1119-05-131 **Ben Salisbury*** (salis1bt@cmich.edu), Department of Mathematics, Central Michigan University, Pearce Hall 206H, Mount Pleasant, MI 48859, **Adam Schultze** (aschultze@albany.edu), Department of Mathematics and Statistics, Earth Science 110, University at Albany, Albany, NY 12222, and **Peter Tingley** (ptingley@luc.edu), Dept. of Maths and Stats, Loyola University, BVM hall, room 506, 1032 W. Sheridan Road, Chicago, IL 60660. *Crystal structure of certain PBW bases.* Preliminary report.

Lusztig's theory of PBW bases gives a way to realize the crystal $B(\infty)$ for any complex-simple Lie algebra where the underlying set consists of Kostant partitions. In fact, there are many different such realizations: one for each reduced expression of the longest element of the Weyl group. There is an explicit algorithm to calculate the actions of the crystal operators, but it can be quite complicated. For simply-laced types, we give conditions on the reduced expression which ensure that the corresponding crystal operators are given by a simple combinatorial bracketing rule. We then give at least one reduced expression satisfying our conditions in every simply-laced type except E_8, and discuss the resulting combinatorics. Finally, we describe the relationship with more standard tableaux combinatorics in types A and D. (Received February 13, 2016)