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Meteorite impacts occur every day all over the world. Some of them are the size of your fist, some have the size of a basketball, some are as big as a Volkswagen beetle or a small house while others are the size of a mountain or even as big as a continent. The small ones burn off harmlessly in our atmosphere after reentry, the ones that are as big as a car or a house crashes onto the ground and will leave a mile wide crater as well as release an energy equal to the air forceâ€™s MOAB (Massive Ordinance Air Blast) bomb or even more. A meteorite that size would have a mass of 30 â€“ 50 tons and it normally cruises at 35,000 to 60,000 miles per hour; you can just imagine how much kinetic energy it carries with it. In case you need to do a little conversion of the units on measurements, you can just go to a website that has an online conversion calculator on it.

Kinds of Meteorites

There four known types of meteorites and they are classified as a) Chondrites, b) Achondrites, c) Irons and d) Stony Irons. The Chondrites are the most common type of meteorite that falls to Earth and are determined as H (12 â€“ 21% metallic iron), L (5-10% metallic iron) and LL (approximately 2% metallic iron). Chondrites have been observed falling to Earth, retrieved, and studied to have a weight range between 25 to 100 pounds. Achondrites are less common and while Chondrites account for 70% of meteorites that fall on Earth, Achondrites on the other hand makes up only 7.8% of all meteor fragments that collide with Earth. Scientists were able to determine that Achondrites come from the surface of the moon of Mars and they also are in the weight range of 25 to 100 pounds. Irons have a high metallic content and is made up of iron-nickel alloy and can weigh as much as 60 kilograms and up. They account for 4.8% of all meteor falls. Stony Irons are a mixture of different kinds of minerals as well as iron-nickel alloy.

Mass-to-Impact Ratio

Mass to impact ratio deals with the asteroid/meteoriteâ€™s mass or weight multiplied by the maximum velocity itâ€™s travelling and the kinetic energy it possesses. So if you have a meteorite with a mass of 675,000 pounds accelerating at 73,333.33 feet per second (upon entering Earthâ€™s atmosphere). We get its kinetic energy:

Ekinetic=1/2 mv^2

Ek= Â½ (675,000 pounds) (73,333.33 feet per second) 2

Ek= Â½ 49,500,000,000 foot-pounds per second2

Ek= 24,750,000,000 foot-pounds per second2

Or

Ek= 24.75 Giga Joules

Thatâ€™s more than enough energy to light up 114 units of 60 watts plasma TVâ€™s 24 hours a day, for a whole month. Or an explosion equal to a small thermonuclear bomb that can wipe out an area of 200 city blocks, which is why meteorites can become very dangerous. In July of 1994 we have witnessed a meteorite convoy called Comet Shoemakerâ€“Levy 9 hit the planet Jupiter. Had those comet hit Earth it would have caused an extinction level event more than what had killed the

dinosaurs 65 million years ago. Recently NASA (National Aeronautics & Space Administration) and the U.S. armed forces planned to put up a satellite constellation that could deflect any incoming asteroid or comet that will not burn harmlessly in our atmosphere. They hoped that this will keep us safe from deadly asteroids and comets that are on a dead collision path with Earth.

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