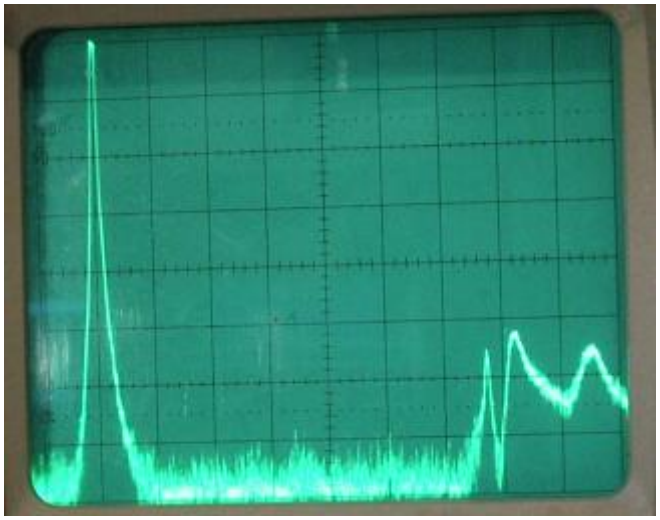
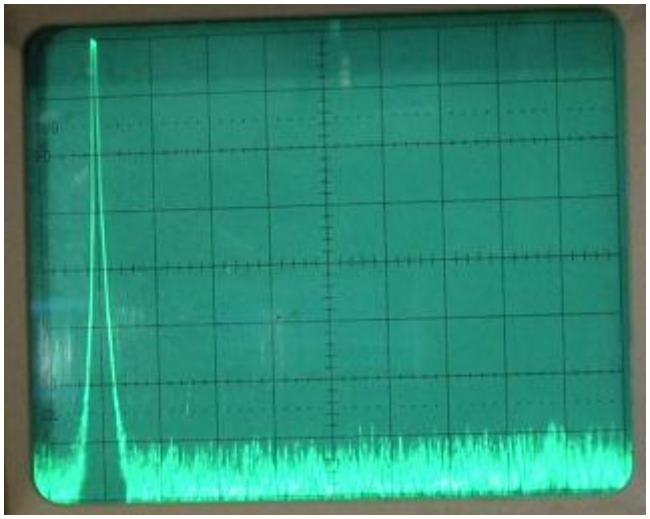
The Old versus the New -- Why bother with the new one?

w7zoi, 15May11

I recently measured the most recent bandpass filter (built in 2010) and the original filter used in the 1998 QST Spectrum Analyzer. The measurement was done with a spectrum analyzer and tracking generator that tune a bit beyond 500 MHz, an instrument that was not available for the design of the 1998 QST SA. The two filters have nearly identical response at 110 MHz, but the new filter is much better in the UHF stopband. These measurements scan from 60 to 560 MHz.



This is the result obtained with the **old** filter. The junk at the right results from a filter construction without shields between resonators. An auxiliary low pass filter cascaded with the bandpass should eliminate these spurious responses.



Here is the response measured with the **new** filter. None of the UHF feedthrough is evident, even though no lid was included with this filter. The extra low pass filter should not be needed with the new bandpass circuit.

Click on your **"back"** button to return to the detailed filter description.