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*Lubin-Tate space and Morava E-theory.*

I would like to review and clarify the relationship between the Lubin-Tate space of deformations of a height  $n$  formal group and the associated homology theory, the Morava  $E$ -theory  $E_n$ . It is a useful slogan to say that Lubin-Tate space is the formal neighborhood of a height  $n$ -formal group in the moduli stack of formal groups, but this is not quite true: it is more accurately described as the universal cover of that neighborhood – and the Morava stabilizer group is the group of Deck transformations. Once this algebraic geometry is understood, some of the usual complexities around the Morava  $E$ -theories become transparent; for example, there isn't really one  $E_n$ , nor is  $E_n$  really a homology theory. Other points acquire an aura of the inevitable as well; for example, the well-known connection between the co-operations and the Morava stabilizer group is a translation of the assertion about Deck transformations above. Or, to give another example, the fact that these co-operations are etale over  $(E_n)_*$  is a translation that of the fact that we have a covering map. This last fact is the key input into the Hopkins-Miller theorem that  $E_n$  is an  $E_\infty$ -ring spectrum. (Received February 11, 2008)