AIRGRAPHY OR AEROGRAPHY?

IN the *Bulletin* of the American Meteorological Society (April 1927, p. 69) the suggestion is made that the word *aërography* (study of the air) henceforth should be written *airgraphy*. On this side of the Atlantic we have done away with the word aëroplane (which certain of the Boeotians pronounced a-ery-o-plane) and use the simpler, equally expressive term airplane.

A new reason for adopting the change is found in the increasing use of the word *areographic* by astronomers in connection with planetary atmospheres.

Thus, Professor W. H. Wright, of the Lick Observatory, discussing the ice cap on Mars speaks of "the exact areographic position of every cloud or atmospheric peculiarity."

If we are to continue the use of aerographic and areographic, we offer the types a fine opportunity to do their worst in transposition; to say nothing of professorial orthography!

And, while we are about it, can we not abandon *meteo*graph and *meteo*therm for airgraph and airtherm?

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"ASTRONOMIC"

WHO introduced the word "astronomic" into astronomic literature and why did he do it? "Special Publication No. 110 of the U. S. Coast and Geodetic Survey" is entitled "Astronomic Determinations." Plans have been made for "An Ideal Astronomic Hall" in the American Museum of Natural History, though there is some comfort in the fact that it is "to be devoted to astronomical and kindred subjects . . ." We even find the terms "astronomic latitude" and "astronomic time" in a recently published astronomic text-book. I see no object in lining up the comfortable old word "astronomical" with geocentric, pneumatic, egophonic and gastronomic. If we don't look out, some one will take all the joy out of our new word "astrophysical."

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SCIENTIFIC APPARATUS AND LABORATORY METHODS

DIRECTIONS FOR DETERMINING THE COLLOIDAL MATERIAL OF SOILS BY THE HYDROMETER METHOD

IN the issue of October 8, 1926, of this journal there appeared a brief article proposing the hydrometer method as a very rapid means of determining the colloidal content of soils. Since the publication of this paper a great number of letters have been received asking for more detailed information as to technique, kind of hydrometer used, etc. In view of this large number of inquiries, it has seemed advisable to publish in advance of the main report the directions for executing a colloidal determination and other essential information concerning the method.

The use of the hydrometer method for determining the colloidal content of soils in only fifteen minutes is based upon the fact that there is a remarkably close relationship between the colloidal content of soils as determined by the heat of wetting method and the percentage of material, based on the sample taken, that stays in suspension in a liter of water, at the end of fifteen minutes. There is a fundamental basis for this relationship, for it holds true for all types of soils and various amounts of samples taken. The only soils that do not give a very close relationship are the peats and mucks and this is because it is almost impossible to disperse those organic materials.

The success of the hydrometer method for determining colloids is based upon a complete dispersion of the soil. This can be accomplished remarkably well and most rapidly by means of a stirring motor, such as is used in mixing malted milk. In using this machine, however, care must be taken to use a special cup made purposely with baffles in it in order to prevent the circular motion to which the soil-water mixture is subjected without these baffles. The machine will disperse a soil in ten minutes which an ordinary shaker will require more than twenty-four hours to accomplish.

The soils can be dispersed also by hand from about ten to fifteen minutes, but such dispersion can not be uniform and not always complete and consequently is not recommended. If it is absolutely necessary to disperse by hand, then the following procedure may be followed. Place fifty grams of soil, 100 grams in case of sandy soils, based upon the dried basis in a mortar, add enough distilled water to make a paste and pestle vigorously. Add more water to make a thin suspension, stir, let it stand half a minute and pour supernatant liquid in the cylinder. Pestle the paste again vigorously and again add water to make suspension and at the end of half a minute pour supernatant liquid in the cylinder. Continue this operation until all the clays are dispersed or the liquid is almost clear. To the mixture add 5 cc of 1N KOH. For making hydrometer readings follow directions given below.

If the stirring motor is used, the procedure is as