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Misc. Notes
Mr. Bard.

Miscellaneous Notes.

Mr. Bae.

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Why does reversing the prism make a change in the magnitude?

6/14 '00

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Polarizing Photometer

A Effect on readings of reversing the prism.

4 aps. full lengths { First position (R), readings averaged 0.21 mag
 Second " (L) " " 0.12 "

See data in Pol. Phot. Records, p. 214.

Further data from p. 215, ~~smaller~~ where apertures were 2 mm long.

B
 2 aps. { First position (R), readings averaged 0.12 mag
 2 mm. long { Second " (L) " " 0.04 "

C Uniformly exposed film interposed
 Same aps. { First position (R), readings averaged 0.21
 Interposed film { Second " (L) " " 0.04

Data for p 216, Light on apertures fainter

D
 no film { 1st position (R), readings averaged 0.19
 Same aps. { 2nd " (L) " " 0.06

E
 aps 3 cm { 1st position (R), reading is 0.17
 no glass { 2nd " (L) " " 0.04

With the polarizing photometer I cannot trust the accuracy of my settings when the square is fainter than 0.1 or 0.2 mag. For example see the following readings on p. 11 of Photom. Book 2. Squares 6 (upper) and 16 should read alike.

Polarizing Photometer

Bibliography

H.C.O. Annual Vol XIV p 9

" XXIII p 6

Pickering Papers on Optics

6/24/00 To what extent does absorption by the air
affect the tests of this law? (v. Gauss § 508)

Light Intensity Varies Inversely as Square of Distance

Portable Argand Lamp.

Distances corresponding to light mag-
nitudes.

Mag.	Dist.
0.0	1.000
0.5	1.259
1.0	1.585
1.5	1.996
2.0	2.512
2.5	3.162
3.0	3.981
3.5	5.012
4.0	6.310
4.5	7.944
5.0	10.000

Incandescent Platinum as a Standard Light.

6/24/00

The absolute unit of light adopted by the International Congress of Electricians is that emitted by a square centimeter of melted platinum at the moment of its solidification. It equals 15 standard candles. (V. Lant 309)

Data for Wedges

Exp	Dist	Light	Ref. Plate	Remarks
5 ^s				
10 ^s				
20 ^s	0.5	1 Argand " Michelson		rather strong
30 ^s	0.0	"		
60 ^s	1.5	1A		good
10 ^m				
20 ^m	0.5	1 Arg		good
30 ^m	~~1.5~~ 2.0	1 Arg	138	somewhat ft.
60 ^m	1.5	"	142	good
120 ^m	2.0	"		"
60 ^s	0.75m	"		too faint

Misc. Notes
Mr. Baird

How were these data from Lauvø's
Physics derived?

Intensity of Light from Sun, Moon, etc.

From Lavoisier's Physics § 510

Sun is 600,000 times as powerful as moon in light, and 16,000,000,000 times as powerful as α Centauri, the third in brightness of all the stars. The moon is thus 27,000 times as bright as α Centauri.

Sun is 5,500,000,000 times as bright as Jupiter, and 80,000,000,000 times as bright as Neptune.

Sun is estimated ~~at~~ equal to 670,000 times that of a wax candle at a distance of 1 foot

Tabulating these results:

of luminosity of

Moon = 1	∴	Sun = 600,000
α Centauri = 1	∴	" = 16,000,000,000
" " = 1	∴	Moon = 27,000
Jupiter = 1	∴	Sun = 5,500,000,000
Neptune = 1	∴	" = 80,000,000,000
Wax candle ^{at 1 ft} = 1	∴	" = 670,000

also

Jupiter = 8.240	Vega = 1.000
Genus = 38.900	Polaris = 0.130
	Aldebaran = 0.300
	Saturn = 0.470
	Arcturus = 0.790
	Mars = 2.930
	Sirius = 4.291

Telegrams.

Make use of toll line in telephoning.

Have telegraph clerk repeat message

Sign "Pickering" on cables

" E. C. Pickering on American telegrams

Data for Instrument Signals

Willard 1 m sigs. to Var. Star. ap.
 mag. relay #2 into #2
 turn #2 to left.
 Points relay #2 into #16
 turn #16 to left
 Relay #2 makes circuit once a min. by
 dial time.
 Rear bench switch turned to right.

Prod. 18 sigs. to Var Star. ap.
 Main bldg. switch to right
 #8 " "
 rear bench " "
 #16 " "

Willard 10 m sigs. to Var. Star. ap.
~~mag~~ relay #1 into #2
 Switch #2 to left
 1 point of relay #1 into #8 (left took)
 Switch #8 to left
 other point relay #1 to ground
 #16 to right
 rear bench switch to left.
 relay #1 use 10 m disc on commutator
 to open pull ground switch #16 to left.

5
~~40~~

Frod. 5 ~~8~~ or 105 sigs.
 Basement switch to right.
 Switch over relay (in basement) to right
 " # 8 to right
 " 16 "
 reach bench "
 Mines to 5 m or 10 m dist.

Alarm Sigs.

3 switches to right	Key powerless
left switch to left	key rings everything
" " " "	} key rings big bells.
right " " "	

Clock & Watch Comparisons.

Get sigs from Fred. ~~on~~ ~~over~~.

Switch # 8 to right
near bench switch " "

Compare these sigs with tower and
watches with tower.

Figures 1-3

Table 1

For the first 8 or 10 years

the ...

the ...

Table 2

For the first 10 years

the ...

the ...

the ...

the ...

the ...

the ...

the ...

Jupiter Eclipses

Sats I & II

Dis. - Begin 8 m early : use 10 m

Re. " 2 " " " "

Use 10^5 sigs. for Bond

Sats III & IV

Dis. Begin 15 m before : use 20 m

Re " 5 " " " "

Use 1^m sigs for Millard, using relay #2

On Sat IV run longer if Prof. Wendell says so.

Get 4 or 5 good images with each aperture. If planet is low in W. take ap. exps. first.

2

Propitius californicus

Sept. 15, 1900

One in Basin, 8 mi. S. of Santa Barbara

Re. 1900phae.proj.1823B

Male 14.5 in. long from snout

Sept. 15, 1900

One in Basin, 11 mi. S. of Santa Barbara

Re. 1900phae.proj.1823B

Male 17.5 in. long from snout to end of caudal fin

One in Basin, 14 mi. S. of Santa Barbara

Re. 1900phae.proj.1823B

Sept. 15, 1900

One in Basin, 14 mi. S. of Santa Barbara

Re. 1900phae.proj.1823B

Algol Variables (Sigs.)	
M. Delphini	5 min.
U Cephei	1 "
U Coronae	"
S Cancri	"
Ceraski's	10 min.

Alfred Cunningham (1891-1971)
M. Delphinae
M. Capella
M. Corona
S. Corona
L. Corona

Dark Room Data

Hypo & Alum Baths

By weight

Large hypo	15 #
" alum	3 "
Med hypo	3 1/2 " = 4 1/2 scoops
" alum	11 oz = 1 "
Small hyp	2 1/4 # = 2 1/2 "
" alum	6 oz = 1/2 "

For tank development

4 1/2	32 oz bots. of H_2O	} 1:32
4 1/2 oz	Rodinal	

50
20
3
—
3
76
81

Kiepert - Stegeman
Calculus

Graphical methods
Pickering - Physical Manipulation

Pickering - Physical Manipulations

