Extracts from the papers of Sir Charles Wheatstone

WHEATSTONE 4: Working papers and experimental observations relating to optics including polarisation, photometry, spectra and the characteristics of light, [1840-1875]

K/PP107/4/7

[1850-1875]

Notes on optics, notably including description of lunar nimbus, 1850; outline of the function of the eidotrope, a kind of projection device; brief observations on the operation of the human eye, and on binocular vision. With diagrams and equations.

Jundary Nor 103th 1050. From to put of to O o' clark I saw the following rementable phenomenon . Flor a large with append and the moon (white mes exactly in its center) about 60° in dimeter . A opposed like a concern shits with the norm as a bop in it centre . This with was " and have the next of the stay and the limit of its ininferen was strongly mated . The anthat are very vishet and should me with abouisment, company the the great sic of a solar manage . This are som within this and but I do not menter whether they were in the which put . On many when withing this good with appeal to non with the moon app or the opper was gratty demenieted . This Justiges is an and many plansmenon but at publices it allow seems so shongly marked . It is that in the homis (New 21) that and that ing betom & o'lack on that morning and the same how on the fettering day own them 3/4 of one wich for 29.92 % 29.15 . Estime horgen the 53°

K/PP107/4/7/2 Description by Wheatstone of witnessing a lunar halo, 1850 Nov 18.

The can be no doubt of the promits of proto Poppa their por is the Pilostuite Tomation to in a valuable Dation to his myster por floren the menous popers and the white her been rents patiet on his to the primetic materie of the altri light, copiety a thing how his room to commen a phonese can be maked to the inhighting of and artimentic of the portions of the invitte ray . Som of the initiate observations have has not lyon, but as the whit is having so and haven, the particular state and it is not of minh company in carry communication while the To perheating the mining . the the the both to and

Draft note commenting on a paper 'On the Long Spectrum of Electric Light' by George Gabriel Stokes (1819-1903), physicist, published in 1862 in the *Philosophical Transactions of the Royal Society*, [1862].

5 New method of meaning the Coursetion of instances spacks. Cal a doubly refracting crystat in such very that when it rewhen in its own plane, all objects seen by the ordering ray shew to seen stationing . a point own by the ordining my with the appen to verster . Compan the Quation of the spart men by the extranding my with - godat with new by the ordining my .

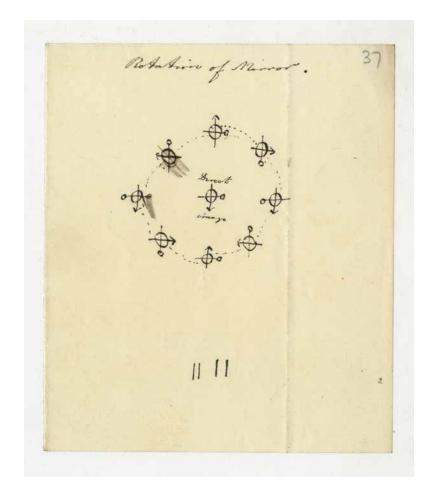
Note describing a 'New method of measuring the duration of instantaneous sparks' using a cut doubly-refracting crystal, [1850-1875].

The Eidotrope The Eistopie consists of bess similar plates of method or cand perforabed with agentarias symmetrically aringed . On aming my plate to the openque spraces of the one in first come a cation parties of the agentuis to symmetrical patterns which vary with every change of angular prosition of one whete with respect to the other . The Eastone byon the mint a the stay , a window the or a boundet un a the ground glip glibe of a time



36 Binocular Dision The gallery of It Same' Hall is an excellent place to Abserve the gradual approximation of brincates mayes by converge The eyes to different distances . Sitting in one side galling and horking at the other , the varie and reafer containing the windows , and the paties of nailing to be each being much may him is merepion, the oper, according as they warrange & affint Dubeaus, my with his affinit reafes or the athemate reaps, as the respect having the atures between them . In the little care the enzy with he only a few with for the face . What is some that he is the copariment (as no and similer ones) is that when the monscular images an with they to not apper to be me at The first without, but obvious new reaver and reares, without however the notion of motion intervision and the distant place in parciand. It is hence follows that the mentions accompanying the milination of this optic and does not immentity sugget the distance, it appears rather to be an ancouscious judgement for it sons not new then any remation accompanying

the Distant of the eyes her any thing to do with it . What when it were more like a judgement them a percention aring from a moration is that it takes him to form . Sinte jugenets are for with regard to italorcopic ghe There anscenses judgements have a prat dear to do an the formation of the In from the visible ion D.



45 to to sophical Further remarks on convincets relative to the interformer of by By the Rev. Baden Pourte, Est 1. 10. 133 On a new mind simple Helios And . By R. P.M. Soft. Del 2. 1. 8 On the phenomenus of New bonic ring where formed to know here bourgrande substances of Defferent repartices powers . By G. B. Ching . Ext 2 p. 20. On the milification of the interforme of two pomils magnesses hight produced by them to profe through a preserve glass, and on the importance of whenomenes which Them take in Determining the velocity which light bours a fracting substan By R. Potter . Bil 2 10 02 .

List of papers published in the Philosophical Magazine on the subject of the' Undulatory Theory of Light' including papers by Rev Baden Powell (1796-1860), physicist, George Biddell Airy (1801-1892), mathematican and Astronomer Royal, John Frederick William Herschel (1792-1870), mathematician and astronomer, William Henry Fox Talbot, (1800-1877), photography pioneer, William Rowan Hamilton (1804-1865), mathematician, James Maccullagh (1809-1847), mathematician, Humphrey Lloyd (1800-1881), physicist, and Sir David Brewster (1781-1868), natural philosopher, [1850-1875], page 1.

On the phenomena prevented by light in its papenges through bineat competales . By the Red H. Llog ?. Chi 2 po 112 Remarks on Me Collers concinen on interference. 13 y g. 1. Ding Ell 2 p 181. On the affect of abcoration in prison sie inthe former . By to. R. He willow Urt 2 p 191. Earther caperiments on the phonons presented by light in its profonge along the area of briend ingotale. By Flow Row? M. Lligh. Sec. 2 10 207. On the inflacions of light . By F. Barton. Oct 2 1 263. a mply to the remarks of Profifers any and Franktoors on the poper upon The interformer of light after populy through a prison of glafs . By R. Petter. Ell 2. 12. 2.76. On the inductory time of jufrages of light samight a periore. By to. A. Hand How 201 2. p. 2014.

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Obon on hours on the about hois specific rays, in reference to the and taking there of light To D. Bourster. Est 2 p 300 Note on Mr Peters myly . By W. R. Hawthen Box 2. p 371. Remarks on tis D. Browsters pay "On the aborquetion of specific rays toy 9. M. aning . Shi 2 . paling . Remarks on Mc Barkon's poper on the influmine of light . By the Read B. Por 2n2 p 424 Reculto of the sepatricio of Mr Pother's capitriment of eith proving a provision in. the path of interprine light. By Boy. any 2022. p. 45% . On the power of glage of antimising to repart Lyes . By a. P.t. Bither Bar 3. pS Facto relating to optical science . They For F. F. Jallor Engt . Not. Est the jo 112 M2. In Musti polonging age price. Eve 3. p 2009 On a method of obtaining hourseness tight of a great interinty . By tech. Tallet Sec 4. 1. 35 .

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The Papers of Charles Wheatstone K/PP107/4/7 - Papers relating to optics

8. E. Fixed . Els Note on the subject of comed refraction . By S. Mac Callagh. Dol 3. 19 116 On the inflation of light is reply to Prof. Pourle . By J. Backon . Est 3. 10 172. additional with on convent reportion by . Mac Cullayle . Bol 3 , p 197 . Parkintars of a series of conversion to and calculations under taken with an view to Determine the vehicity with which light have branque & media 13- R. P.M. . Drc 3. 333 . On the about this of high by alound milia, view in connexions with the adulating there , by the I. A. W. Herscheld 2063. 10. 402 Remarker in the Baltin's regly respective the inflations of light by the Read B. Pourte 8163. 10 412 Experiments on light . Marrospices appearances with polarged light (On Parkintery) . By H. F. Fallort. Octo 10 825.

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Muscles of the Eyeball . The head remaining in a find pointion The eyes can art converge to points at all Distances in every Sirections . If the head be had and inthey and an object to pland one the floor at a short Distance before the observes it wir always appear double, and by low; a per and changing it ditana hopen the eyes it are to non that the optim and converge to a point much nearer . There is the fore an encountry for the eyes to become particle asher they are deperfed with regard to the pointion of the hard . The same can be shound whe bying in his and regarding any style in the room at a le angle of the his part to regarded the the main does not appear to be practice but inchin howards the lower ands ; this records to indicate that the any have robated through a small anyte in opposite directions . a walking thits phind on the floor with the same thing . Durching the ages agrinds, the power of long as the offerts is not printed; but the want If push time to have the has eminged of an annight and

is this mon me the , but the hear was of the many any still man to be each other









A cutting from Atkinson's List of Photographic Specialities' for Woodward's Solar Camera [David Acheson] Woodward (1823-1909), American portrait painter and inventor, 1875.

NS 54 15 7, Wigmore Street, Cavendish Square.W. Sir Charles Wheatstone F. R.S. 19 Park Crescent, Portland Place. We by to enclose wood and of Solar Camera, Such as me described to you. Price \$ 15 .-We could let you have one 1.a few days, should you In ays at your comm lour obed! Ser

Letter from Ross & Co, optical and photographic instrument manufacturer and retailer enclosing the cutting for Woodward's Solar Camera, 1875 Jul 10.