

Abstract

The Pioneers 10 and 11, spacecrafts deployed to explore the outer solar system, are reported to have experienced a constant anomalous acceleration toward the Sun. I contend that a generally covariant correction is the cause of the observed Pioneers' anomaly. I include the dominant generic corrections of the pure gravity before computing their corrections to the space-time geometry around the Sun. Afterwards I will find the correction describing the Pioneers' anomaly. I observe that the covariant resolution of the Pioneers' anomaly challenges the common sense to the gravitational interactions among the elementary particles. I then notice that it predicts an anomaly for satellites orbiting the earth.