1161-52-109   **Ferenc A. Bartha**, **Ferenc Fodor*** (`fodorf@math.u-szeged.hu`) and **Bernardo Gonzalez Merino**. *Central diagonal sections of the n-cube.*

We prove that the $(n-1)$-volume of central hyperplane sections of a unit cube in $\mathbb{R}^n$ orthogonal to a diameter is a strictly monotonically increasing function of n for $n \geq 3$. The proof is based on an integral formula for central sections of the cube, and on Laplace's method which we use to estimate the asymptotic behaviour of the integral. We treat small n by numerical methods. (Received August 13, 2020)