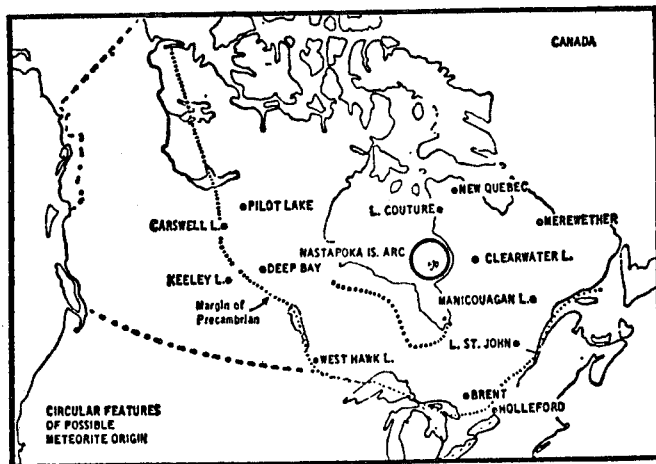


now known with all the accuracy which can be of any practical importance.



The last solution comes in. Tens of billions of tons are going to strike. They will fall at fifty kilometers per second, but will drop almost exactly midway between New Zealand and Chile —Longitude, 121° 25' West, Latitude 42° 41' South, plus or minus 9' in each case.

Not a thump, but a mid-ocean splash.

Up on Earth, a man sitting in the thorniest worry seat in all history takes his index finger off the Panic Button.

The panic is over. . . .

OR IS IT?

The piece of fiction just presented is founded on the strictest fact. Earth has been repeatedly hit by very large meteorites, their speed unchecked by virtue of their enormous size. Evidence for this has been piling up for the past sixty years. Scores of able workers in other disciplines have dug hard for the data we now hold. Soon, the seeds which they are sowing will flourish as a new exact science—the study of Meteoritics. The odd point is, however, that none of these workers has yet noticed the simple fact which is crucial to the climax of my little story. The problem here is certainly

real, and is distinctly important. Something that matters has been overlooked.

I'm going to take you back to the beginning of the story. To follow its development to the present end, we are going to make a few calculations. Little more than simple arithmetic is needed for these.

That "little more" is knowledge of these easy facts:

1. That $e = \frac{1}{2} m \times v^2$. The energy of a moving body equals half its mass times the square of its velocity.
2. When the moving body is involved in a collision, the energy of movement degrades into heat. The exchange is at known rates for various materials.

The first evidence for a strike by a large meteorite was given by the Barringer brothers early this century. Here "large" means "ranging over 1,000 tons weight." The Barringers showed that the Canyon Diablo crater was formed by meteoric impact. Naturally, the demonstration met with the most pigheaded resistance from precisely those who should preserve the most open minds. Despite these people, the concept finally percolated . . . but even as late as 1930, the Barringer Crater could still provide a fresh theme for a story in the old *Amazing*.

Well over forty similar cases are now either well proven, or listed as suspect on very good grounds. Two or three more are added yearly.

Some, or all, of the following clues provide the evidence:

1. Cratering of a generally circular shape. Whatever the angle of collision, the meteorite's impact is violently explosive. Its speed, and thus the speed of the blast of superhot gases which results, vastly transcend those of chemical reactions. The power of the Barringer strike was about 2½ megatons of TNT, and it blasted a crater about 4,000 feet across.

You can model the process in miniature yourself. Spread a target of loose cement dust three inches thick on your garage floor. Shoot loose slugs of cement dust into this target from the mouth of a very small container. Getting the slugs to cohere yet hit fast will call for practice, or perhaps some ingenious contrivance. Once you get them hitting fast enough, you will produce *circular* craters in your target, whatever the angle of impact. Occasionally, material ejected