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Lingyu Jin and **Yan Li*** (yan_li1@baylor.edu), One Bear Place #97328, Sid Richardson Science Building, Waco, TX 76798. *A Hopf's lemma and the boundary regularity for the fractional p -Laplacian.*

We begin the paper with a Hopf's lemma for a fractional p -Laplacian problem on a half-space. Specifically speaking, we show that the derivative of the solution along the outward normal vector is strictly positive on the boundary of the half-space. Next we show that positive solutions for a fractional p -Laplacian equation possess certain Hölder continuity up to the boundary. (Received January 28, 2019)