CRATERING COLLISIONS ON ASTEROIDS

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We can learn a great deal about cratering impacts on Earth and the terrestrial planets by studying equivalent impacts on low-gravity bodies such as comets and asteroids. Impact features and processes which are hidden by the comparatively large gravity of Earth, or by tectonic and volcanic processes, are oftentimes revealed on an asteroid where ground motions of as little as one cm/s can create distinguishable geologic features such as spallation rings and fissures. Furthermore, spacecraft such as Deep Impact are in the final planning stages for performing in situ cratering experimentation on small planetary bodies, as the most efficient means of finding out what is inside, and how they behave. We shall present the results of numerical models demonstrating asteroid and cometary collisions, and compare the results of those features with their kindred processes on Earth, and present results which demonstrate what we might learn from seismic sensors on an asteroid prior to a collision or explosion.