

The Japan Linear Collider Project, M. KIHARA,
KEK - The research and development for the Japan Linear Collider have been concentrated on the X- and C-band linac technologies as well as on the front end of a linear collider. The KEK Accelerator Test Facility (ATF), which is a front end development facility, comprises a 1.54-GeV S-band linac and a damping ring. The ATF started operation in January, 1997. The primary research target so far has been to achieve the small emittance of stored beam, now in the single bunch mode. Precise measurement of the beam size of the order of 10 microns has been done with two different methods successfully. Basic technologies of both X- and C-band linacs have been developed, including diffusion bonding technique for accelerator guides of the X-band linac, the invention of the delay line distribution system (DLDS) for rf pulse compression, the development of X- and C-band klystrons, a smart modulator system, a C-band accelerator guide of choke mode type. These development results and the future prospects will be reported.