

Defending Planet Earth from

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Grum
Learning
Center

Impacts by Asteroids

A large, dark, cratered asteroid is shown in the process of impacting the Earth. The impact point is a bright, glowing orange and yellow fireball that has just struck the surface, creating a massive shockwave that radiates outwards. The Earth's blue and white atmosphere is visible in the background, and the overall scene is set against a dark space background with some distant stars.

Irwin Shapiro

Earth is continually bombarded by objects from space, hundreds of tons enter our air space daily. The good news is that most are exceedingly small and disappear in our atmosphere with hardly any being noticed. My talk will concentrate on the larger intruders, which can cause appreciable damage and which, luckily for us, strike far less frequently. The key question is: What should we do to protect Earth from interlopers that would deprive us of life (and property)?

Irwin Shapiro was born in New York City in 1929. After graduating from Brooklyn Technical High School, Shapiro did an undergraduate degree in mathematics at Cornell University, and a master's and PhD in physics at Harvard University. Shapiro joined MIT Lincoln Laboratory in 1954 and became a professor of physics at MIT in 1967. In 1982, Shapiro became a professor at Harvard University and also director of the Harvard-Smithsonian Center for Astrophysics. Shapiro was director of the Harvard-Smithsonian Center for Astrophysics from 1982 to 2004.

Irwin won the Bowie in 1993, which is the highest award of the AGU. In 1997, he became the First Timken University Professor. Irwin Shapiro has had a very localized geographical career - all in Cambridge - but has wandered widely in research, from study of the core of the Earth, through remote-sensing exploration of the solar system, to observation of the most distant known objects in the universe. He also originated and carried out solar-system tests of the general theory of relativity. The common thread tying these various topics together is his use of radio or radar techniques in all of these efforts.