

Review of Experience with HOM Damped Cavities, H. PADAMSEE, Laboratory of Nuclear Studies, Cornell University - Future high luminosity electron-positron and proton-proton colliders stand to gain many advantages from the use of low impedance cavities. To achieve the needed luminosities, ampere size beam currents need to be stored in a very large number of bunches, which must be spaced together very closely. The high current and tight bunch spacing makes the control of multibunching stabilities one of the most important issues for the new accelerators. Therefore it is imperative to reduce the beam-cavity interaction. Both superconducting and normal conducting cavity designs are being prepared to meet the low impedance and high power challenges. The cavity developments are in the advanced stages of beam tests and initial operating experience. We will review the various designs and their operation.