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Attention is called particularly to the large number of small particles in one of the 145-1/2-hour collections. The actual number in the collection was 140, for the five-minute run. Most of these were in the size range of two to five microns, and the principal difficulty in associating them with the fireball is that a five-micron particle cannot fall much more than 10,000 feet in 145.5 hours. These particles could have come down from a greater height only if some downward motion had taken place in part of the air involved.

It should be mentioned that collections were taken during the afternoon of July 27, at several points south and east of Socorro, the farthest being near Bingham. These collections contained particles giving copper indications, the particles being in the same range of sizes as those collected in Socorro at about the same time.

It is perhaps noteworthy that the copper-bearing particles in all these collections were of opaque material. Most of the copper minerals that have previously come to our attention in collections from the air have been colored material, blue, green, red, or yellow.

COBALT AND NICKEL TESTS

In the 2:00 p.m. collection of July 26, three quite remarkable particles were found that gave very strong cobalt indications. The particles were apparently perfect spheres (at least they were perfectly circular in cross section), twelve microns in diameter. The reaction with rubeanic acid, after ammonia treatment, produced a dense yellow-tan halo, sixty microns in diameter. The color was not quite so clear as with pure cobalt: the appearance suggesting a high-cobalt composition with some metal present. Such particles are quite unique in the experience of the present. If these particles were of meteoritic origin they could, in the absence of vertical air movement, have fallen a distance of the order of 20,000 feet in an interval of 41.5 hours.

Two particles giving nickel indications were found. This is quite normal, however. If anything, the number is smaller than might have been expected in material of surface origin. The collections were not given acid treatment: additional nickel indications might have been found if this had been done.

A SUGGESTION

While the results of the present investigation should be regarded as negative or inconclusive, it is desired to call attention to the fact that a means is at hand that should make possible a definite demonstration of the presence or absence of copper particles associated with events of the July 24th type.

Particle collection equipment, operating on the same principle as that used in the present investigation, and designed for airplane installation, is on hand and its successful operation has been demonstrated in numerous flights. Provision

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