distinguished astronomer, a member of the Academy, and made some brief remarks on his lifework.

Prof. REES was appointed a committee of one to draw up suitable resolutions for presentation to the Academy.

Meeting adjourned to first Monday in October.

The following papers received too late for publication in their proper places are printed at the close of this volume.

The Railway Problem in China.

BY JOHN A. CHURCH, E. M.

(Abstract.)

Mr. CHURCH stated that there were but two roads in operation in China, one of small account on the Island of Formosa, and one at Tientsin, about 80 miles in length, built to transport coal from the mines to the coast. The history of the building of this road, its gradual extension from a short line, seven miles long, operated by mule-power, to a full-fledged railway, is very interesting. Some idea of its usefulness may be gained from the fact of its having carried 2,000,000 passengers since 1888, when it was completed. This line now carries 1500 passengers daily, 900 tons coal, 100 tons general freight, and 250 tons stone, lime, etc., most of which is used in extending the road. This extension will take the road to Yung Ping, a city on Lan River, and ultimately to Shan Hai Kwan, the sea-board fortress at the end of the Great Wall. The capital value is now about 2,000,000 ta. of about \$1.13 each.

There are several reasons for the opposition to railways in China.

1st. A fear that the lines may be used by invaders in penetrating the country in case of war; for that reason it is forbidden to construct roads along the coast, or penetrating the interior.

2d. A settled policy that all roads built must be constructed by the Chinese from materials produced in China, and the roads must be controlled by their own people.

Lastly, the superstition of the people that the burial places of their ancestors will be desecrated by the operation of these roads.

There is no doubt that such a radical change in the means of transportation would temporarily disturb the existing channels of employment for thousands of people.

The question of home production of railway steel, for the Chinese will have none but the best materials, seems to be insurmountable, for the sources of iron and coal are remote from the coast, in places inaccessible without railroads, or are not convenient to each other, or those deposits easily reached are unsuited for steel-making.

Mr. Church stated that the production of iron in China amounted to 500,000 tons per annum, a fact unknown to the world at large.