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**Jun Zhang\*** (zhangjun19@gmail.com), Jun Zhang, Math Department, University of Washington, Seattle, WA. *Some Examples of AS Regular Algebras of type (14641)*. Preliminary report.

We are interested in dimension four regular algebras of type (14641). We are particularly interested in algebras with a generator  $x_4$  satisfying  $x_4x_1 = ax_1x_4$ ,  $x_4x_2 = bx_2x_4$ , and  $x_4^2 = f(x_1, x_2, x_3)$ , with  $f$  being a quadratic functions in the variables  $x_1, x_2, x_3$ . The class of all such algebras is large and we break our classifications into six sub-cases. We have some partial result for two of our cases and will present some of the regular algebras we found. (Received August 13, 2008)