In addition, a further improved spectrometer with double the frequency resolution, a polyphase-FIR filter front end, and substantially reduced noise has been successfully simulated and is presently in the final stages of development. When finished, it will offer a spectrometer developed on Virtex-5 hardware with bandwidth and spectral resolution an order of magnitude greater than the analog spectrometers presently in use.

Plans to make an 8-GHz spectrometer taking advantage of the same technology used for this device are already being made. Finally, efforts are presently being made to interface this design to a compact Nallatech board, which consumes less power and can be more readily used in remote locations and demanding environments.

This work was done by Robert F. Jarnot of Caltech and Ryan M. Monroe of Georgia Tech for NASA’s Jet Propulsion Laboratory. Further information is contained in a TSP (see page 1). NPO-48352