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Changho Keem* (ckeeem@math.snu.ac.kr), Department of Mathematics, College of Natural Sciences, Seoul National University, 151-742 Seoul, South Korea, and **Edoardo Ballico**. *Double covering of hyperelliptic curves*.

We prove various properties of varieties of special linear systems on double coverings of hyperelliptic curves. We show and determine the irreducibility, generically reducedness and singular loci of the variety W_d^r for bi-elliptic curves and double coverings of genus two curves. Similar results for double coverings of hyperelliptic curves of genus $h \geq 3$ are also presented. (Received January 29, 2006)