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Louiza Fouli* (lfouli@math.utexas.edu), 1 University Station, C1200, Austin, TX 78712, and
Claudia Polini and **Bernd Ulrich**. *The core of points and the Cayley-Bacharach Property.*

We will discuss the shape of the core of an ideal in a Cohen-Macaulay ring and in particular we will focus on the following situation: Let k be an infinite field and let $X = \{P_1, \dots, P_s\}$ be a set of s reduced points in \mathbb{P}_k^n . Let $R = k[x_0, \dots, x_n]/I_X$ be the homogeneous coordinate ring of $X \subset \mathbb{P}_k^n$ and $\mathfrak{m} = (x_0, \dots, x_n)$ the homogeneous maximal ideal of R . We present a formula for $\text{core}(\mathfrak{m})$ and show a connection between the shape of $\text{core}(\mathfrak{m})$ and the Cayley-Bacharach property of X . (Received September 14, 2008)