

**Wakefield Calculations for Short Bunches with Finite Transverse Beam Size in Bending Magnets,**  
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V. SHILTSEV, DESY/INP (Novosibirsk) - Effects of cooperative interaction within a short bunch of charged particles following a curved trajectory are known to significantly influence beam dynamics. Longitudinal beam dynamics is affected by overtaking electromagnetic fields radiated by the tail of the bunch. Centrifugal space-charge force is studied. The investigation of the both effects takes into account vertical and radial beam sizes as well as shielding due to the vacuum chamber. Simulation techniques for these effects are discussed.