



Professor Ferrel's theory of atmospheric currents

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CLASSIFICATION OF METEORITES.

Professor Tschermak, who has made many important contributions to the study of meteorites, has been led by the results of recent microscopic study to propose some changes in the system of classification given by Rose in 1864. The meteorites are classified after the principles of lithology according to the kind and relative amounts of their mineralogical constituents. The classification as proposed by Tschermak, with some typical examples under each head, is as follows:—

I. Meteorites consisting essentially of iron: *Meteoric iron*.

II. Meteorites having an iron ground-mass with enclosed silicates. (a) *Pallasite*: iron and olivine the chief constituents (Pallas-iron, Atacama, Bitburg); (b) *Mesosiderite*: iron with olivine and bronzite (Hainholz, Estherville); (c) *Siderophyr*: iron and bronzite (Rittersgrün, Breitenbach, Steinbach); *Grahamite*: iron with plagioclase, olivine, bronzite (Serra da Chaco).

III. Meteorites consisting chiefly of olivine and bronzite with iron as a subordinate constituent; the texture mostly chondritic. *Chondrite* (Aigle, Knyahinya, New Concord, Pultusk).

IV. Meteorites consisting essentially of olivine, bronzite, pyroxene. (a) *Chassignite*: olivine (Chassigny); (b) *Amphoterite*: olivine and bronzite (Manbhoom); (c) *Diogenite*: bronzite or hypersthene (Ibbenbüren, Shalka); (d) *Chladnite*, enstatite (Bishopville); (e) *Bustite*: diopside and enstatite (Busti).

V. Meteorites consisting essentially of augite, bronzite, lime felspar; with a shining crust. (a) *Howardite*: augite, bronzite, plagioclase (Frankfort, Loutolaks); (b) *Eukrite*: augite, anorthite or maskelynite (Juvinas, Jonzac, Stannern, Peterborough).—Silliman's *American Journal*, Nov. 1883 (*Ber. Ak. Wien*, July 7, 1883).

PROFESSOR FERREL'S THEORY OF ATMOSPHERIC CURRENTS.

To the Editors of the Philosophical Magazine and Journal.

GENTLEMEN,

Understanding that you consider that this question has been sufficiently discussed in your pages, I nevertheless hope you will allow me to set myself right with Prof. Everett.

First, by acknowledging a blunder which he has pointed out. A mass moving in a fixed great circle over the earth's surface does gain and lose, not only relative (as I said), but also absolute velocity parallel to the equator, because it changes its direction relative to that plane.

Secondly, by stating that this is not the doctrine which I still understand Prof. Ferrel to maintain, and which I still dispute.

Thirdly, by pointing out that this, after all, is not "the main point of my criticism." That main point is the utter baselessness of the mathematical theory propounded in the paper of 1860.

I remain,

Kitlands, Dorking,
Oct. 27th, 1883.

Your obedient servant,
D. D. HEATH.