1145-05-871 **Atsuhiro Nakamoto*** (nakamoto@ynu.ac.jp), Yokohama National University, Yokohama, Kanagawa 240-8501, Japan, and **Yuta Omizo**. *A new $Y\Delta$ equivalence class of projective planar maps.*

A map G on a closed surface F^2 is *k-representative* if every noncontractible closed curve on F^2 hits G at least k times. Randby proved that for any $k \geq 1$, any two *minor-minimal* k-representative maps on the projective plane P^2 (i.e., w.r.t. minor operations) can be transformed by $Y\Delta$-exchanges. So the class of minor-minimal k-representative maps on P^2 forms a $Y\Delta$-equivalence class.

Recently, finding a relation between a certain quadrangulation on P^2 and a rhombus tiling of a regular $2k$-gon, we proved that if G is a minor-minimal k-representative map on P^2, then the "medial graph" $M(G)$ can be regarded as a system of "straight" noncontractible curves on P^2 (where $M(G)$ is the 4-regular map with vertex set $E(G)$ such that two vertices e and e' are adjacent in $M(G)$ if and only if e and e' are consecutive on some facial walk in G). This fact enables us to give a intuitive proof of Ranbdy's theorem.

In our talk, extending the above observation on geometry, we find a new $Y\Delta$ equivalence class of projective planar maps, including those classes of minor minimal k-representative maps on P^2. (Received September 16, 2018)