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Vivien Ripoll* (vivien.ripoll@lacim.ca), Université du Québec à Montréal, CP 8888, Succ. Centre-ville, Montréal, QC H3C 3P8, Canada. *Geometrical enumeration of certain factorisations of a Coxeter element in finite reflection groups.*

When W is a finite reflection group, the noncrossing partition lattice NCP_W of type W is a very rich combinatorial object, extending the notion of noncrossing partitions of an n -gon. A nice formula (but for which the only known proofs are case-by-case) expresses the number of multichains of a given length in NCP_W as a generalized Fuss-Catalan number, depending on the invariant degrees of W . We describe, from a geometrical point of view, some new refinements of a specification of this formula, in terms of "submaximal block factorizations" of a Coxeter element of W . The enumeration of these factorizations involves specific properties of the discriminant hypersurface of W . The (case-free) proof uses an interpretation of the block factorizations as fibers of the "Lyashko-Looijenga covering" of type W . (Received February 14, 2011)