-------------|---------------|
| 9.18        | 19.51         |
| 9.10        | 19.50         |
| 8.90        | 19.35         |
| 9.20        | 19.39         |
| <u>4.38</u> | <u>4.17 5</u> |
| 9.10        | 19.44         |

millimeter segs

|   |              |       | Space         | diff  |
|---|--------------|-------|---------------|-------|
| 4 | 4.72         | 4.70  | 19.45         | 19.75 |
|   | <u>4.68</u>  |       |               |       |
| 3 | 7.90         | 7.84  | 19.72         | 19.88 |
|   | <u>7.78</u>  |       |               |       |
| 2 | 13.89        | 13.68 | 19.70         | 6.02  |
|   | <u>13.47</u> |       |               |       |
| 1 | 17.25        | 17.18 | 19.65         | 19.7  |
|   | <u>17.12</u> |       | <u>4.25 2</u> | 19.63 |

diff 17.18  
4.70  
12.48

|              |               |       |       |
|--------------|---------------|-------|-------|
| 4.62         | 4.65          | 19.39 | 19.64 |
| <u>4.68</u>  |               |       |       |
| 8.00         | 7.92          | 19.89 | 11.97 |
| <u>7.85</u>  |               |       |       |
| 13.29        | 13.32         | 19.69 | 6.37  |
| <u>13.35</u> |               |       |       |
| 17.49        | 17.52         | 19.38 | 1.86  |
| <u>17.55</u> | <u>4.23 5</u> |       |       |
|              | 19.59         |       |       |

diff 17.52  
4.65  
12.87

diff 12.48  
1.287  
1.196  
= 12.68



