

1040-57-75

**Greg Brumfiel, Hugh M. Hilden\*** (mike@math.hawaii.edu), **Maite Lozano, Jose Montesinos, Hamish Short, Enrique Ramirez-Losada, Debora Tejada and Margarita Toro.** *Title: On three manifolds as geometric branched coverings of the three sphere.*

One method for obtaining every three manifold is as a branched covering of the three sphere branched over a link. There are topological results along these lines that cannot be improved upon in two respects: (A) The minimum possible number of sheets in the covering is three. (B) There are individual knots and links (universal knots and links) that can serve as branch set for every closed three manifold. Given the growing importance of geometry in three manifold theory it is of interest to obtain geometrical versions of topological results A and B. Twenty years ago a geometric version of result B was obtained using universal groups. In this paper we obtain a geometric version of result A, also by means of universal groups. (Received January 24, 2008)