1086-51-2785   **Robert D. Knight*** (`puzzled40@yahoo.com`), 101 University Ave, Chillicothe, OH 45601.
Desargues' Theorem in Laguerre Planes.

An Ovoidal Laguerre plane can be defined as the set of points of a cylinder over an oval in an affine 3-space, together with the set of "circles" resulting from intersecting this cylinder with planes not parallel to the generators of the cylinder. The points are traditionally referred to as "spears" and the circles as "cycles". Using lattice theory, Jeff Kahn proved in 1980 that a Laguerre plane is ovoidal iff it satisfies a set of conditions called the Full Bundle Theorem. The spears and cycles of a general Laguerre plane can be represented by affine planes and points, respectively, of a near-linear space. In this space the Full Bundle Theorem takes a form analogous to the Veblin-Young Axiom for projective spaces. We provide a direct, synthetic proof that a form of Desargues' Theorem within this near-linear space holds iff the Full Bundle Theorem holds. (Received September 25, 2012)