Qingying Bu and Byunghoon Lee* (blee4@olemiss.edu), Department of Mathematics, University of Mississippi, Oxford, MS 38677. On Positive Tensor Products of $\ell_p$-spaces.

For $1 \leq p_1, \cdots, p_n < \infty$, we characterize the main diagonals of the positive projective tensor product $\ell_{p_1} \hat{\otimes} |\pi| \cdots \hat{\otimes} |\pi| \ell_{p_n}$ and the positive injective tensor product $\ell_{p_1} \check{\otimes} \varepsilon |\pi| \cdots \check{\otimes} \varepsilon |\pi| \ell_{p_n}$. Then by using these two main diagonals, we characterize the reflexivity, the property of being Kantorovich-Banach spaces, and the property of being order continuous of $\ell_{p_1} \hat{\otimes} |\pi| \cdots \hat{\otimes} |\pi| \ell_{p_n}$ and $\ell_{p_1} \check{\otimes} \varepsilon |\pi| \cdots \check{\otimes} \varepsilon |\pi| \ell_{p_n}$, as well as the space of all regular $n$-linear forms on $\ell_{p_1} \times \cdots \times \ell_{p_n}$ and the space of all regular $n$-homogeneous polynomials on $\ell_{p}$ ($1 \leq p < \infty$). (Received September 15, 2014)