

sunsets following the Krakatoa outburst (whose explosion of 1883, Aug. 27, drove whole cubic miles of dust and steam, if not clear through our atmosphere, at least many times higher than the clouds ever float) indicated by their successive appearances at different places a probable upper equatorial current moving rapidly westward, i.e., rotating slower than the earth. We do not think the discussion of these red sunsets is, from this stand-point, by any means exhausted, and hope that Professor Kiessling of Hamburg, who has so well explained the physical causes of the phenomena, will publish the thousand or more records he has of the first appearances of the red sunsets all over the world. The only other occasions when these upper currents can be observed are the rare chances when the drift of a long-continuing meteor-streak might be determined from two or more observatories. If workers with equatorials would endeavor, on those rare occasions when a meteor-train remains visible, quickly to begin a series of pointings (using the lowest power) alternately upon the two ends of the streak, noting the times and reading the hour and declination-circles as rapidly as possible, we might in time accumulate some valuable data about the upper currents in our latitudes; but observatories near the equator are scarce. However, the knowledge thus gained of the heights at which meteors appear would be much more accurate than from the ordinary alignment among the stars, and these observations ought to be made on every possible occasion by astronomers.

Two new comets.—Two new comets have already been discovered during the present month. The first was found on Dec. 1, at Paris, the name of the discoverer not being given in the telegram. The comet was readily picked up by Professor Frisby of the Naval observatory with a 2½-inch finder, and the following observations were obtained with a 9.6-inch equatorial:—

Date.	Wash.M.T	a	log p. Δ	δ	log p. Δ
1885.					
Dec. 2	9h 20m 2s	0h 36m 11s.11	9.285	+21° 0' 26".2	0.460
" 3	8 10 56	33 53.93	8.796	20 58 46 .7	0.433
" 6	6 27 6	27 7 .81	9.079 n	20 54 3 .5	0.443
" 7	6 58 54	24 50 .81	8.593 n	20 52 35 .7	0.434

It has been described as ill-defined, and slightly condensed towards the centre, — without a tail. The second comet is announced in a telegram from Prof. Lewis Swift, who states that the comet was discovered by Mr. E. E. Barnard of Nashville, Tenn., on Dec. 3, its position being at 9h 37m (probably Washington mean time) R.A., 4h 21m 57s; Dec., + 4° 45'. The motion is given as 35 minutes, but the direction of the motion is made unintelligible by the ambiguous term 'north west.'

In the position just given, the comet would pass the meridian a few minutes before the bright star Aldebaran, but nearly twelve degrees farther south.

NOTES AND NEWS.

THE work of the Henry Shaw school of botany, St. Louis, outside of the university classes, will begin with the formation of a class for the study of grasses. For the accommodation of teachers in the schools of the city, this class will meet from 9 to 1, on Saturday mornings. A class in analytical botany will take up the study of spring flowers on Tuesday and Thursday afternoons, and Saturday mornings, from April 6 till June 12, 1886.

— Those interested in composite photographs will find a plate of four of members of the National academy, in *Science* of May 8, 1885; another, from a composite photograph of several skulls, in the number for June 19; a third, of the officers of the American association at the Philadelphia meeting, in the issue of Aug. 28; and a fourth, showing the racial characteristics of Jews, in *Science* of Oct. 9.

LETTERS TO THE EDITOR.

. Correspondents are requested to be as brief as possible. The writers' name is in all cases required as proof of good faith.

Newcomb's 'Political economy.'

PROFESSOR NEWCOMB objects, in the last number of *Science*, to certain things in my recent notice of his work on political economy, charging me with 'atrocious misrepresentation' of his views. The quotation-marks enclosing two sentences in the first paragraph of my review should not have been there, and, so far as they led my readers to think that they indicated Professor Newcomb's own words, they were misleading; and an apology is due Professor Newcomb from me, which is hereby tendered. I may simply say, by way of explanation, that the proof of my article was not submitted to me in time to receive any corrections at my hands before it was printed, or the offending marks, as well as the word *always*, to which the author objects later in his letter, would certainly have been expunged.

As to the chief point at issue, however, viz., whether my article presented a correct view of Professor Newcomb's theories, I have nothing to take back or change. I have again examined Professor Newcomb's book, in connection with his strictures on my review, and do not see wherein I have misrepresented him. The point in dispute, of course, is not what Professor Newcomb desired or tried to do, nor even what he claims to have done, but simply what he actually did do in the work reviewed. It is true that he expressly disclaims any intention of doing what I maintain he has done; but this is no evidence, of course, that my view of his actual work is erroneous. The notice contained my opinion of the real work, and not of the author's