

In July of 1994, an astounding series of events took place .

The world anxiously watched as, every few hours, a hurtling chunk of comet plunged into the atmosphere of Jupiter .

All of the twenty-odd fragments, collectively called comet Shoemaker- Levy 9 after its discoverers, were once part of the same object, now dismembered and strung out along the same orbit .

This cometary train, glistening like a string of pearls, had been first glimpsed only a few months before its fateful impact with Jupiter, and rather quickly scientists had predicted that the fragments were on a collision course with the giant planet .

The impact caused an explosion clearly visible from Earth, a bright flaming fire that quickly expanded as each icy mass incinerated itself .

When each fragment slammed at 60 kilometers per second into the dense atmosphere, its immense kinetic energy was transformed into heat, producing a superheated fireball that was ejected back through the tunnel the fragment had made a few seconds earlier .

The residues from these explosions left huge black marks on the face of Jupiter, some of which have stretched out to form dark ribbons .

Although this impact event was of considerable scientific import, it especially piqued public curiosity and interest .

Photographs of each collision made the evening television newscast and were posted on the Internet .

This was possibly the most open scientific endeavor in history .

The face of the largest planet in the solar system was changed before our very eyes .

And for the very first time, most of humanity came to fully appreciate the fact that we ourselves live on a similar target, a world subject to catastrophe by random assaults from celestial bodies .

That realization was a surprise to many, but it should not have been .

One of the great truths revealed by the last few decades of planetary exploration is that collisions between bodies of all sizes are relatively commonplace, at least in geologic terms, and were even more frequent in the early solar system .