

**Babenko, Yu. I.**

**Power invariants of a union of coaxial prisms.** (English. Russian original) [Zbl 1003.51009](#)  
*J. Math. Sci., New York* 110, No. 4, 2769-2773 (2002); translation from *Zap. Nauchn. Semin. POMI* 261, 31-39 (1999).

Summary: The paper is an addition to the paper of *Yu. I. Babenko* and *V. A. Zalgaller* [see the paper above]. It gives a condition under which the set of all vertices of several coaxial prisms inscribed in a sphere in  $\mathbb{R}^3$  has power invariants  $I_1, \dots, I_n$ . A finite set in  $\mathbb{R}^3$  with 11 invariants is constructed. It is also proved that unions of prisms yield finite sets in  $\mathbb{R}^3$  with any preassigned number  $n$  of invariants with alternating signs.

**MSC:**

[51M04](#) Elementary problems in Euclidean geometries  
[52A99](#) General convexity

**Keywords:**

union of coaxial prisms; power invariants