1119-05-177 **Cristian Lenart**, **Daniel Orr*** (dorr@vt.edu) and **Mark Shimozono**. *Compression and combinatorial formulas for Koornwinder polynomials.* Preliminary report.

The Koornwinder polynomials are a six-parameter family of n-variable orthogonal Laurent polynomials, first introduced as BC_n-analogues of Macdonald polynomials. In the general framework of Macdonald-Koornwinder polynomials, Koornwinder's original polynomials are attached to the maximal non-reduced extension of the affine root system of type $D_{n+1}^{(2)}$; via specialization of parameters they recover all Macdonald polynomials of classical type. The Ram-Yip formula gives a combinatorial expression for Macdonald-Koornwinder polynomials as a weighted sum over alcove walks. Using a map from alcove walks to diagram fillings, we compress the Ram-Yip formula for Koornwinder polynomials to a smaller, more explicit combinatorial formula. (Received February 15, 2016)