

XADS/Eurisol

G. Olry, CNRS, IPN Orsay

RF design of the $\beta_g = 0.35$, 2-gap spoke cavity has been done with the MAFIA EM code. Starting from the so-called pillbox cavity model, optimization of the main parameters $E_{\text{peak}}/E_{\text{acc}}$, $B_{\text{peak}}/E_{\text{acc}}$ and transit time factor, has led to specific shapes for the spoke bar (i.e. a cylindrical spoke base and a racetrack spoke center) and the reentrant end-walls (in order to maintain the ratio of 1/3 between the spoke bar dimensions and the cavity length). The different steps of the EM calculations are described.