

Notes about this draft excerpt (Roberta Kwok, Oct 24, 2010):

This is the nut graf section from the original draft I submitted to Rich. It was immediately after the first paragraph where Kowalski finds the asteroid and then goes to sleep.

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By the time Kowalski woke up the next afternoon, an army of professional and amateur astronomers around the globe was scrambling to point its telescopes at the same dot, then known as asteroid 2008 TC₃ and predicted to smash into the Earth's atmosphere just before dawn over northern Sudan. At 2:46 UTC the next day, the rock burst into a fireball like a match struck against the sky, its remains hurtling toward the desert in a brilliant display witnessed by Dutch pilots flying over Africa and local mosque-goers returning from morning prayers. Two months later, a student on a meteorite-hunting expedition in the remote Sudanese desert would pick up a glassy black shard the size of a fingernail – the first of almost 300 fragments to be found from the obliterated asteroid.

By some standards, the asteroid was unimpressive: a mere 4 metres across, or about the size of a pick-up truck. But 2008 TC₃ would turn out to be the first asteroid ever detected, predicted to hit the Earth, and recovered from the ground. The precise calculation of the rock's impact point, correct to within a few kilometres, led a US-Sudan team to discover several kilograms of fragments that have since been identified as ureilites, an unusual type of meteorite thought to form from melted asteroids. By comparing the meteorite analyses to telescope observations of the incoming asteroid, astronomers now have a rare chance to connect a blip in the sky to solid rock in their hands.

The published opening section—minus the nut graf(s):

Around midnight on 6 October 2008, a white dot flitted across the screen of Richard Kowalski's computer at an observatory atop Mount Lemmon in Arizona. Kowalski had seen hundreds of such dots during three and a half years of scanning telescope images for asteroids that might hit Earth or come close. He followed the object through the night and submitted the coordinates, as usual, to the Minor Planet Center in Cambridge, Massachusetts, which keeps track of asteroids and other small bodies. When the sky began to brighten, he shut down the telescope, went to the dorm down the mountain and fell asleep.

The only thing that had puzzled Kowalski about the midnight blip was the Minor Planet Center's response to his report. Its website posted the discovery right away but when he tried to add more data, the system stayed silent.

Tim Spahr, the Minor Planet Center's director, found out why the following morning...