1135-47-308   **Yunied Puig de Dios*** (`puigdedios@gmail.com`), University of California Riverside, Department of Mathematics, 900 University Ave, Riverside, CA 92521. *Piecewise syndetic recurrence sets in hypercyclicity.*

We will be concerned with dynamics of linear operators. On one hand, we address the problem of the regularity of frequently hypercyclic vectors. This goes back to Shkarin in 2009 and consists to determine whether a frequently hypercyclic operator admits a frequently hypercyclic vector with some recurrence set having positive and different lower and upper density. As far as we know this problem is still open. We give a positive partial answer replacing upper density by upper Banach density. On the other hand, it is known that reiteratively hypercyclic operators are syndetic transitive. However the converse is not true, and the example is a weighted shift on l^p. Still, syndetic transitive weighted backward shifts remain very close to reiteratively hypercyclic ones. This is the content of our second result. (Received August 22, 2017)