Life on Earth: How aliens might go about discovering us

[L]ight-years from our solar system, other intelligent beings on a similar planetary oasis might be gazing in our direction and seeing us as a sign that they're not alone in the universe.

First, they'd need to find Earth from afar, either by watching our sun wobble as the planet's gravity tugs against it, or by seeing the sun dim as Earth blocks a tiny fraction of sunlight during its orbit.

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Once spotted, our planet would likely intrigue E.T. Our sun is relatively stable, not prone to disastrous flares that'd rip our atmosphere to shreds. What's more, we fall squarely within our sun's habitable zone.

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In addition to oxygen molecules, alien astronomers would look at our atmosphere's levels of nitrogen, carbon dioxide, nitrous oxide, and methane. Only life could keep Earth chemically off-kilter enough for all these gases to persist at once. Beyond those chemical clues, alien astronomers with truly massive telescopes might even be able to map Earth's surface from afar, down to major urban areas.

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If intelligent life is nearby, the most straightforward way to find earthlings would be to listen for us. For the last century, human civilization has been broadcasting its existence to the cosmos via our leaky radio transmissions.

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If aliens are anything like us, perhaps the news that they aren't alone in the cosmos wouldn't be their equivalent of earth-shattering.

Read full, original post: Aliens Could Detect Life on Earth. Here's How.