1096-32-1725 **Brendon Kerr Ballenger***, Love Building, 1017 Academic Way, Tallahassee, FL 32306, and **Craig A Nolder**. *Boundary Values of Components of Monogenic Functions.*

In this paper, we study the components of monogenic functions, i.e. functions in the kernel of the Dirac Operator $D = \frac{\partial}{\partial x_0} + \sum_{i=1}^{n} \frac{\partial}{\partial x_i}$. Furthermore, we apply the characterization of the existence of non-tangential limits for harmonic functions in terms of their area integrals. It is a well-known fact that if u is a harmonic function in $\mathbb{R}^3_+$, then for almost all $x \in \mathbb{R}^2$, the area integral,

$$S(u)(x) = \left(\int_{\Gamma(x)} |\nabla u|^2 y^{1-n} dV \right)^{\frac{1}{2}} < \infty$$

if and only if u has a non-tangential limit at x. We generalize this result for the quaternionic case. That is, for monogenic functions $u \in \mathbb{R}^3_+$ of the form

$$u = u_0 + u_1 e_1 + u_2 e_2 + u_3 e_1 e_2,$$

u_0 and u_3 have non-tangential limits almost everywhere on $\mathbb{R}^2$ if and only if u_1 and u_2 have non-tangential limits almost everywhere on $\mathbb{R}^2$. (Received September 16, 2013)