1060-57-252 **Krzysztof Putyra*** (putyra@math.columbia.edu). A 2-category of dotted cobordisms and odd link homologies with parameters. Preliminary report.

A chronology on a cobordism is a Morse function $f: M \to I$ which separates critical points. (1 + 1)-cobordisms with chronologies form a category which has a natural structure of a 2-category, where 2-morphisms are given by homotopies (changes) of chronologies. I showed two years ago that for a given tangle diagram we can build a complex in the additive closure of this 2-category from which we can recover both even and odd homology groups. This time I will describe how to introduce dots to chronological cobordisms and a neck-cutting relation. This gives us a natural Abelian framework for the odd construction and may result in fast algorithms to compute odd homologies. Further applications include:

- non-existence of an odd version of the Lie construction
- no analogues of the t and h parameters

(Received March 30, 2010)