

# We *Live* in an Invisible World

by Fr. John Scott, S.J.

I sometimes hear people complain: "There are too many religious mysteries, too much accent on an invisible world. I wish religion were as simple and easy to understand as the world around us."

Unfortunately or fortunately — depending on your perspective — our world is replete with unseen forces too. We live in an invisible universe that vibrates with mystery and fascination.

One familiar mystery is gravity.

Scientists point out that no one really knows for sure just what gravity is, but most of us are aware of its effects.

Take your weight. It's a measure of the attraction between your mass and the mass of planet Earth. The more your mass, the greater your gravitational appeal.

For those who religiously pursue weight loss, consider this:

The smaller mass of the moon exerts a gravity pull only 1/6 that of the earth. So a 100-pound person on Earth, would weigh about 16 pounds on the moon. Scale conscious, be wary of Jupiter, however, where — with a gravity pull 2.64 times that of Earth — that same person would weigh 264 pounds.

Here are some more weighty tidbits. Newton's Law tells us that gravity's pull is strongest at an object's core.

In the Klondike gold rush days, sealed shipments of gold were sent from Alaska to Washington, D.C. In Washington, these gold shipments always weighed less, even though the seals had not been broken.

The reason for the loss in weight: the earth is not round like a billiard ball, but is squashed at the poles like a tomato. The north pole is 13.6 miles closer to the center of the earth. Hence, the gold weighed more in Alaska.

Searching for a quick drop in your weight? Travel to Mexico City. It's 1.5 miles above sea level, far from Earth's center where gravity's pull is strongest.

Don't, however, visit East Rand Proprietary Mine at Boksburg, Transval, South Africa. It drops some 2.13 miles



Photo by Monte Kruse, BA '83

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below the ground or 5,875 feet below sea level.

Here's another invisible force that daily shapes our world: invisible rays. Wherever you go, you can't dodge them.

During the time it takes to read this sentence, approximately 20 unseen "bullets" will fire at your head! The culprits? Our stars, the same stars that wink and twinkle above.

As we travel the vast realms of space, we cruise through a universe of radio waves, sunlight, ultraviolet rays and high energy cosmic rays.

These "atomic bullets" ricochet through the cantons of space in all directions. They hit Earth from all sides, forming a cosmic rainstorm. You can look at this "cloudburst" in two ways: either the cosmic rays bump into you, or you bump into them.

Some scientists say the cosmic rays are naked atoms of hydrogen, helium and heavier elements thrown off by the stars, leaving us "sprinkled with star dust" as tiny particles fall into our lives.

Think of these and all the incredible wonders that sur-

round you every second of every day:

Unseen electromagnetic waves that, with the flip of a switch, can bring the graceful waltzes of Strauss to your radio and the latest world news to your television.

The sky's crimson glow at sunrise and sunset, a result of the filtering and refracting of the sun's rays through the earth's atmosphere.

The warm glow of a reading lamp, brought to you by tiny particles of electricity, called electrons, racing through and heating very thin wire filaments.

The flash of an electrical storm, which generates about 500 times as much horsepower as all the automobiles in America put together, but lasts for only 35 millionths of a second.

This invisible world, much like the mystery of God, is all around us. We just need to take the time to notice...and to wonder. **W**