Numerical simulation of the wire array load for Z pinch and optimal load design based on PSPICE\textsuperscript{1} HAILONG ZHAO, JIANJUN DENG, WENKANG ZOU, GANGHUA WANG, MINGXIAN KAN, Institute of Fluid Physics, CAEP — In order to make better understand of the Z pinch implosion performed on Yang generator, the key point is to make numerical simulations about the pinch load. A zero dimensional load model of the wire array Z pinch is designed using PSPICE to simulate the implosive process, comparisons between the calculated results and experimental data prove the load model to be correct. With this model, optimal load designs are performed for PTS facility, factors influencing the simulation results are discussed, and comparison between results are analyzed to give out appropriate parameters useful for experiments.

\textsuperscript{1}Project supported by the National Natural Science Foundation of China (Grant No.11205145).

Hailong Zhao
Institute of Fluid Physics, CAEP

Date submitted: 03 Jul 2013

Electronic form version 1.4