Measurement of the Alpha Decay Parameters in $\Omega^- \to \Lambda K^-$ and $\overline{\Omega}^+ \to \overline{\Lambda} K^+$ Decays

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Analyzing 5.5 million $\Omega^- \to \Lambda K^-$ and 1.9 million $\overline{\Omega}^+ \to \overline{\Lambda} K^+$ decays, the HyperCP collaboration at Fermilab has measured α_Ω and $\overline{\alpha}_\Omega$. The nonzero values of α_Ω and $\overline{\alpha}_\Omega$ provide the first unambiguous evidence of parity violation in Ω decays. The comparison of α_Ω and $\overline{\alpha}_\Omega$ provides a test of CP invariance in Ω decays.