1167-28-338 **Chun-Kit Lai*** (cklai@sfsu.edu), Th 928, San Francisco State University, 1600 Holloway Ave, San Francisco, CA 94132, and **Angel Cruz** and **Malabika Pramanik**. *Erdös similarity conjecture on a type of Cantor sets.* Preliminary report.

Erdös similarity conjecture asserted that for every infinite sequence decreasing to zero, we can find a set of positive Lebesgue measures such that it avoids all affine copies of the sequence. This conjecture remains open for any sequences with at least exponential decay e.g. $a_n = 2^{-n}$.

We consider a class of Cantor sets and show that there exists a Cantor set K such that the set of "good" points

$$\{x \in K : \forall \delta \neq 0, \exists k > 0 \text{ s.t. } x + \delta 2^{-k} \notin K\}$$

has Hausdorff dimension 1. This result also holds for all a_k with sub-superexponential decay. However, additional obstruction happens when $a_k = 2^{-2^k}$. (Received March 09, 2021)