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30332-0160. *Conductors and minimal discriminants of hyperelliptic curves.*

Conductors and minimal discriminants are two measures of degeneracy of the singular fiber in a family of hyperelliptic curves. In the case of elliptic curves, the Ogg-Saito formula shows that (the negative of) the Artin conductor equals the naive minimal discriminant. In the case of genus two curves, Qing Liu showed that equality no longer holds in general, but the two invariants are related by an inequality. We extend Liu's inequality to hyperelliptic curves of arbitrary genus assuming that the Weierstrass points are rational. We also present explicit examples that suggest that Liu's inequality extends without any assumptions on the rationality of the Weierstrass points. We explain the difficulties in adapting the proof of the inequality in the case of rational Weierstrass points to the general case. (Received September 20, 2016)