p^n-typical formal group laws and Morava-orientability

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For a prime number p, and a natural number n we will introduce p^n-typical formal group laws analogous to Cartier's definition ($n = 1$). We will define 'Chern classes' from algebraic Morava K-theories $K(n)$ to orientable theories with an associated p^n-typical formal group law, which thus can be rather vaguely called 'Morava-oriented'.

In particular, these operations from $K(n)$ to $K(n)$ allow to define the gamma filtration on Morava K-theories, which satisfies properties similar to the classical one. Using this filtration and using the results of and following an idea of N. Semenov, we will obtain universal bounds on torsion in Chow groups $CH^{\leq 2^n}$ of quadrics coming from $(n+2)$-th power of the fundamental ideal in the Witt ring.