962-14-1027   **Cem Guneri*** (`guneri@math.lsu.edu`), Department of Mathematics, Louisiana State University, Baton Rouge, LA 70803. *On the Minimum Distance of a Class of 2-D Cyclic Codes Using Artin-Schreier Curves.* Preliminary report.

We give a new method for weight computations of certain 2-D cyclic codes via the number of rational points on a family of Artin-Schreier curves. We view these codes as trace codes and relate the weight of each codeword to number of rational points on several Artin-Schreier curves. The same idea was used in weight enumerator computations of certain cyclic codes by several mathematicians. In the 2-D case, we will be able to give a lower bound for the minimum distance. (Received October 01, 2000)