

**Lunar Observations in Algiers.**—M. Faye has communicated to the French Academy the first series of lunar observations which were made at the new observatory at Algiers by its director, M. Trépid. These observations strikingly confirm the accuracy and importance of Newcomb's corrections of Hansen's tables. M. Faye anticipates from a continuation of the observations further valuable results, which will amply justify the establishment of the new observatory.—*Comptes Rendus.* C.

**Electricity of Mechanical Vibrations.**—Mousson, in 1858, found that the conductivity of metallic wires is affected by vibrations. Dr. de Marchi has recently resumed the investigation. He finds that every stretching of a metallic wire generally increases its resistance; the increase is commonly proportional to the increase of stretching, but after reaching a certain limit the variations proceed by jerks, showing a momentary and profound disturbance of the molecular state of the wire.—*Revist. Scientif. Indust.*

[Chase showed in 1864 that the variations of the magnetic needle could be explained by the mechanical action of the convection currents of the atmosphere.] C.

**Relation of Magnetism to Atomic Weight.**—Leo Errera deposited with the Royal Academy of Belgium, in January, 1878, a sealed note upon the "law of magnetic properties," which has lately been published on account of Carnelly's having arrived at conclusions identical with his own. He concludes that the bodies of the uneven series, in Mendelejeff's groupings, are diamagnetic; the bodies of even series are paramagnetic. He proposes to show, in subsequent communications, that the periodicity exists not only in the fact of paramagnetism or diamagnetism, but also in the intensity of those forces. He is now endeavoring to establish a like periodicity for many other physical properties, especially for the points of fusion and volatilization. He predicts that vanadium will be found decidedly paramagnetic; lithium, rubidium, zirconium, rutherfordium, cesium, thorium, and perhaps yttrium and erbium, will be slightly so. As to calcium, strontium and barium, contrary to the opinion of Faraday, they will also probably be attracted, at least slightly, by a very powerful magnet. On the other hand, thallium, gallium, and probably indium, will be diamagnetic.—*Bull. de l'Acad. de Belg.* C.