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Christopher K Chung* (cc2wn@virginia.edu), 110 Kerchof Hall, 141 Cabell Drive, Charlottesville, VA 22904. *Serre presentation and canonical basis for ι -quantum covering groups*. Preliminary report.

In 2016, Bao and Wang developed a theory of canonical basis for quantum symmetric pairs $(\mathbf{U}, \mathbf{U}^\iota)$, generalizing the canonical basis of Lusztig-Kashiwara for quantum groups. Soon after, Chen, Lu and Wang established a presentation for the ι -quantum group \mathbf{U}^ι of the quasi-split quantum symmetric pair of Kac-Moody type, explicitly in terms of Serre relations. In a series of papers, Clark, Hill and Wang developed a theory of quantum covering algebras, which generalizes both the Lusztig quantum group and quantum supergroups. In this setting, we will describe how the results on the Serre presentation and canonical basis generalize to the quantum covering setting. (Received January 21, 2020)