

Appendix H

Hardware Picture Gallery



Figure H.1: The radiotelescope surrounded by apple orchards.



Figure H.2: A view of the dish dusted by snow.



Figure H.3: Paul's son Jake (as a youngster) next to the dish for size comparison. (Jake just graduated from college this spring.)



Figure H.4: A view from the edge of the dish.



Figure H.5: The twin sky horns before installation.



Figure H.6: The sky horns installed in the radome.



Figure H.7: A double exposure showing the terrestrial discone and its downconversion circuitry as well as its enclosure.



Figure H.8: The GPS antenna, lightning rod, discone and terrestrial feed system mounted on the tower. The tower is tilted down for maintenance.

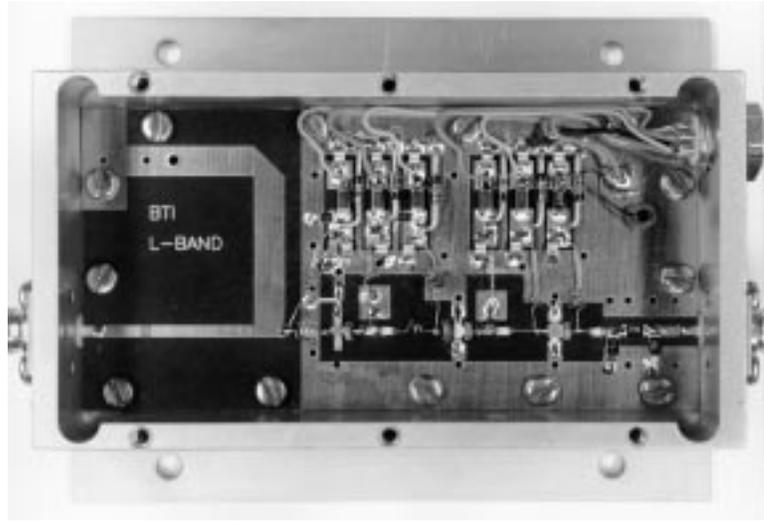


Figure H.9: An inside view of one of the HEMT low noise amplifiers.

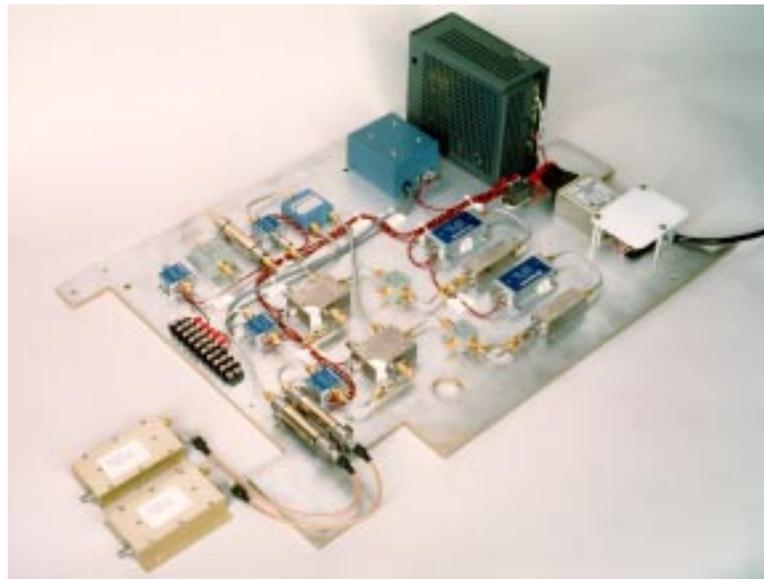


Figure H.10: Low noise amplifiers and receiver plate with downconversion circuitry.

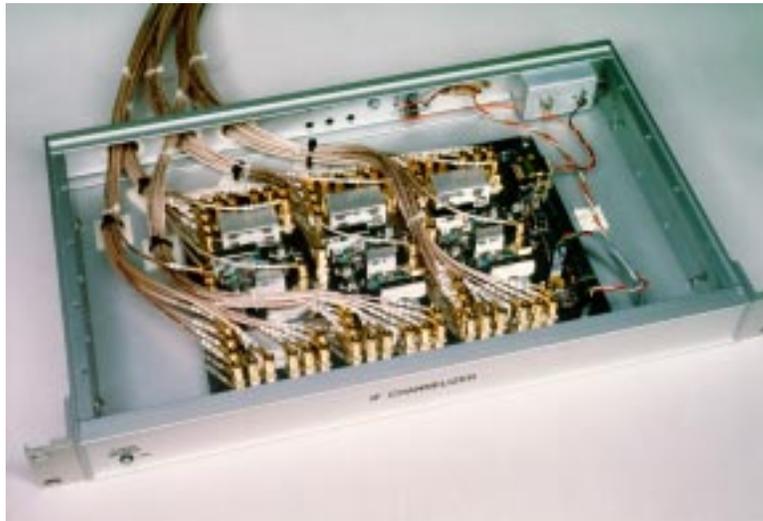


Figure H.11: The IF channelizer box.

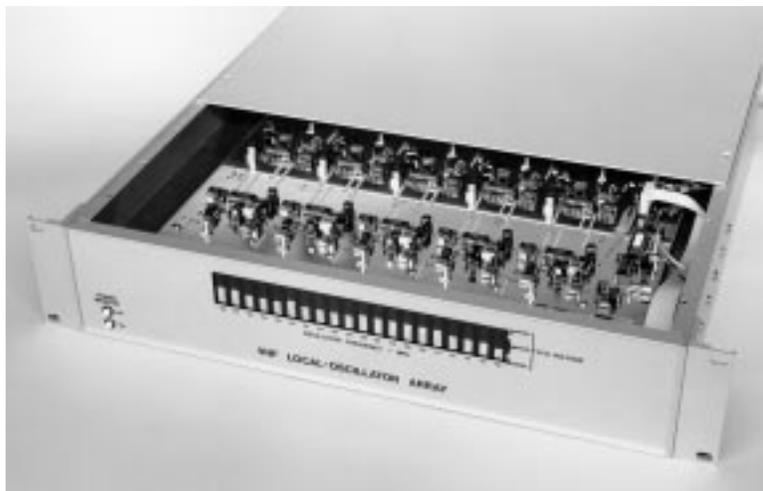


Figure H.12: The local oscillator array with its LED bargraph meter.

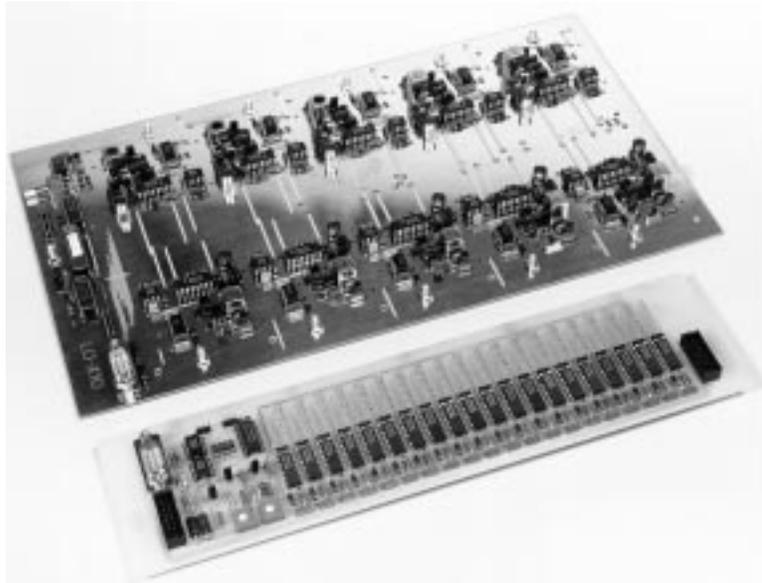


Figure H.13: The boards inside the local oscillator array.

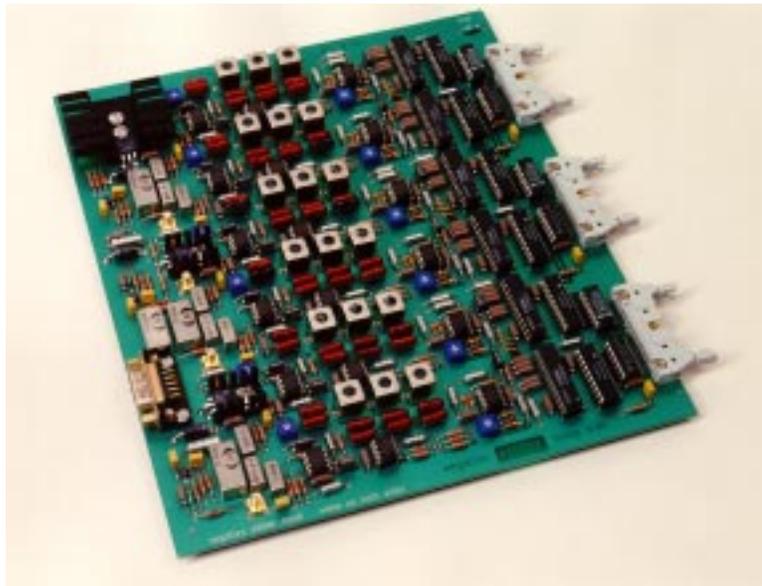


Figure H.14: A mixer digitizer board. Note the progression from RF connectors and circuitry on one side of the board to digital ones on the other side.

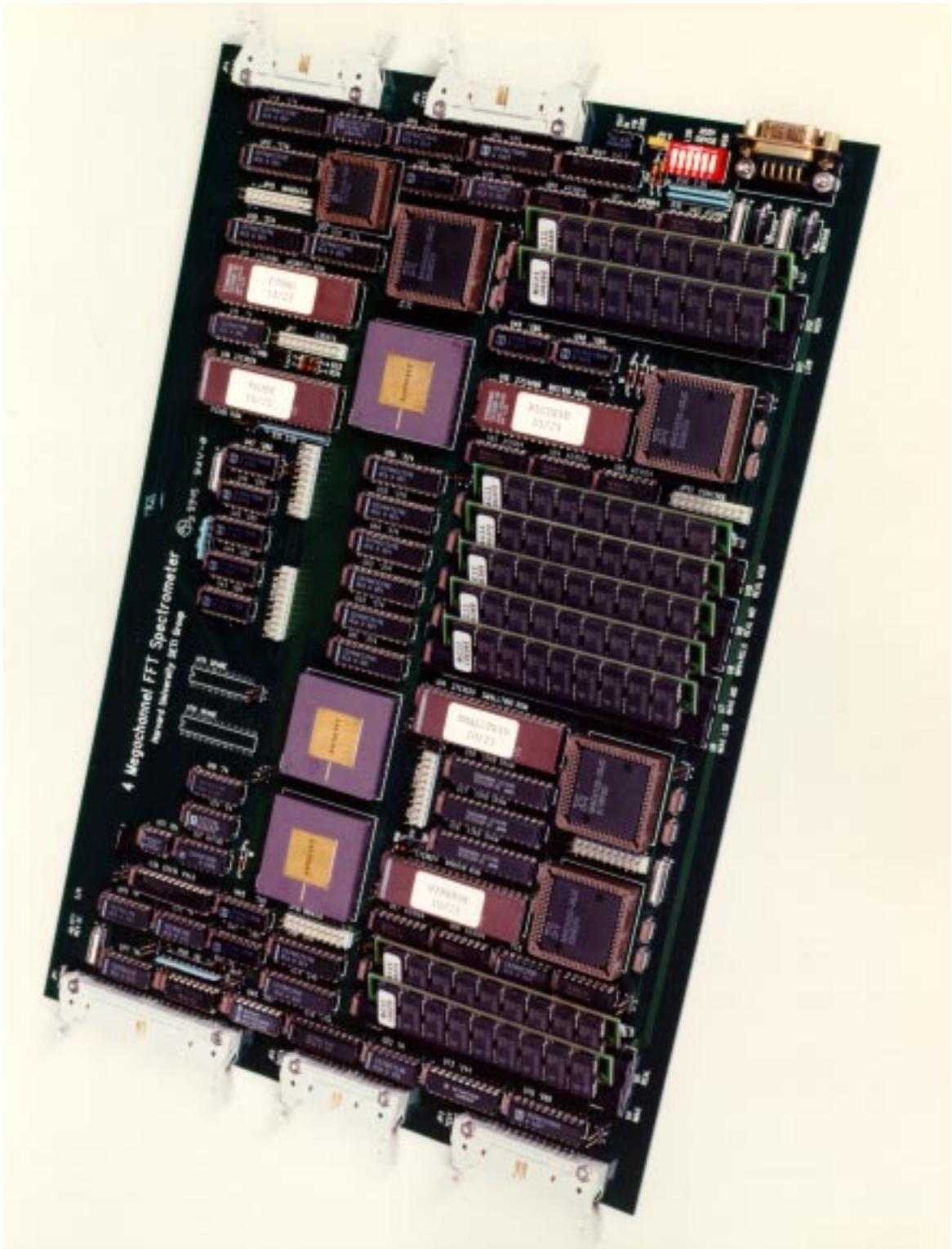


Figure H.15: The 4 million point FFT board.



Figure H.16: The *BETA* supercomputer in its rack. The rack holds 63 4M-point FFT boards, 21 mixer-digitizer boards, power supplies and cooling fans.



Figure H.17: The rack during its move from Harvard U. to Harvard, MA.

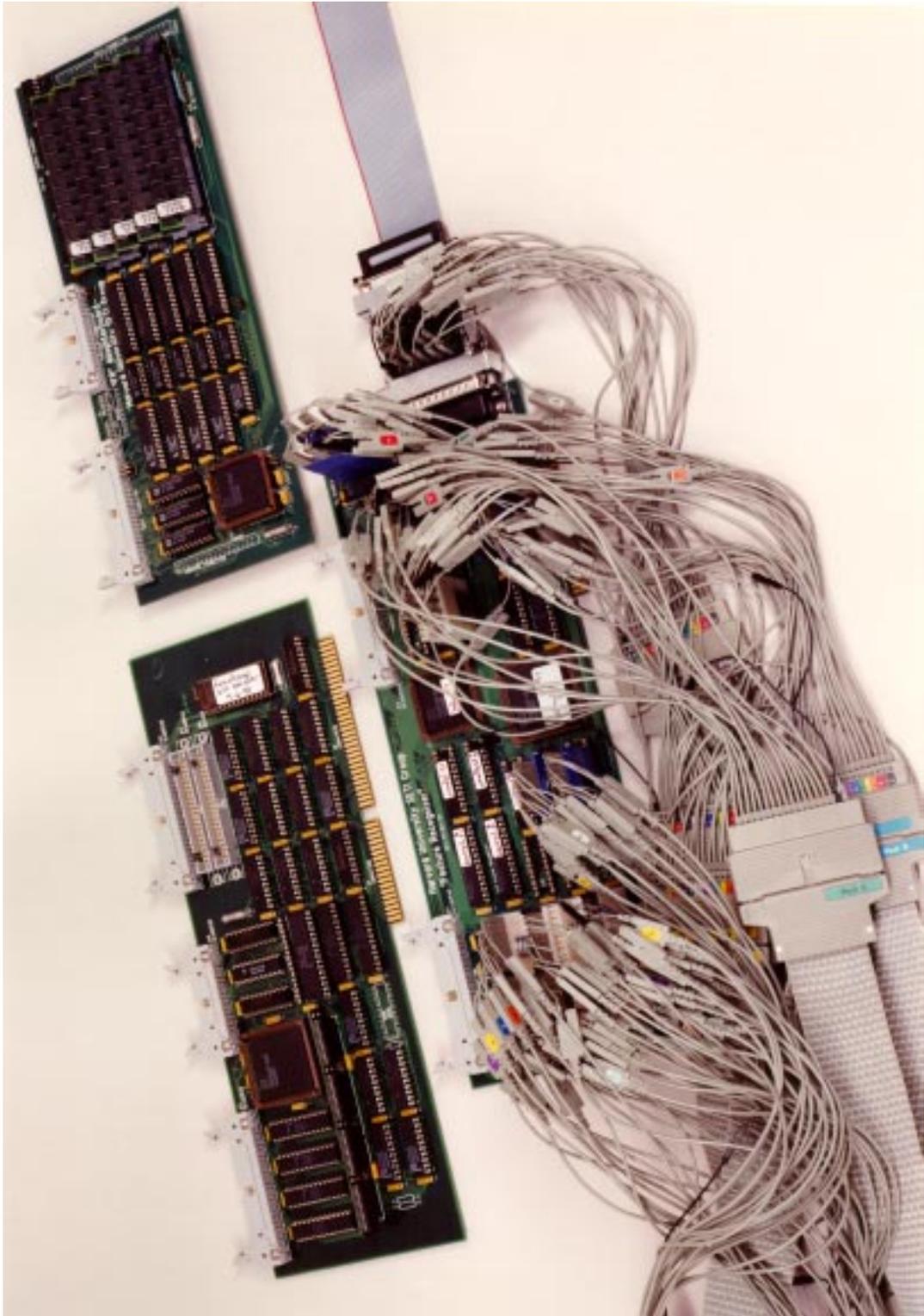


Figure H.18: A feature recognizer/feature correlator board set undergoing massive debugging on a logic analyzer.



Figure H.19: The pentium array in its rack.



Figure H.20: The *BETA* control room inhabited by the principal investigator.