

1050-51-45

Barry Monson*, Department of Mathematics and Statistics, University of New Brunswick, P.O. Box 4400, Fredericton, NB E3B 5A3, Canada, and **Egon Schulte** and **Daniel Hay**. *More on the 11-cell*. Preliminary report.

Codiscovered by Coxeter and Grünbaum in the 1970's, the 11-cell is a very beautiful abstract regular 4-polytope, with automorphism group $PSL_2(11)$. Here we give what is perhaps the most natural construction (via orthogonal groups over the ring $\mathbb{Z}[\tau]$; work with Egon Schulte), then try to sensibly visualize the thing (work with UNB student Danny Hay). (Received February 16, 2009)