

Now bodies in which μ is so small as 3.6 belong distinctly to the non-magnetic class; but the test with the magnet would very markedly distinguish them from manganese steel with 12 per cent of manganese. The distinction,

however, between $\mu = 3.6$ and $\mu = 1000$ is comparatively small; whereas, under the conditions of experiment, μ is much more than 1000 for most bodies of which iron is the principal constituent.

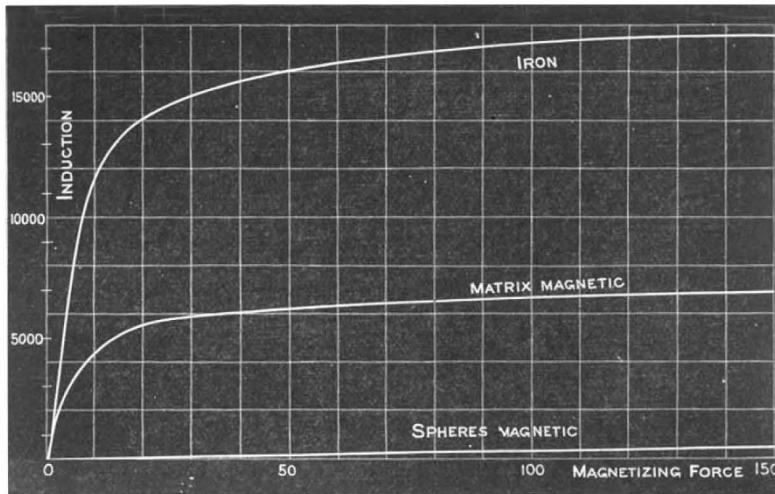


FIG. 7.

The effect of stress on the magnetic properties of iron and nickel have been studied by Sir W. Thomson. A fact interesting from a broad and general point of view is that the effects of stress are different in kind in the case of iron and nickel. In the case of iron, for small mag-

netizing forces in the direction of the tension, tension increases the magnetization; for large forces, diminishes it. In the case of nickel the effect is always to diminish the magnetization.

(To be continued.)

LORENZO RESPIGHI.

DURING the last forty years the Eternal City has possessed two astronomical observatories. It was at the old building, connected with the Collegio Romano, that Scheiner collected the principal materials for his famous work on the sun, called from its dedication to Prince Orsini, the Duke of Bracciano, "Rosa Ursina"; and though it is with some justice that Delambre speaks disparagingly of its contents as compared with its bulk, the observations of the solar spots show with what care they were made, and they afford the first indication of the now familiar fact that their rotation varies in duration in different heliographical latitudes, though Scheiner's idea seems to have been that it was not the same in the two solar hemispheres. But it was not until 1787 that the present observatory of the Collegio Romano was commenced, nor until 1804 that the general interest felt in the great eclipse of February 11 in that year induced Pope Pius VII. to provide G. Calandrelli with the means of furnishing it with suitable instruments. Another astronomical phenomenon, the appearance of the great comet of 1843, led his son Ignazio Calandrelli, to wish to form a new observatory on the Capitoline Hill; but it was not until five years later that Pius IX. was able, in 1848, to provide him with the means for carrying out this design. Meanwhile Calandrelli continued his observations at Bologna, ably assisted by the subject of our notice.

Lorenzo Respighi was born at Cortemaggiore, in the province of Placentia, in 1824. His first studies were made at Parma, from which town he proceeded to the University of Bologna, where he obtained high honours in the departments of mathematics and philosophy in 1847. Nominated Professor of Optics and Astronomy in 1851, he subsequently succeeded Calandrelli as Director of the Observatory. On the retirement of the latter in

1865 (followed by his death in 1866) Respighi was appointed his successor. His earliest papers were on mechanical and optical subjects; but he will be best remembered by his subsequent labours on stellar spectra, on those of the solar corona and protuberances, and on the scintillation of the stars. In 1871 he went on an expedition to Poodocottah, in Hindustan, to observe the total eclipse of December 12 in that year; an account of the observations will be found in the eclipse (41st) volume of the Memoirs of the Royal Astronomical Society, of which Respighi was elected an Associate in 1872. He formed from his observations between 1875 and 1881 a catalogue of 2534 stars in the northern hemisphere from the first to the sixth magnitude, which was published in successive numbers of the Memoirs of the Lincean Academy.

His death took place after a long illness, aggravated by the recent epidemic, on December 10 last, and the Campidoglio Observatory has thus been deprived of its second director, who has so ably and energetically conducted its operations during nearly the last quarter of a century.

W. T. LYNN.

NOTES.

ON Saturday evening, at the Royal Institution, Prof. Max Müller delivered an address to inaugurate the establishment of a school for modern Oriental studies by the Imperial Institute in union with University College and King's College, London. The Prince of Wales presided, and among those present were many eminent persons, including some distinguished Orientals. Prof. Müller presented with admirable force and clearness the need for a great English school for Oriental studies, and had much to tell his hearers as to work done in this direction in other countries. His account of the new Berlin seminary of