1030-14-258 **Nigel Boston*** (boston@math.wisc.edu), Departments of Mathematics and Electrical and, Computer Engineering, Madison, WI 53706. *Hartmann-Tzeng-type Bounds for Cyclic Codes.* Preliminary report.

In an earlier paper I introduced projective varieties V(S,t) over Q with the property that if V(S,t) contains no nontrivial points over GF(q), then any cyclic code over GF(q) whose defining set contains S has minimum distance $>$ t. Here we aim to classify those S and t for which V(S,t) is 'nice', meaning its components are all rational and defined over an abelian extension of Q, allowing us to characterize precisely those S and t for which Hartmann-Tzeng-type bounds exist. This is a joint project with Gary McGuire. (Received August 05, 2007)