# A NEW DESIGN FOR THE ILC 45MV/m CAVITY INPUT COUPLER

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*Abstract*

An attractive structure using capacitive coupling has been found for the input coupler for the 45 MV/m versions of the International Linear Collider (ILC) project. The coupler supports an electrical field gradient of ~1 kV/m around the RF window ceramic with 500 kW through power, a VSWR of 1.1 and a frequency bandwidth of 460 MHz. No unwanted resonances were found in the RF window near the first and second harmonics of the operation frequency. In this paper, we report the detailed design of a new cold side input coupler using a capacitive coupling coaxial line.

## NO SUBMISSION RECIEVED