

Journal of the Royal Astronomical Society of Canada. Vol. V, No. 2, for March and April 1911.

Vijnana, the Hindu Organ of the Vernacular Scientific Society of Allahabad.

Memoirs of the Kodaikanal Observatory. Vol. I, Part II.

Bulletin of the Kodaikanal Observatory. Nos. LV and LVI.

The following gentleman was elected as a member of the Society :—

Kumud Nath Chatterjee, Esq., of Howrah.

The following College was enrolled as an associate of the Society :—

Presidency College of Ccutta.

The papers read at the meetings are published in this issue.

---

### Paper on "A Proposed Reformation of our Calendar"

BY REV. A. C. RIDSDALE, M.A., F.R.A.S., F.R. MET. SOC.,  
M. LOND. MATH. S., F. PH. S., A. L. C. M., FOREIGN MEMBER  
OF SOCIÉTÉ ASTRONOMIQUE DE FRANCE.

1. Instead of making a change of a day each year and two days each leap year, the dates of the days will remain always the same for all years, the year commencing always with a Monday. The years will continue to consist of 12 months. They will all be identical, containing 52 weeks of 7 days. They will be separated by one holiday, a day that will not count, and by two such days after leap years.

2. The year will be divided into 4 equal quarters, each quarter consisting of months of 30, 30, and 31 days. All the 31st days will fall on Sundays.

3. The year, instead of beginning on January 1st, a day without any astronomical significance will begin on the day which we now call March 21st, the spring equinox.

4. Instead of being a movable Feast, let Easter be made a fixture. This would be an enormous advantage in respect to educational, legal and commercial holidays, etc. Easter has been assigned, by the Ecclesiastical General Council of Nice of A.D. 360, to the Sunday which follows the Full Moon next after March 20th. It, therefore, oscillates by 34 days,

between March 22nd and April 25th. In our reformed Calendar Easter would fall on a day midway between its present extremes, namely, April 10th.

### The Respective Magnitudes of Saturn's Satellites

BY REV. A. C. RIDSDALE, M.A., F.R.A.S., F.R. MET. SOC.,  
M. LOND. MATH. S., F.PH.S., A.L.C.M., FOREIGN MEMBER  
OF SOCIÉTÉ ASTRONOMIQUE DE FRANCE.

SATURN is now very favourable for observations. I will venture to give a few simple notes to aid observer's, possessed of instruments of various powers. Titan can easily be seen with a 2-inch telescope. It will be found at about  $4\frac{1}{2}$  times the length of the major axis of the rings distant from the planet. It is to the north of the planet on April 2nd, to the west on the 6th, to the south on the 10th, to the east on the 14th, and so on, completing the cycle in about 16 days. The satellites Rhea Dione and Tethys can be seen with instruments of 5 to 6-inch diameters. So also can Japetus, but this satellite is 5 times brighter when seen to the west than to the east of the primary. Its light value varies regularly between these extremes, which proves that it always turns the same face towards Saturn, one of which is much darker or of lower albedo than the other face. Euceladus, Mimas and Hyperion can only be seen by large instruments. Phoebe requires the most powerful instruments in existence. Titan alone presents a measurable disk, about 2,600 miles in diameter, being slightly bigger than our Moon. The time it takes for Rhea to be eclipsed, proves its diameter to be 1,100 miles. Japetus is probably about the same size as Rhea. The smallest satellite Phoebe cannot be more than 150 miles in diameter. The masses of these satellites can be calculated from their motions due to mutual attractions. Dione is  $\frac{1}{20}$ th and Tethys  $\frac{1}{120}$ th of the mass of our Moon. Mimas is only the  $\frac{1}{2,000}$ th, or 35,000 millions of tons, or the mass of a million mountains 3,000 feet high.

### Note on the "Elements of the Wilson Bolide"

BY REV. A. C. RIDSDALE, M.A., F.R.A.S., F.R. MET. SOC.,  
M. LOND. MATH. S., F.PH.S., A.L.C.M., FOREIGN MEMBER  
OF SOCIÉTÉ ASTRONOMIQUE DE FRANCE.

THE famous Bolide observed by Mrs. F. Wilson and Mr. A. Watkins in March 1916 appears to have had the following elements. Its height was 60 miles, the length of its trajectory was 80 miles, its velocity 25,750 metres a second. It was a member of the Pegasides.