



Distant Starlight Creates a False Dawn



Imagine your parent's are driving you home from a night at your grandparents' house. Travelling along a dark country lane you look ahead and see a hazy pyramid of light rising from the horizon. It looks like light from a nearby town, but there are no towns in that direction. It could be the Sun about to rise, but it's only an hour since sunset. So, what is it?

This eerie glow is called 'false dawn' or 'zodiacal light'. It's caused by sunlight reflecting off dark cosmic dust in the Solar System. These rocky grains were leftover when the planets and moons formed nearly 5 billion years ago.

By combining the power of four very large telescopes into one super-telescope, astronomers have given themselves the ability to peer closely at almost 100 distant stars. And they discovered ghostly zodiacal light glowing around nine of them – exactly as we see it in our own Solar System!

The glow around these distant stars is caused by starlight bouncing off cosmic dust. This dust is made up of broken asteroids and melted comets. While this light may be a beautiful and exciting discovery, it's not all good news.

Searching for planets around other stars is a very difficult task. These alien worlds are so far away that they appear tremendously small and dark. This makes it almost impossible to photograph them.

In fact, out of almost 2000 planets that have been discovered around distant stars, only around 20 have been photographed! The rest have been discovered using clever tricks, such as "wobble watching".

Like bright headlights on a dark road, the glare of the false dawn light will make it even more difficult to spot any Earth-like planets that lie within a far away Solar System.

COOL FACT

The zodiacal light spotted around these 9 stars is 1000 times brighter than that seen in our own night skies!



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