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Spin-Orbit Alignment of Extrasolar Planets as a Probe of their Origin and Evolution

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All of our solar system's planets orbit within 7 degrees of the Sun's equatorial plane as a result of their formation in a flat protoplanetary disk with the same direction of angular momentum as the Sun. It turns out, however, that many planets around other stars do NOT orbit in their stars' equatorial planes, a situation known as spin-orbit misalignment. I will discuss how we are able to measure the spin-orbit alignments of stars tens to hundreds of light-years away and how we can use those measurements to figure out how extrasolar planets got to the orbits that they are in today.