

<i>Ceres</i> (1).						
					Apparent.	Δ 2'7673.
1897	Nov. 22	...	...	...	0''64	0''42
	„ 23	...	...	...	0'55	0'36
	Dec. 26	...	...	...	0'57	0'34
	„ 27	...	...	...	0'55	0'33
1898	Jan. 2	...	...	...	0'51	0'31
						<u>0'352</u>

<i>Vesta</i> (4).						
					Apparent.	Δ 2'7673.
1899	Sept. 26	...	...	...	0''38	0''21
	Oct. 7	...	...	...	0'32	0'17
	„ 8	...	...	...	0'26	0'14
						<u>0'175</u>

The observations were difficult in each case.

These values when combined with the previous measures will not sensibly change them, and the first series should have the greatest weight. If we make this combination, weighting, by number of observations alone, we should have: Diameter of *Ceres*, 0''383; diameter of *Vesta*, 0''192, at distance 2'7673.

Yerkes Observatory, Williams Bay, Wisconsin:
1899 October 26.

Observations of the Leonids, 1899. By C. Michie Smith, Director
of the Kodaikanal and Madras Observatories.

A careful watch for *Leonids* was carried out from the Kodaikanal Observatory on the morning of November 14 and on the three following nights. The approximate position of the Observatory is Lat. $10^{\circ} 14' N.$, Long. $5^h 10^m E.$; height above sea level 7,700 feet. The following observations were made by the director and the first assistant, Mr. K. V. Sivarama Aiyar. Observations were also made by others of the assistants, but it has not been considered necessary to give these, as they do not cover any extra time. The time used is Madras mean time.

Date.	Count begins.		Count ends.		No. of Leonids seen.	Remarks.
	h	m	h	m		
Nov. 13	15	52	16	07	2	
	16	10	16	25	nil	
	16	25	17	10	3	1 equal to Venus.

Date.	Count begins.		Count ends.		No. of Leonids seen.	Remarks.	
	h	m	h	m			
Nov. 14	13	20	14	00	4	} 15 of these were of the first magnitude.	
		14	00	15	00		4
		15	00	16	00		4
		16	00	16	30		6
		16	30	17	05		7
Watch ended at 17 ^h 15 ^m in advancing dawn.							
15	12	10	13	00	4	} 21 of the first magnitude.	
		13	00	14	00		3
		14	00	15	00		7
		15	00	16	00		7
		16	00	17	00		15
		17	00	17	09		9
16	12	00	14	00	1		
		14	00	15	00	Not observed	
		15	00	16	00	6	
		16	00	17	00	3	

The weather throughout was fine, with only very light passing clouds or occasional thin films of mist driving over the Observatory.

All records in this and the following lists were made within the area of Professor Pickering's map.

At Madras, Professor R. Ll. Jones, assisted by S. Solomon Pillai and S. Sitarama Aiyar, observed in nearly equally favourable weather, with the following results :—

Date.	Count begins.		Count ends.		No. of Leonids seen.	Remarks.	
	h	m	h	m			
Nov. 13	10	00	15	00	nil	Fine and clear.	
		15	00	16	00		3
		16	00	17	00		5
14	12	00	13	00	nil	Quite clear after 13 ^h 30 ^m . Moon set 15 ^h 45 ^m .	
		13	00	14	00		1
		14	00	15	00		nil
		15	00	16	00		10
		16	00	17	00		16
		17	00	17	13		1

Date.	Count begins.		Count ends.		No. of Leonids seen.	Remarks.
	h	m	h	m		
Nov. 15	12	20	14	15	nil	Passing clouds.
	14	15	15	00	3	
	15	00	16	00	8	Moon set about 16 ^h 35 ^m .
	16	00	17	00	12	
16	—	—	15	08	nil	
	15	08	16	00	3	
	16	00	17	00	1	
17	15	00	17	00	2	Cloudy till 15 ^h .

Of the other counts that have been forwarded to me, the most interesting is a series made by the Rev. Oswald O. Williams, B.Sc. (London), L.S.A., at the Mission House, Karimganj, Assam. This station is thirty-four miles due east of Sylhet, and the time used was local mean time, which is 49^m fast of Madras mean time. The following is a summary of the results :—

Date.	Count begins.		Count ends.		No. of Leonids seen.	Remarks.
	h	m	h	m		
Nov. 13	13	30	14	00	2	Clear sky.
	14	00	15	00	nil	
	15	00	16	00	12	
	16	00	16	30	8	
	16	30	16	45	4	Zodiacal light magnificent.
	16	45	17	00	4	
14	13	30	—	—	1	Sky perfectly clear.
	After Moon set.					
	16	00	16	15	11	
	16	15	16	35	Several seen but not counted.	
	16	35	16	45	12	
	16	45	17	00	24	2 of first magnitude.
	17	00	17	08	12	
	17	08	17	15	10	
	Dawn.					
	17	15	17	18	4	
	17	18	17	22	5	
17	33	17	30	2		
15	Very foggy. No observations.					
16	Went out thrice but saw no meteors, much moonlight.					

Kodaikanal Observatory.