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**Edna Jones\*** (elj44@math.rutgers.edu). *The Local-Global Principle for Integral Crystallographic Sphere Packings*. Preliminary report.

We will discuss a local-global principle for certain integral crystallographic sphere packings, such as Soddy sphere packings. (A Soddy sphere packing is a 3-dimensional analogue of a Apollonian circle packing.) Sometimes each sphere in a crystallographic sphere packing has a bend ( $1/\text{radius}$ ) that is an integer. When all the bends are integral, which integers appear as bends? Using quadratic forms and the circle method, we attempt to answer this question. (Received September 14, 2020)