Sudden switching in two-state systems KH. SHAKOV, J.H.
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Louisiana State University — Analytic solutions are developed for two-state sys-
tems strongly perturbed by a series of rapidly changing pulses, called 'kicks'. The
evolution matrix may be expressed as a time orrdered product of evolution matricies
for single kicks. Single, double and triple kicks are explicitly considered, and the
onset of time ordering is examined. The effects of different order of kicks on the
dynamics of the system is studied and commpared with effects of time ordering in
general. To determine the range of validity of this apporach, the effect of using pulses
of finite widths for 2s - 2p transitions in atomic hydrogen is examined numerically.

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