1056-30-23 **Steve M Anglin, ScM*** (stevemanglin@yahoo.com), Mountain View, CA 94043. *Strong and Weak LFCDs: Local Fractional Complex Derivatives.* Preliminary report.

Fractional complex variables focus on the fractional or non-integer order differential calculus of a complex variable. In fractional calculus, locality can narrow down pieces of a function where there may be better behavior in order to model in an analytic sense, as well as obtain more meaningful physical and/or geometric information. That's where we introduce the concepts of Strong and Weak Local Fractional Complex Derivatives or LFCDs. Strong LFCDs can "maximize" the opportunity that the piece of the function in a localized or local enough area is "well-behaved" (enough). (Received May 12, 2009)