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Impedance analysis of the septum in Hefei Advanced Light Facility

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An eddy-current design is used for the septum in HALF (Hefei Advanced Light Facility), with the whole cores located in a vacuum chamber. The stored beam passes through a copper vacuum pipe which set in the vacuum chamber. Two types of connections between the copper pipe and the flanges at both ends of the chamber were considered. The impedance calculations were done, and the wake-field, heat have also been analyzed. A flexible connection using a beryllium bronze casing was finally selected.

Footnotes

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