

KICKER FOR THE DAFNE

LONGITUDINAL BUNCH-BY-BUNCH FEEDBACK

Pill-box cavity loaded with
6 ridged waveguides

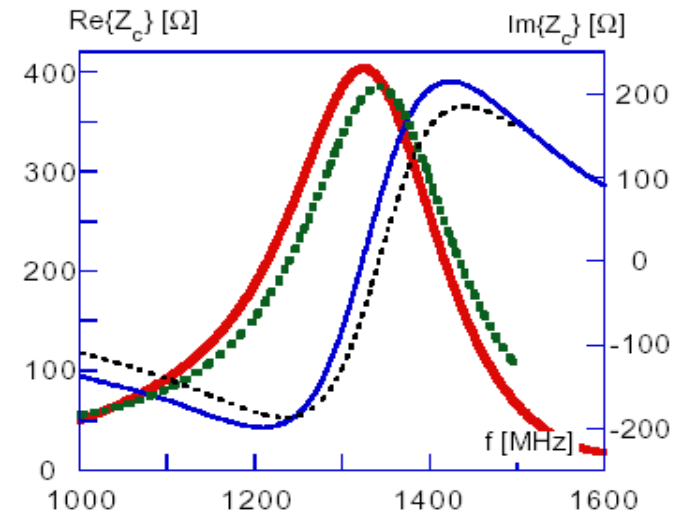
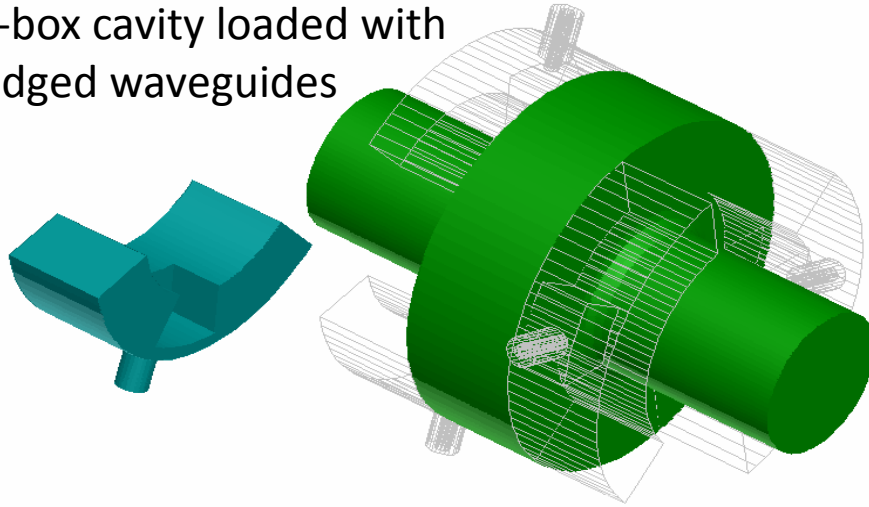
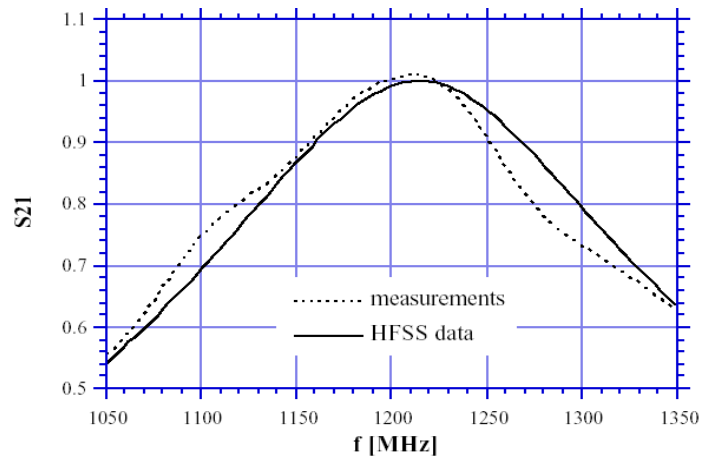


Figure 10: Coupling impedance of the longitudinal feedback kicker. (thick lines: resistive part of impedance, thin lines: reactive part; solid lines: wire measurements, dotted lines: HFSS wire method simulations).

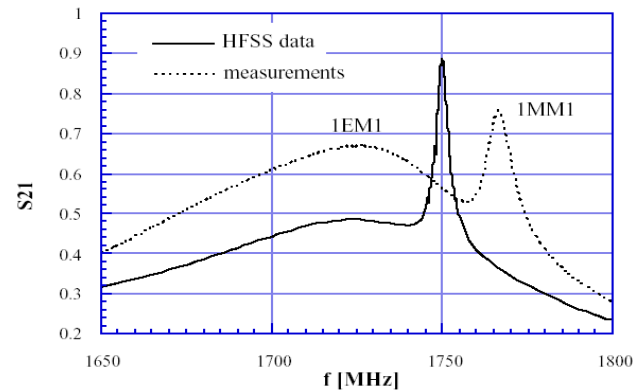
TM010 working mode:

Center frequency = $3.25 * f_{RF}$

BW \approx 220 MHz

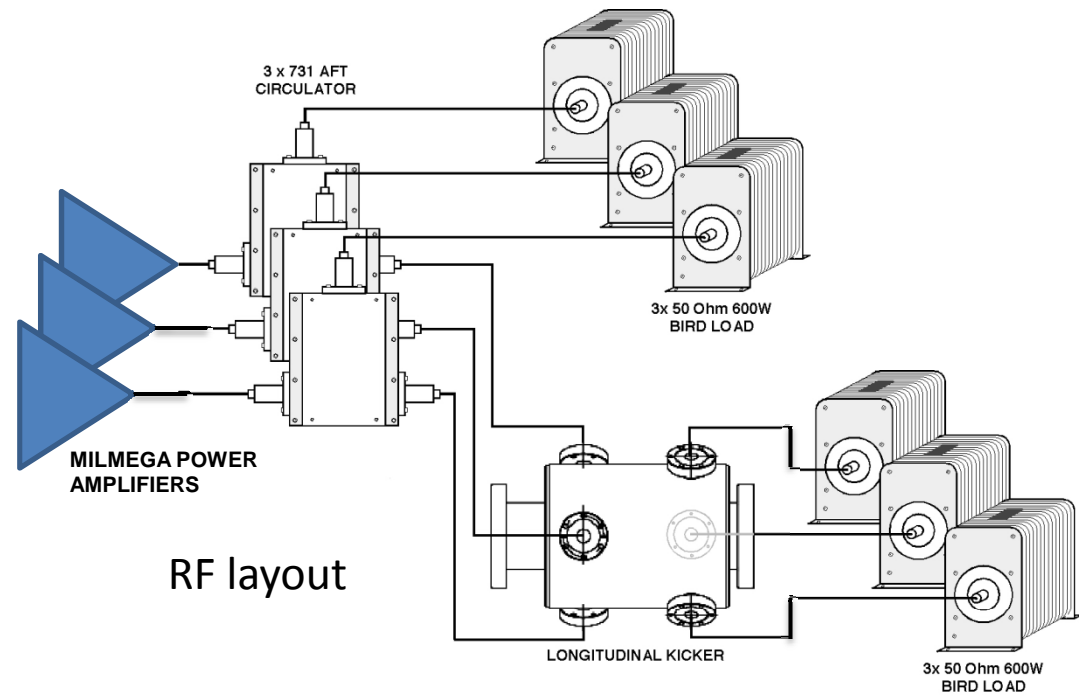


wgs also strongly damp HOMs



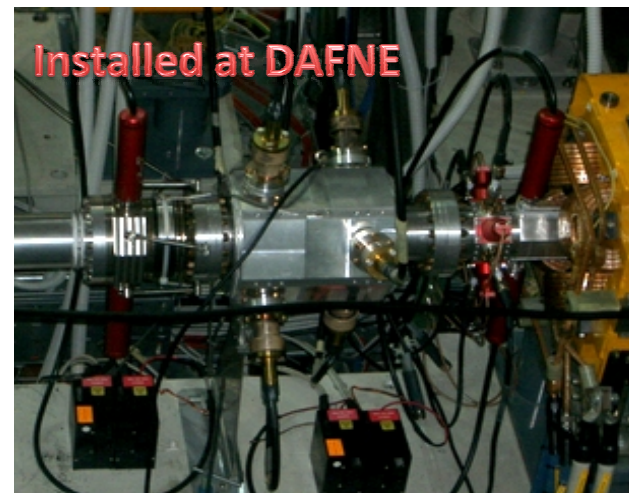
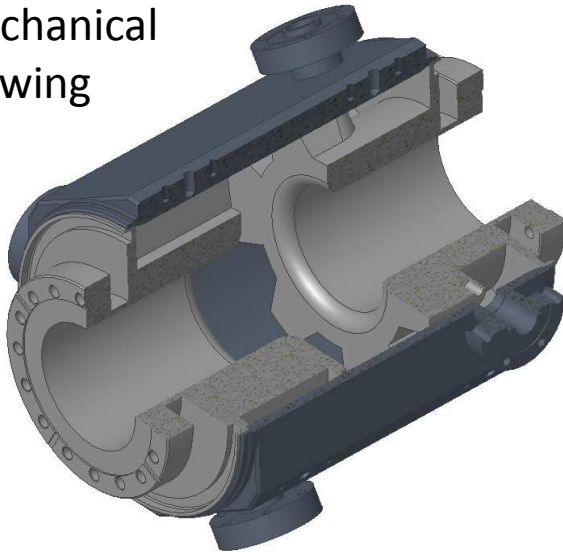
F. Marcellini

KICKER FOR THE DAFNE LONGITUDINAL FEEDBACK



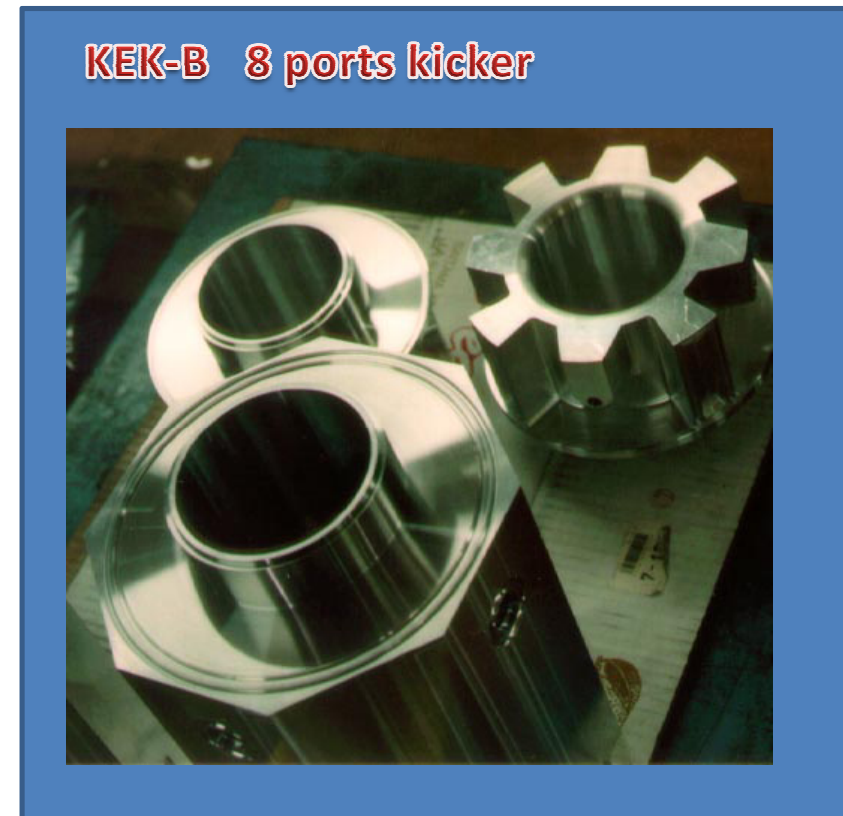
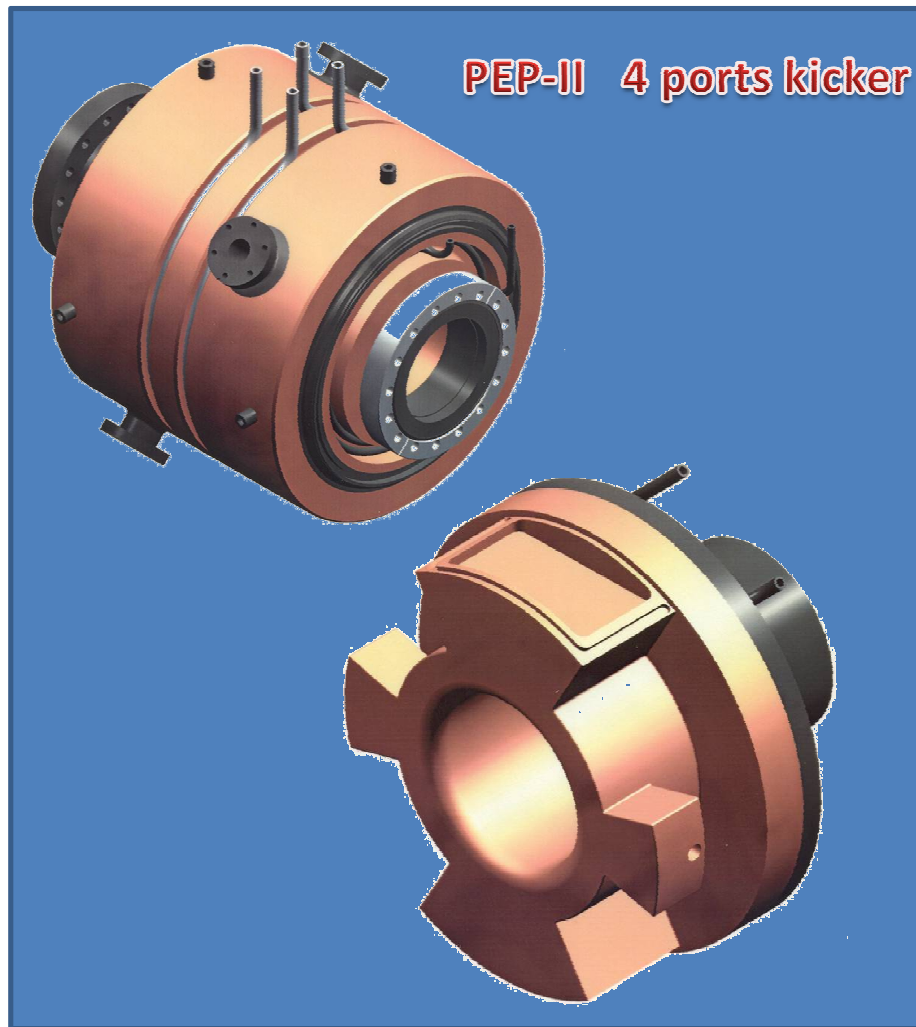
RF layout

Mechanical
drawing



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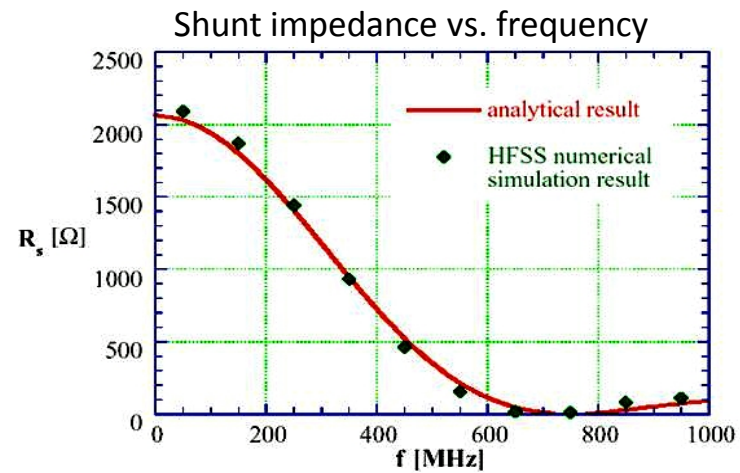
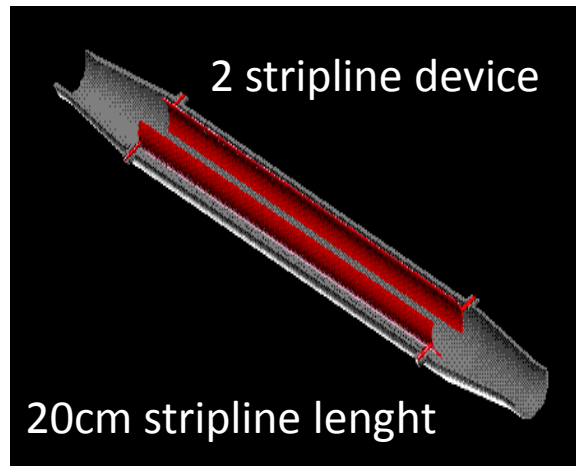
SIMILAR KICKERS USED IN B FACTORIES



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KICKER FOR THE DAFNE

TRANSVERSE BUNCH-BY-BUNCH FEEDBACK



Both E and H contribute to deflection

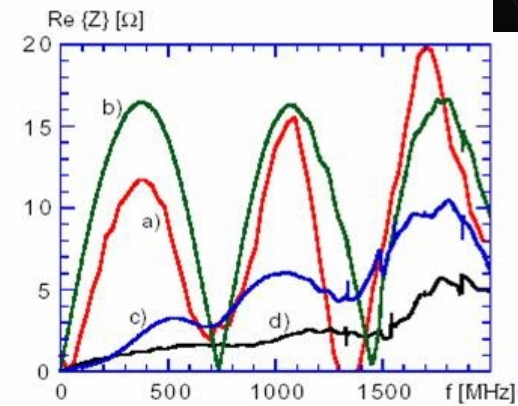
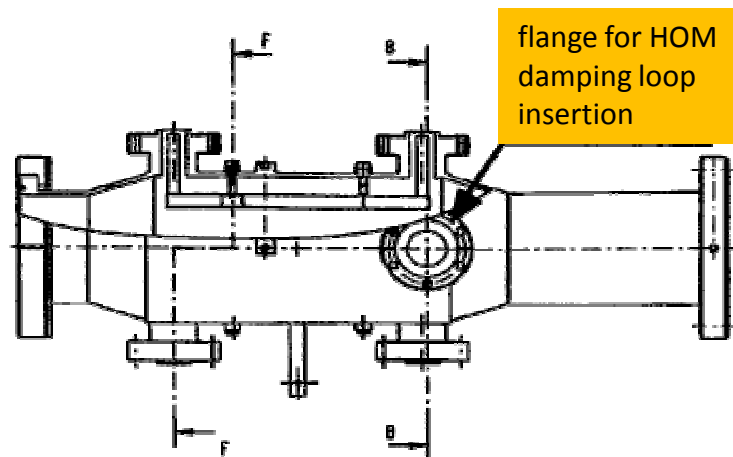
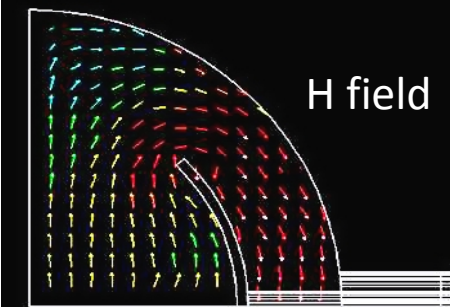
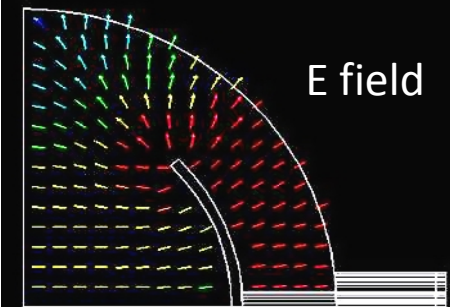
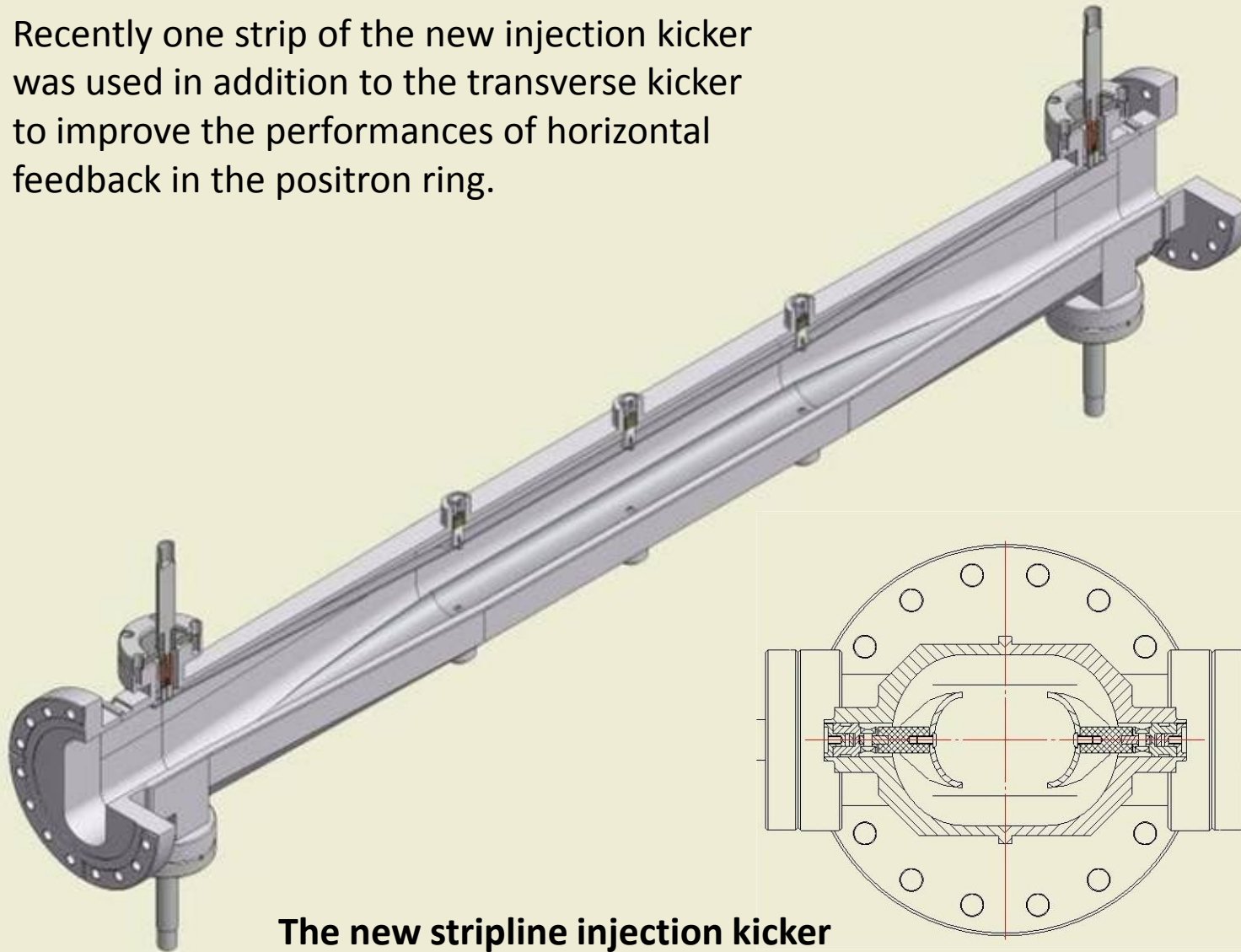


Figure 11: Transverse feedback kicker measurements: a) beam coupling impedance; b) upstream port transfer impedance; c) downstream port transfer impedance; d) loop transfer impedance.

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Recently one strip of the new injection kicker was used in addition to the transverse kicker to improve the performances of horizontal feedback in the positron ring.



The new stripline injection kicker

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