ISAC - II QWR Cavity Characterizations and Investigations

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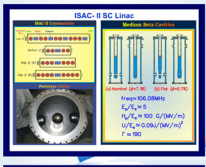
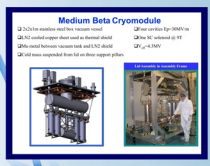
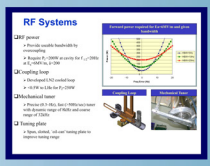
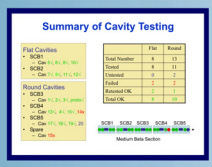
ABSTRACT

A heavy ion superconducting linac is being installed at ISAC/TRIUMF. A first stage of the ISAC -II upgrade at TRIUMF will see the installation of 20 quarter wave bulk niobium cavities (β_0=0.057,0.071). The cavities operate cw at 106MHz with design peak fields of Ep=30MV/m, Bp=60mT while delivering an accelerating voltage of 1.08MV at ~4W power consumption. All of the cavities have received BCP processing with two of the cavities receiving an additional electro-polishing treatment. The cavities have been fully characterized for rf performance and are presently being mounted in cryomodules for an initial beam test in Dec, 2005. The report will summarize the cavity treatment procedures and present the cavity test results. In particular we compare the EP vs. BCP treatment and present data confirming the presence of Q-disease in the BCP cavities.









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Tested	8	11
Untested	0	2
Failed	2	2
Retested OK	2	1
Total OK	6	10