

**ENERGY FEEDBACK SYSTEMS AT KEKB INJECTOR LINAC**

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In the commissioning of KEKB e- 8GeV / e+ 3.5GeV linac the beamhandling system was much improved since the stable operation of the linac is required to achieve the higher luminosity. One of the newly installed sub-systems is the energy feedback system. The feedback system is composed of an energy monitor and a tuner. The monitor measures the linac beam energy using beam position monitors installed at the location with a large dispersion. A noise to the measurement caused by beam orbit fluctuation is eliminated with a simple online beam optics calculation around the monitor locations. The tuner changes the beam energy using microwave phase shifters at two klystron stations simultaneously to maintain the energy distribution in a beam bunch. A generalized graphical operator interface to the system is also developed employing script languages in order to manipulate and monitor the feedback parameters in realtime. The feedback system was installed at several points in the linac and is used routinely.