Christian K Zickert* (zickert@math.umd.edu). Coordinates for representations of 3-manifold groups.

We study the shape and Ptolemy varieties of a triangulated compact 3-manifold $M$. The varieties give coordinates for representations of $\pi_1(M)$ in the sense that each point determines a representation (up to conjugation). We describe the varieties, how to compute them, and how to compute invariants such as trace fields and complex volume. (Received September 15, 2015)