1017-30-38 **Thomas H. Mac Gregor*** (pemaquid@lincoln.midcoast.com), 61 Riverview Road, Pemaquid, ME 04558. *Fractional Cauchy Transforms and Compositions, Preliminary Report.* Preliminary report.

For $\alpha > 0$ let $\mathcal{F}_\alpha$ denote the Banach space of fractional Cauchy transforms defined in the open unit disk D. We discuss the question of when the composition of $f \longmapsto \circ\varphi$ is a continuous linear operator on $\mathcal{F}_\alpha$, where $\varphi : D \to D$ is analytic. A known result is that this happens for every such φ when $\alpha \geq 1$. This is not generally true when $0 < \alpha < 1$.

We show that if the Taylor series for φ' is absolutely convergent the question has a positive answer for all $\alpha > 0$. This also happens if φ is univalent, $\sup \{ \mid \varphi(z) \mid : \mid z \mid < 1\} < 1$ and $\alpha > 1/2 - 1/320$. (Received February 02, 2006)