

Jasper



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Curiosity of the day:

A Big Vacuum Cleaner

How would it be if there were a big vacuum cleaner in space, sucking up all the big flying rocks that would batter the earth and leave it as scarred and barren as the moon?

Well, there is such a thing. It is called the planet Jupiter.

Everyone has, I guess, seen television programs that take for granted that the universe is filled with intelligent life. All those billions of galaxies, each with billions of stars, must house countless planets, and surely some of them are like ours, and people live on them. Maybe the creatures have three eyes in their heads, or they have four legs and instead of walking they do cartwheels, or their skin is green because of all the copper in it, or they can calculate 357 times 491 by thinking about it (I can do that one). But surely there must be such creatures, somewhere.

Actually, we don't have any evidence that there are. No evidence at all, even though we've been searching for it for a long time.



Maybe God made other worlds for other creatures besides us, and maybe the story of their salvation is like ours, and maybe it's somewhat different; but maybe this world *is really the center of everything*. I mean: maybe our world is the reason and the only reason why

God made any universe at all.

Scientists have begun to see how many things needed to be just right, in order for the earth to exist and to bear life. And one of those things is the big vacuum cleaner which you can see shining brightly in the night sky, usually brighter than any star, and brighter than anything you will see up there besides the moon and Venus. That's Jupiter,

as I said.

Jupiter is what is called a *gas giant*. That is not a giant with gas. It means that much of Jupiter is made up of highly dense gases, surrounding a central core of liquid and solid. It is also enormous. If you took all the other planets and put them together, Jupiter would still be two and a half times as massive as that. Jupiter has more than 300 times the mass of the

earth.

A thing that heavy and that big is going to have a lot of gravity. That is, it is going to pull objects towards it that come nearby. That is where the vacuuming comes in. The great lumps of debris that are whizzing around in space could pulverize half of the earth if they should strike us, but they don't get the chance. They come towards our solar system, and then – slurp! – Jupiter sucks them in, and that's the last we ever see of them.

A few years ago a comet came within the pull of Jupiter, and that was it for the comet. Jupiter's strong pull first split that fireball up into three pieces, and slurp – it swallowed them up, or rather they struck the planet and exploded in gigantic fireballs of more than 40,000 degrees. If one of those had struck the earth, it would have burnt have the world to cinders.

I have heard it said, too, that Jupiter helps to keep the earth in its place, rather than having it veer too far from the sun for life to endure. You see, the earth revolves around the sun, but not in a perfect circle. No planet would; that's not how gravity works. Instead the shape is an ellipse – an oval. Here is how to trace an ellipse. Take a piece of twine and clamp it, over a sheet of paper, to a table underneath, with thumbtacks on each end of the string, but

make sure the string is a fair amount longer than the distance between the tacks. It should be “loose,” so you can take a pencil, push it tight against the string, and follow the string all the way around, up and down and front and back. That's your ellipse. The sun will be in the position of one of the tacks. Do you see the problem? Sometimes your earth, traveling along that ellipse, will be so close to the sun, everything would be fried, and sometimes it

would be so far away, everything would freeze.

That doesn't happen to us, because our orbit is almost perfectly circular. Why? Some people say it's because Jupiter and Saturn are so big and heavy, they keep us in our place, so that

we never veer too close the sun. They make our travel around the sun more stable.

You may wonder where the word JUPITER comes from. The Romans worshiped a sky-god whom they revered as the father of all the gods. He was called Divus-pater, that is, the *divine father*. They meant, the bright shining father, the father they thought of as belonging to the bright sky above. Well, Divus-pater became Deuspiter for short, and Iuppiter for even shorter – our JUPITER.



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