

Abstract Submitted  
for the DPP16 Meeting of  
The American Physical Society

**A comparison of quasi-symmetries in stellarators**<sup>1</sup> ALEX JOHNSON, ANDREW WARE, University of Montana — This work explores the differences between the equilibrium, stability and transport properties of quasi-helically (QH) symmetric, quasi-axisymmetric (QA) and quasi-poloidally (QP) symmetric stellarator configurations with the same major radius, aspect ratio, average magnetic field strength, plasma  $\beta$  and pressure profiles. Previous work on quasi-symmetry in stellarators has typically focused on one type of quasi-symmetry. Optimized stellarators have been developed for QH, QA and QP configurations but at very different plasma parameters. In this work computational studies of optimized cases of all three cases have been undertaken. Results of the studies will be presented.

<sup>1</sup>Work supported by U.S. Department of Energy under Grant DE-FG02-03ER54699 at the University of Montana.

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Date submitted: 14 Jul 2016

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