

July Skies

Here is a recipe for a 4th of July Spectacular. Take the nucleus of comet Temple 1, about half the size of Manhattan Island and hurtling through space at 6.3 miles per second and put something in its way to be run over! The result will be a detonation equal to about 5 tons of TNT! How's that for a fire cracker?

This will all take place on July 3rd or 4th, depending on the time zone you live in. The fun began last January 12, with the launch of the "Deep Impact" space craft built for NASA by Ball Aerospace of Boulder Colorado. Since the launch, "Deep Impact" has been steadily catching up to Temple 1 which is in a 5.5 year elliptical orbit around the sun.

On July 3rd the Deep Impact mother ship, some 83 million miles from Earth, will pass in front of the comet and release an "Impactor" that will maneuver itself directly into the comet's path. The mother ship will then complete its own maneuver to get out of the way and position itself to watch the show.

The resulting impact could cause the comet's brightness to increase to magnitude 6 or 5 which would make it visible to the naked eye if you're lucky enough to be in a good dark location with clear skies. Many telescopes on Earth, including several at Etscorn Campus Observatory, and the Hubble Space Telescope will be watching the event.

The impact is predicted to occur at 11:52 PM MDT on July 3rd. By measuring the spectra of the material ejected from the football field sized crater, scientist hope to learn a lot more about the chemical composition of comets which are thought to be made of the same materials from which the early solar system formed.

Recall that last month I asked you to practice finding the bright star Spica. In case you forgot, find the Big Dipper and following the curve of its handle you "arc to Arcturus and speed on to Spica." 3.5 degrees northeast Spica is the spot to watch for the impact.

If you have cable or satellite TV you may be able to watch the impact on the NASA Channel. Better yet, go to Etscorn Observatory where the Tech Astronomy Club will be hosting a star party on the evening of July 3rd. Watch the fun through one of the telescopes and then go into our new building and watch it 6 minutes delayed on NASA TV! To reach Etscorn Campus Observatory take Canyon Road past the golf course pro shop. At the 4-way stop turn right on Buck Wolfe Drive and follow the signs. For more information on the "Deep Impact" mission go to: <http://www.nasa.gov/deepimpact>.

The Moon will not interfere with watching for the impact as it will be new on the 6th, first quarter on the 14th, full on the 21st and last quarter on the 27th.

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