1114-51-147 **Craig A. Nolder*** (nolder@math.fsu.edu), Department of Mathematics, Florida State, University, 1017 Academic Way, Tallahassee, FL 32306. *Compactification of Clifford Algebras, Quadratic Spaces and Möbius groups.*

We write $\mathbb{R}^{p,q}$ for the quadratic space $\mathbb{R}^{p+q}$ with quadratic form $x_1^2+\cdots+x_p^2-x_{p+1}^2-\cdots-x_{p+q}^2$. A conformal compactification is topologically a projectivised product of spheres $S^p \times S^q/\sim$. We also write $\mathcal{C}\ell_{r,s}$ for the Clifford algebra generated over the reals with generators $e_j^2 = 1$ for $j = 1, ..., r$ and $e_j^2 = -1$ for $j = r+1, ..., r+s$. In dimensions two and four, we identify quadratic spaces with Clifford algebras. The product of a generic element with its conjugate is the corresponding quadratic form. In this way we have the identifications : complex numbers $\mathbb{C} \approx \mathcal{C}\ell_{0,1} \approx \mathbb{R}^{2,0}$, split complex numbers $\mathcal{C}\ell_{1,0} \approx \mathbb{R}^{1,1}$, quaternions $\mathbb{H} \approx \mathcal{C}\ell_{0,2} \approx \mathbb{R}^{4,0}$, split quaternions $\mathcal{C}\ell_{1,1} \approx \mathcal{C}\ell_{2,0} \approx \mathbb{R}^{2,2}$. We discuss the actions of Möbius groups on the compactifications and in particular have the following identifications : $PSL(2, \mathcal{C}\ell_{1,0}) \approx SO_+(2,2)$, $PSL(2, \mathcal{C}\ell_{1,1}) \approx PSL(4, \mathbb{R}) \approx SO_+(3,3)$. (Received August 22, 2015)