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Gail Letzter* (gletzter@verizon.net), National Security Agency, 9800 Savage Road, Fort Meade, MD 20755-6844. *Cartan Subalgebras for Quantum Symmetric Pair Coideals*. Preliminary report.

Recent discoveries show that the coideal subalgebras used to form quantum symmetric pairs play a fundamental role in the representation theory of quantized enveloping algebras. However, there is still no general theory of finite-dimensional modules for these coideal subalgebras. In this talk, we establish an important step in this direction: we show that every quantum symmetric pair coideal subalgebra admits a quantum Cartan subalgebra which is an extension of a commutative ring and specializes to its classical counterpart. The construction builds on Kostant and Sugiura's classification of Cartan subalgebras for real semisimple Lie algebras via strongly orthogonal root systems. We show that the quantum Cartan subalgebras act semisimply on a large family of finite-dimensional modules and describe the corresponding weight spaces in a number of examples. (Received September 16, 2016)