1030-05-247   **Etsuko Bannai*** (`etsuko@math.kyushu-u.ac.jp`), Faculty of Mathematics, Graduate School, Kyushu University, Hakozaki 6-10-1, Higashi-ku, Fukuoka, 812-8581, Japan. *Euclidean t-designs.*

Euclidean t-designs were defined by Neumaier and Seidel as a generalization of spherical t-designs. Neumaier-Seidel and Delsarte-Seidel gave a lower bounds of the cardinalities of Euclidean $2e$-designs and defined tightness of the Euclidean $2e$-designs. Recently we learned that the natural lower bounds of the cardinalities of Euclidean t-designs were essentially given by M" oller already in 1976 including the case when t is odd. In this talk we introduce the M" oller's results. We give the definition of the tightness of Euclidean t-designs. Then we discuss about the classification of tight t-designs which are on a union of 2 concentric spheres centered at the origin. We found some new examples of tight designs. This is a joint work with Eiichi Bannai. (Received August 04, 2007)