Exoplanets and alien life: Next generation orbital telescopes open windows to the universe

There are about 25 billion stars in our galaxy that are just like our sun, and astronomers suspect that about 20 per cent of them are orbited by an Earth-sized planet. But considering that there are 200 billion stars smaller than ours, which host more terrestrial planets, there are hundreds of billions of potential "Earths" out there. So, with that many planets, why aren't we finding new life every other day? The truth is our technology just isn't advanced enough – yet.

Fortunately, new telescopes will soon allow us to discover if we share our universe.

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In October 2021, a NASA flagship telescope called the James Webb Space Telescope (JWST) is scheduled to be launched into space. At 6.5 metres in diameter, it is twice the size of the previous largest telescope ever launched. Its large size will make it possible to measure the extremely dim atmosphere of planets hundreds of trillions of kilometres away.

After centuries of staring at the sky wondering what is out there, we are now about to enter a new era where we might actually find out.

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