Aug. 3	Comp. *, 4961 Rumker	3 Comp.		
10	,, 15266, 15309 Arg.	5 ,,		
14	,, 15272, 15290 Arg.	7 ,,	Comet faint; moonlight	
15	,, 15290 Arg.	6 ,,	Comet faint; moonlight	

Occultation of 101 *Piscium by the Moon.*

1861, Aug. 24 $11^h\ 26^m\ 31^s{\cdot}0$ Mean Time.

Disappearance instantaneous. Telescope (13 in.) Equatoreal.

Observation of Minor Planets made with the Olcott Meridian Circle at the Dudley Observatory.

Calliope (22).

1861.	M.S.T. of Obs. h m s	App. R.A. h m s	App. Decl. ° ′ ″
Aug. 30	12 13 55·49	22 51 23·25	
31	12 9 6·87	22 50 30·40	−30 23 24·79
Sept. 4	11 49 51·57	22 46 58·15	−30 28 33·21
9	11 25 49·98	22 42 35·38	−30 42 27·33
12	11 11 29·18	22 40 2·28	−30 48 58·88
13	11 6 45·26	22 39 13·74	−30 49 17·53

Themis (24).

1861.	M.S.T. of Obs. h m s	App. R.A. h m s	App. Decl. ° ′ ″
Aug. 31	12 23 10·43	23 4 36·27	−6 55 42·58
Sept. 1	12 18 31·97	23 3 53·60	−7 0 2·65
4	12 4 35·23	23 1 44·23	−7 13 8·93
9	11 41 18·94	22 58 6·89	−7 34 52·85
12	11 27 22·48	22 55 57·79	−7 47 41·83
13	11 22 45·01	22 55 16·11	−7 51 47·38
24	10 32 11·52	22 47 56·40	−8 34 23·38

On a New Observing Clock. By Prof. C. Piazzi Smyth Astronomer Royal for Scotland. (Abstract.)

The desideratum of obtaining a clock with an easily audible seconds' tick has been realised by Mr. R. L. Jones' patent method, to which Prof. Smyth was introduced by letters from Sir T. Maclear and Mr. Hartnup; and Mr. Jones himself procured a second-hand cast-iron barrel clock without striking parts, and having introduced into it his magnetic pendulum brought to the Edinburgh Observatory in April last, and

erected it in front of the transit instrument and in electric connexion with the old transit clock, removed for this purpose out of its former position and into the central hall of the Observatory.

The new observing clock goes as accurately as, because simultaneously with, the old transit or regulating clock, but with a vigour or mechanical power more than three hundred times greater, its driving weight being 180 lbs., descending 10 feet in one day, instead of 5 lbs., descending 3 feet in 7 days. The seconds' tick, though loud, was at first a peculiarly slumberous, heavy, and mournful sound, but this was remedied, as suggested by Mr. F. Ritchie, clockmaker in Edinburgh, by obtaining the seconds beat, not in the usual and almost invariable method by the escapement, but, by introducing for the purpose a tilt hammer striking on an anvil, the escapement being rendered noiseless, so as not to interfere with the note of the hammer. The most appropriate quality of sound was found to be produced by a steel hammer striking on an anvil of hard olive wood, hollowed out below, so as to be under one quarter of an inch thick. It would have been an advantage, as regards loudness, to have the hammer and anvil outside the case of the clock in the free open air of the room: this was not actually done, but the casing was taken in the form of a wooden tubing to them, and almost as loud a beat was obtained. The cost of the production of the electricity is trifling, and, as regards the first cost of the apparatus, Mr. Ritchie, having been recently applied to on the part of a Canadian Observatory, has estimated the cost of a big observing clock, with its hammer, anvil, and galvanic battery, at one-third to one-fourth part of the expense of a first-rate regulator or an ordinary astronomical transit. A collateral advantage has been found to be, that the old transit clock, as now locked up in a closet and used only to regulate the observing clock, remains in a more equable temperature.

Major A. Strange, late Astronomical Assistant in the Great Trigonometrical Survey of India, has sent to the Society three papers:—

"On Testing the Vertical Axes of Altazimuth Instruments."

"On a Direct Method of Testing and Adjusting the Equipoise of Altazimuth Instruments."

"On a proposed Isolated Flange for Conical Axes."

It would be useless to attempt giving an abstract of these elaborate papers, relating, as they do, to instrumental details, and requiring the illustration of a series of figures.

Information has been received of the death of M. Daussy, Member of the Bureau des Longitudes at Paris, and an Associate of the Society.

RECENT PUBLICATIONS.

Astronomical Observations made at the Sydney Observatory in the year 1859. By W. Scott, M.A., Astronomer for New South Wales. Sydney, 1860. 8vo. pp. i. to xxiv. and 1 to 112.

In the *Monthly Notices*, vol. xix. p. 293, are printed some extracts from the first Annual Report to the Observatory Board, 22d Dec. 1858, giving an account of the establishment and the position of the Observatory. The Transit Circle arrived from England about the end of December 1858; but the regular observations were not commenced until June 1859.

It appears by the observations published in the *Monthly Notices*, vol. xx. p. 77, that the latitude and longitude of the Observatory were provisionally found to be Lat. $33^\circ\,51'\,41''\cdot1$ S.; Long. $10^h\,4^m\,59^s\cdot86$ W. The corrected values, as given by the Observations of Zenith Distances of *Nautical Almanac* Stars and the Observations of Moon-culminating Stars during the year 1859, are found to be Lat. $33^\circ\,51'\,40''\cdot8$ N.; Long. $10^h\,4^m\,59^s\cdot96$ W.

The greater part of the volume is occupied with Transit and Zenith-distance Observations of Stars; and from these are deduced the mean right ascensions and north polar distances for 1st January, 1859. It is from the internal evidence afforded by these that an estimate can be formed of the amount of reliance to be placed on the results which may hereafter proceed from the Observatory.

The causes of error are in a great measure of a temporary nature; such, for instance, as the changes in the piers of the instrument, owing to the contraction of the sandstone; but the results indicate also a permanent instrumental error, such as an irregularity in the form of the pivots. The errors of observation are not greater than those which occur in observatories of a high class, as those at Oxford and Cambridge, and are such as to disappear to a great extent when the mean of four or five observations is taken; but the instrumental errors are such that, although the circle may be regarded for some purposes as a useful instrument, yet it cannot be classed among instruments of the highest order, nor can its results compare in accuracy with those obtained at the Royal Observatory at the Cape of