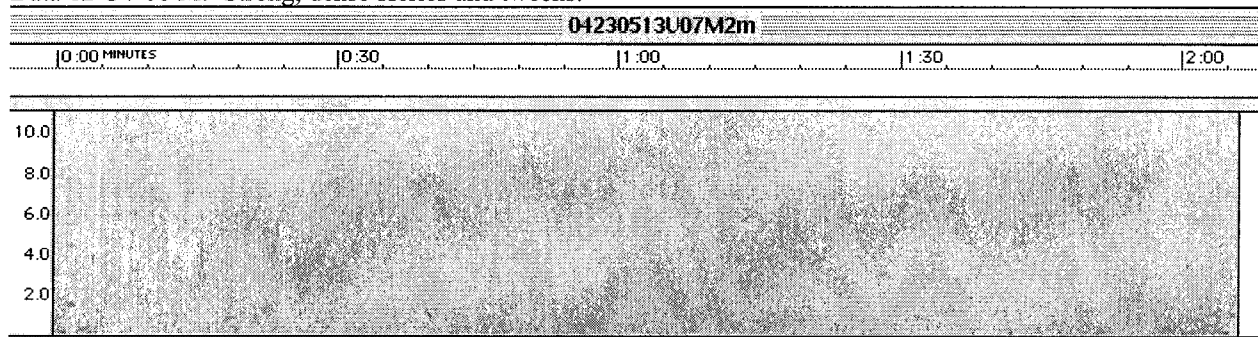
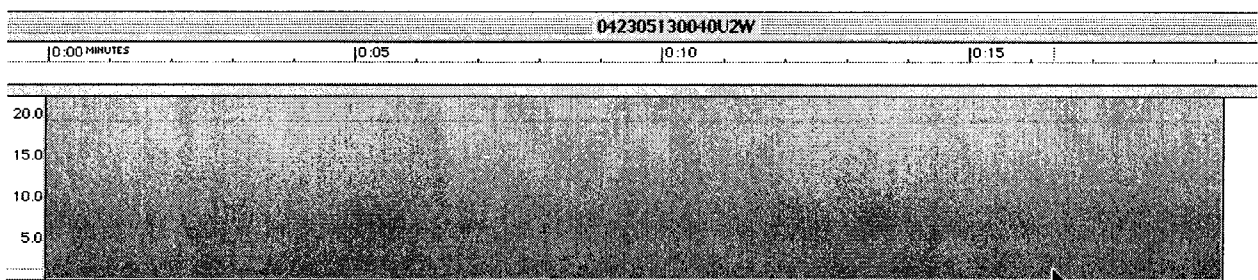


Data 12 U / 06 M. Strong, dense sferics and tweeks.

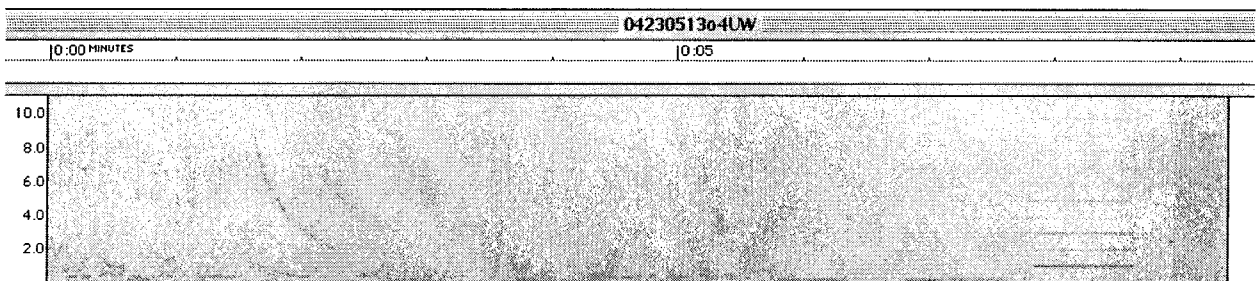


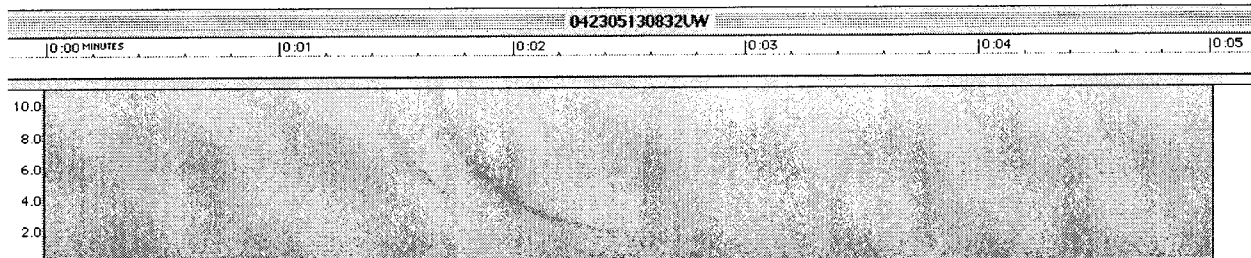
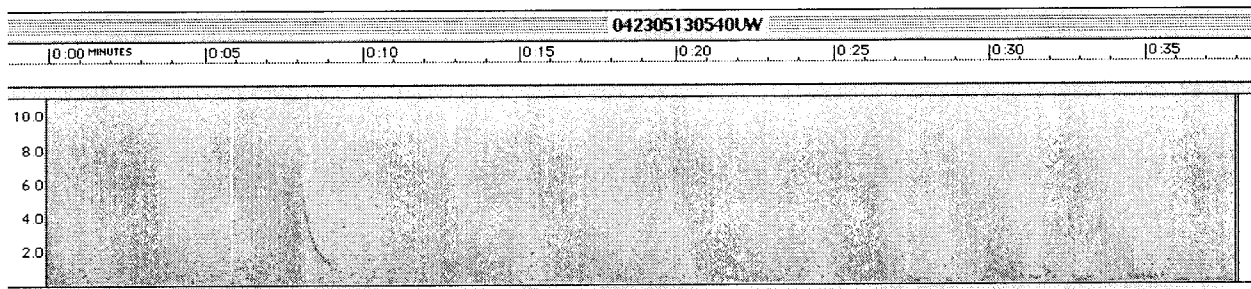
Data 13 U / 07 M.

Whistlers from this session. (Note the time in the filenames.)

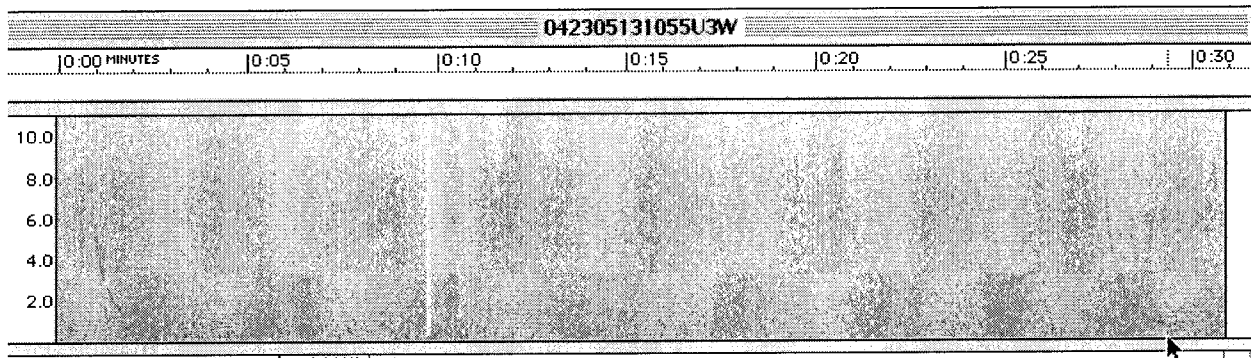


2 whistlers. The first is at :02 seconds; the second is at the arrow.

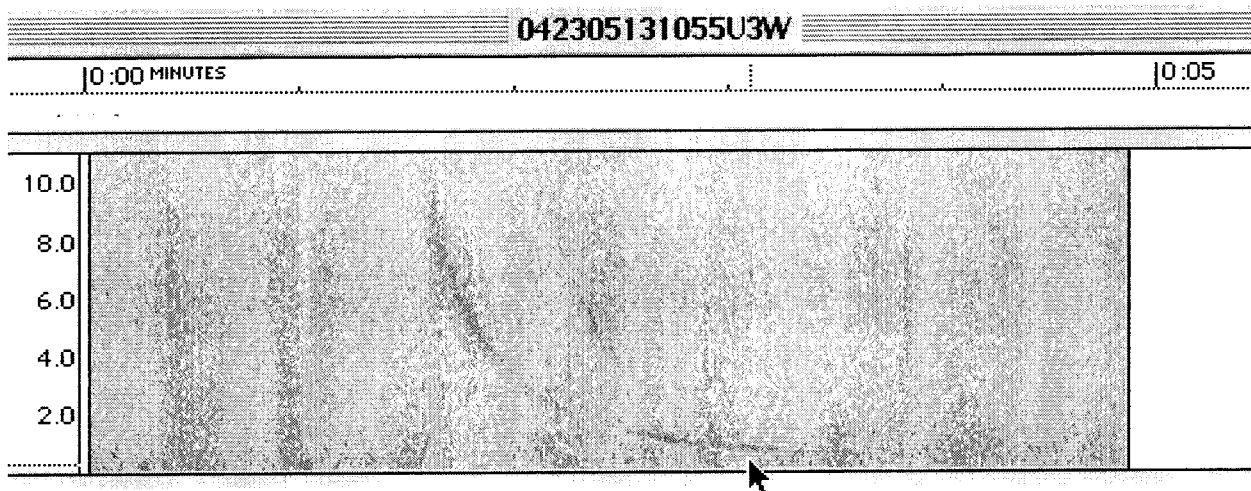




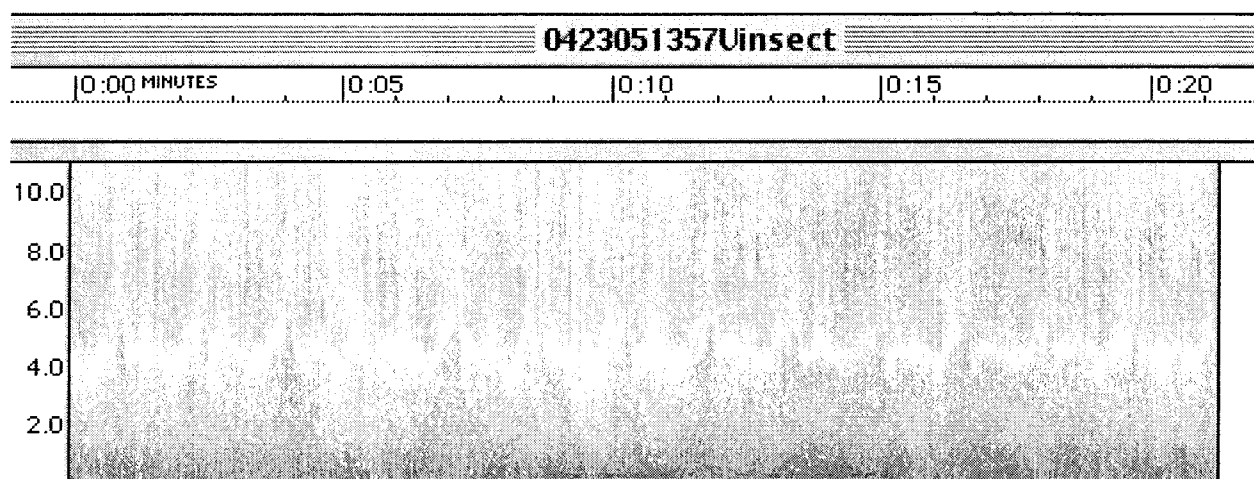
Double whistler.



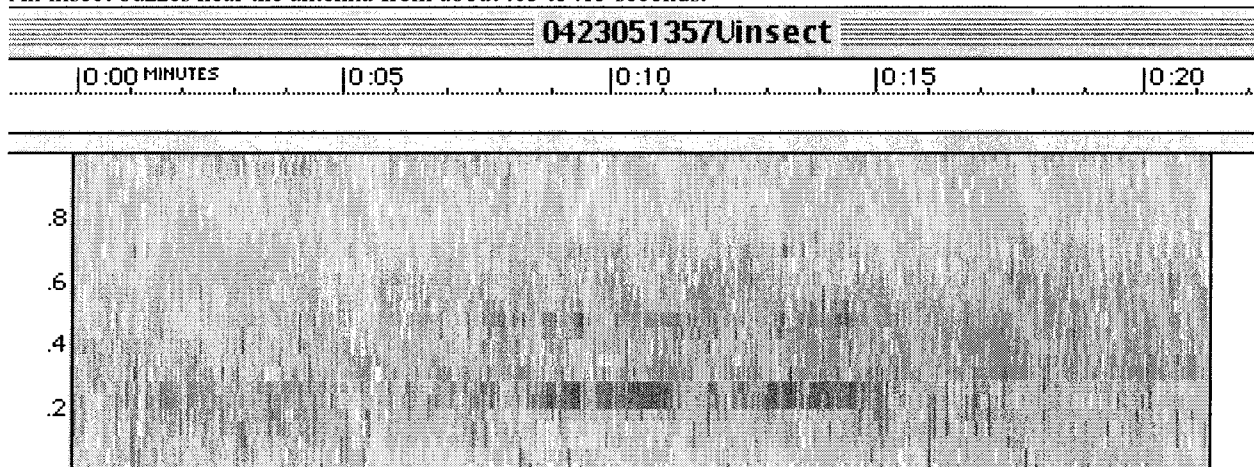
Single W at :01 second and a double whistler (two separate whistlers at the arrow).



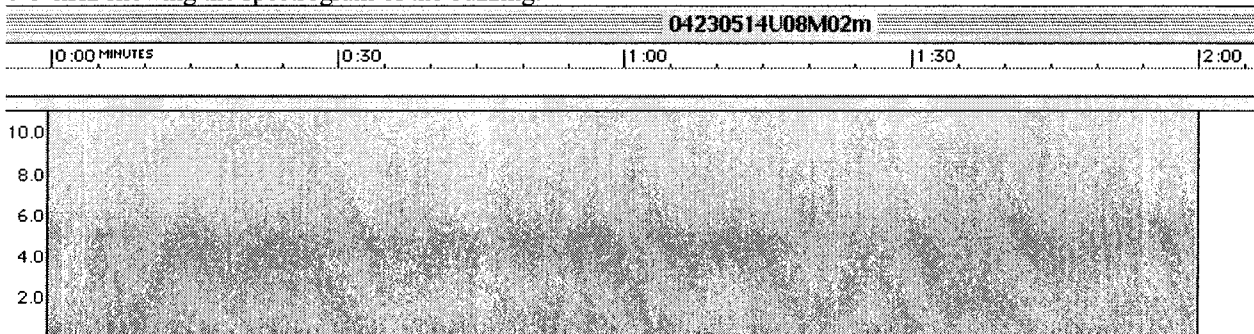
A closeup of the double whistler. Notice that the dispersion (slope) is similar for the two indicating two separate whistlers rather than an echo of the first whistler.



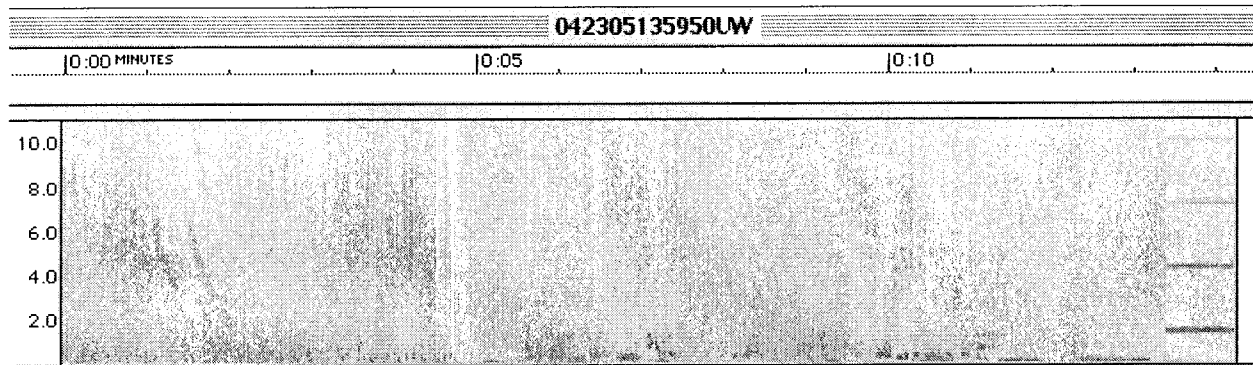
An insect buzzes near the antenna from about :05 to :15 seconds.



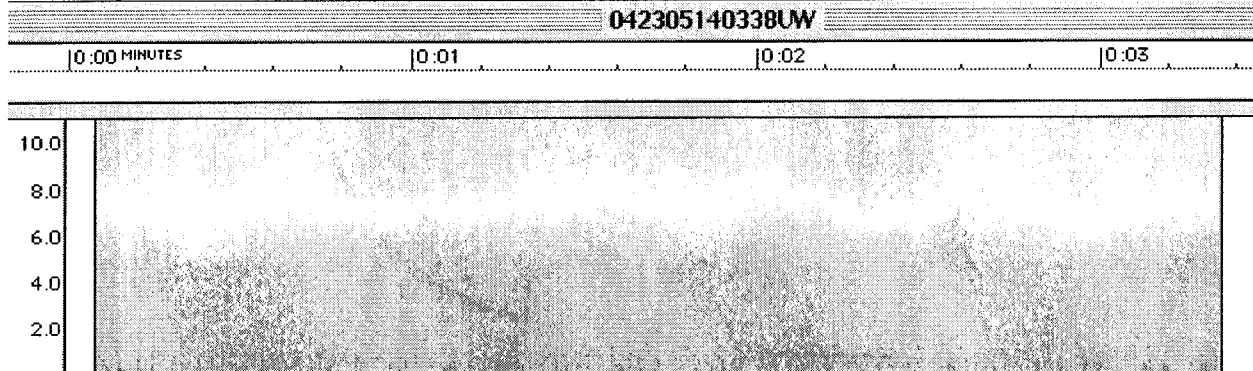
0-1 kHz showing the spectrogram of the buzzing.



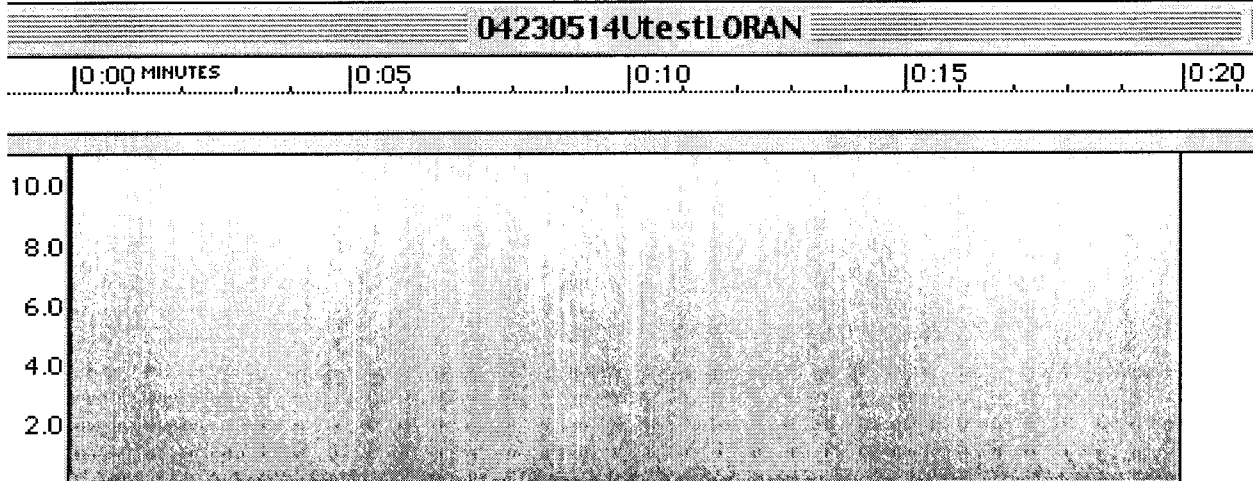
Data: 14U – 08 M



Whistlers just before 1400 UT. The WWV tone for 1400 UT appears at the end of the spectrogram.



Whistler.



Strong LORAN signal. LORAN appears on the spectrogram as horizontal rows of dots. On tape it sounds like rapid clacking.

21 August 2005 Monitoring

On 19-20 August I visited Albuquerque to attend an Amateur Radio meeting. I decided before I left home to detour to a quiet place on my way home on Sunday 21 August for some natural radio monitoring. I planned to monitor only Sunday morning as August is our monsoon season and it rains almost every afternoon.

I decided to monitor along an isolated rural road called Quebrades Back Country Byway and continue monitoring along the El Camino Real Scenic Trail. Both of these “roads”, if one can call them that, are little more than dirt trails through the mountains. For my first monitoring session, I selected a site on top of a high hill with a scenic view of the Rio Grande valley and the town of Socorro. The river and town are about 20 miles from the monitoring site. The site elevation is 5100 feet. The following photograph shows the view from the site. I started recording at about 11 AM. The site was very quiet. I didn’t detect any Loran and 60~ hum was almost undetectable. I noted that sferics and tweek levels were much higher than I normally observe in the daytime.

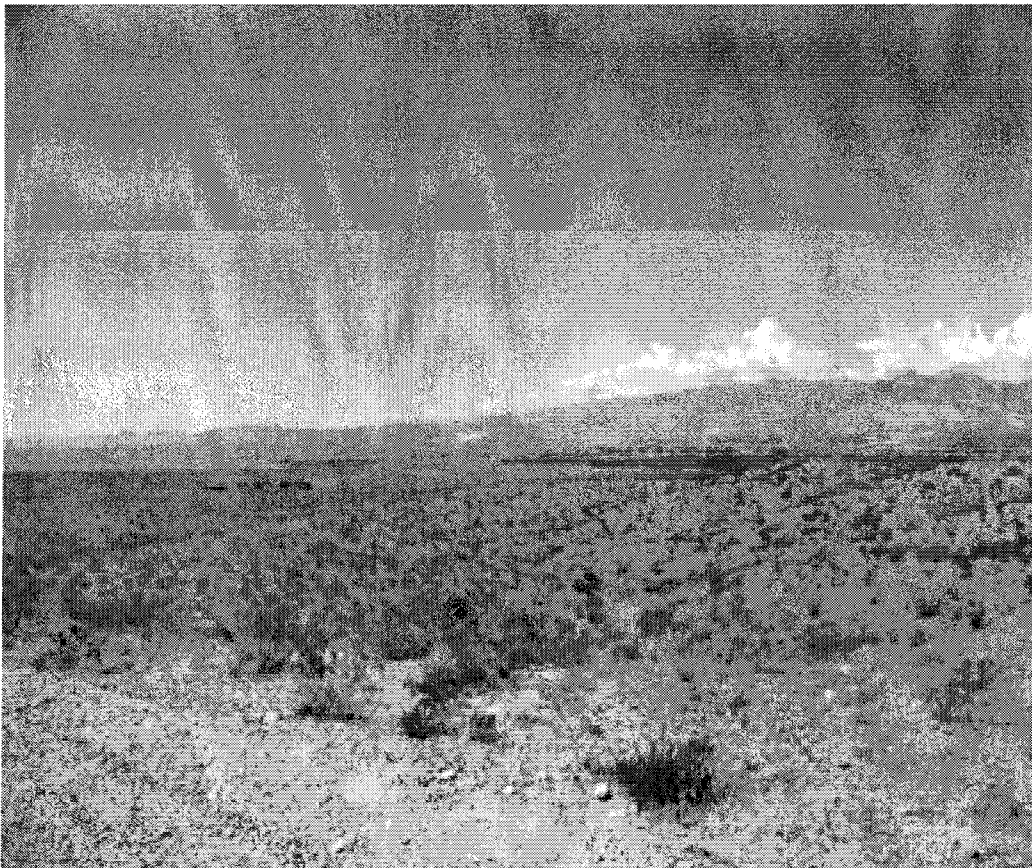


Figure-3. View from the first monitoring site looking West.
The Rio Grande valley is the green patch at the foot of the distant mountain.

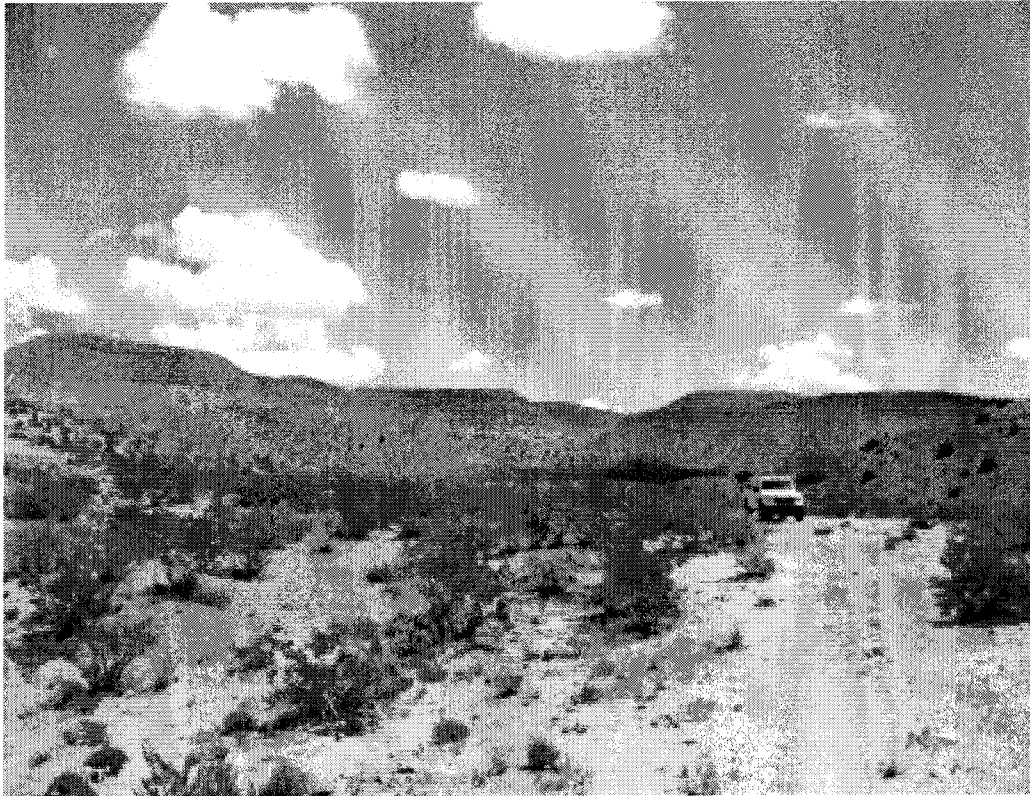
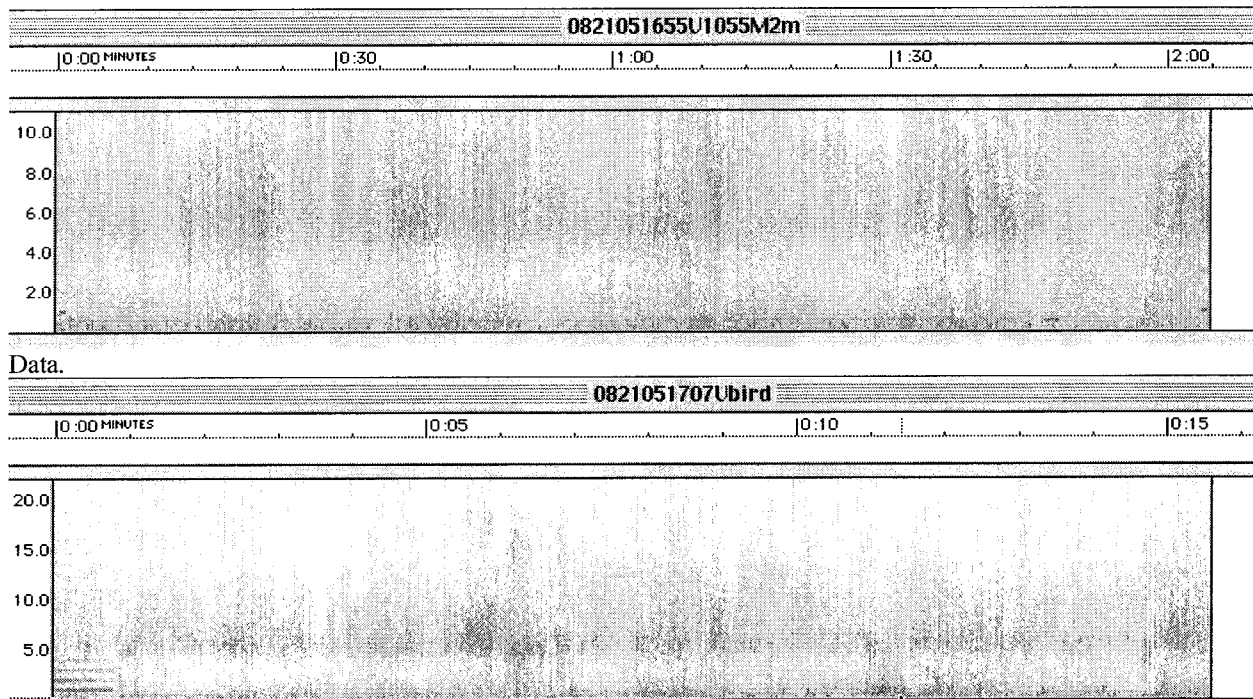


Figure-4. Photograph of the road that I drove over to get to the first two monitoring sites.



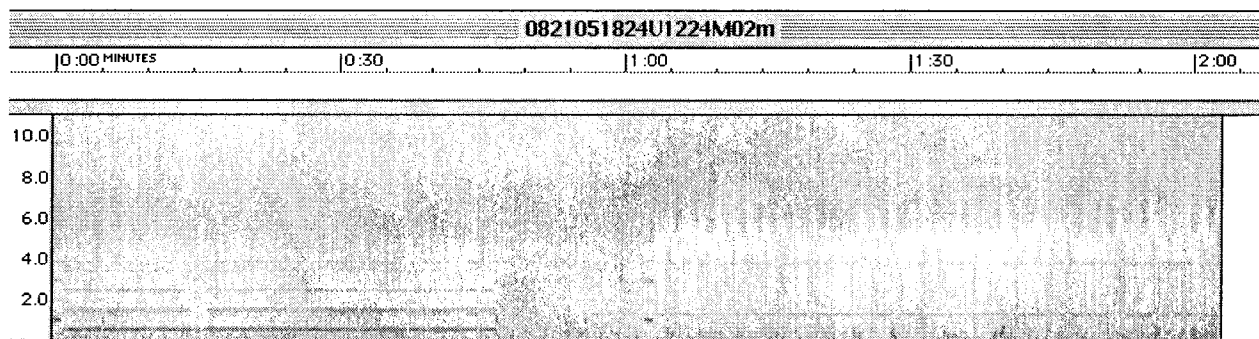
Bird hitting the antenna (arrow).

For my second monitoring session, I selected a site in a valley surrounded by mountains. This site was about 5 miles from my previous site. The elevation was 4850 feet. A photo of the

site follows. I started monitoring at about 12 noon. I was surprised to find that the second site had higher levels of sferics and tweeks than the first. Also, the weak 60~ hum I noted at the first site had disappeared. I didn't detect any whistlers but did record many very strong static clashes from the thunderstorms visible on the horizon.



Figure-6. My second monitoring site in a valley surrounded by hills.



Data at second site. Note the WWV time mark in the middle of the interval.

It took me over an hour to reach my third selected site along the El Camino Real. However, there were now thunderhead clouds near me and lightning flashes were visible. I decided it would be a good idea to get out of the backcountry and find a good road before the rain started. So, I cancelled further monitoring attempts and started home.

I made one significant mistake during the 21 August monitoring. I underestimated how long it would take to reach the first site from Albuquerque. I planned for an hour and a half and expected to arrive around 9 AM. It took almost three hours!

21 October 2005 Monitoring

This natural radio monitoring occurred during a campout in the Cibola National Forest. The area I chose for the campout is located at a primitive campground in the San Mateo Mountains. The site is located about 30 miles northwest of Elephant Butte, NM.

I arrived at the campground (if one can call it a campground) about 1300 local time (MDT) on Friday afternoon, 21 Oct 2005. I spent the next several hours setting up my camp, hooking up radio equipment and deploying antennas. I deployed not only a natural radio antenna but also a 500 foot long Beverage antenna for DXing and a two-meter amateur antenna for emergency communications.

Camping conditions were ideal. There was no wind to contend with, daytime high temperature was 72° F and nighttime low temperature was 36° F. The elevation of the campsite was about 7000 feet MSL. The next two pictures show my camp and a view toward the east.

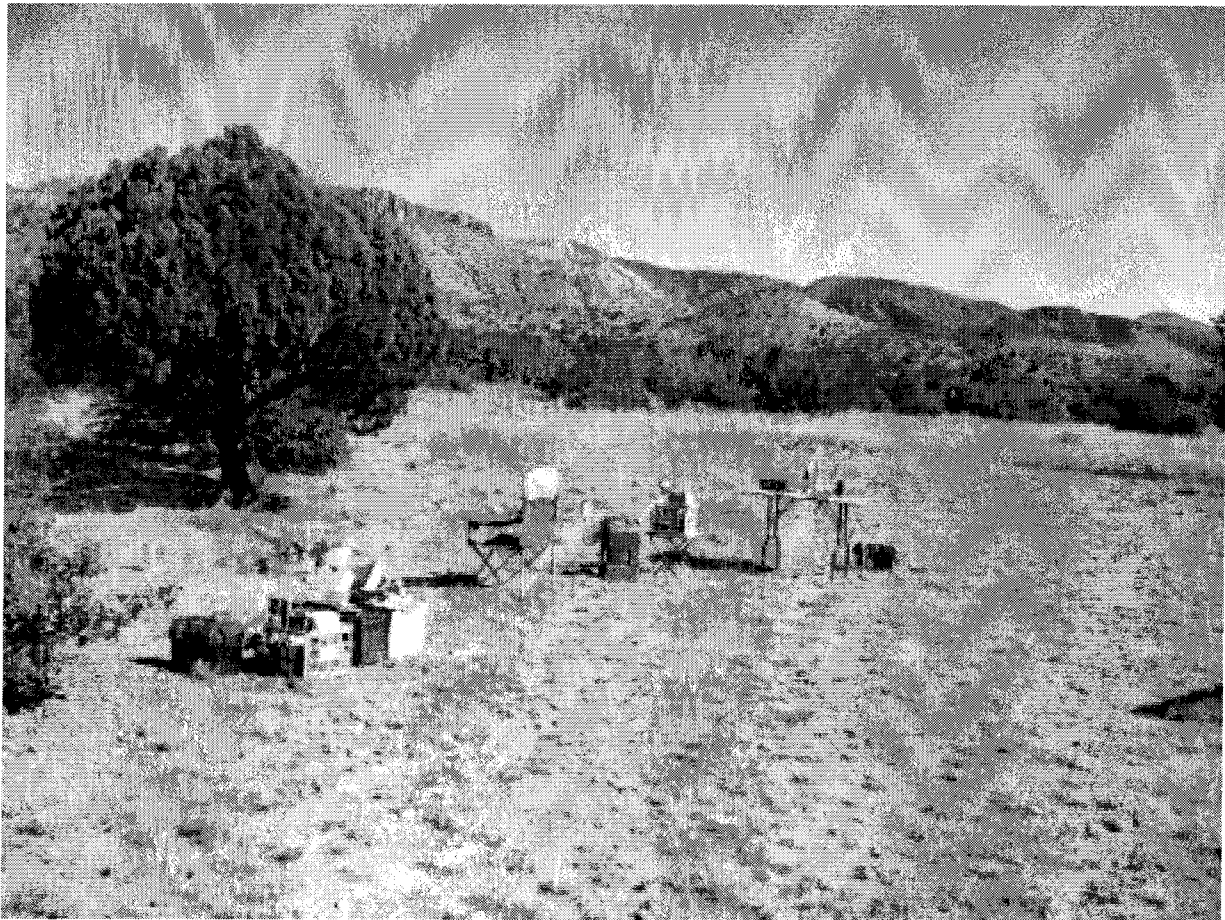
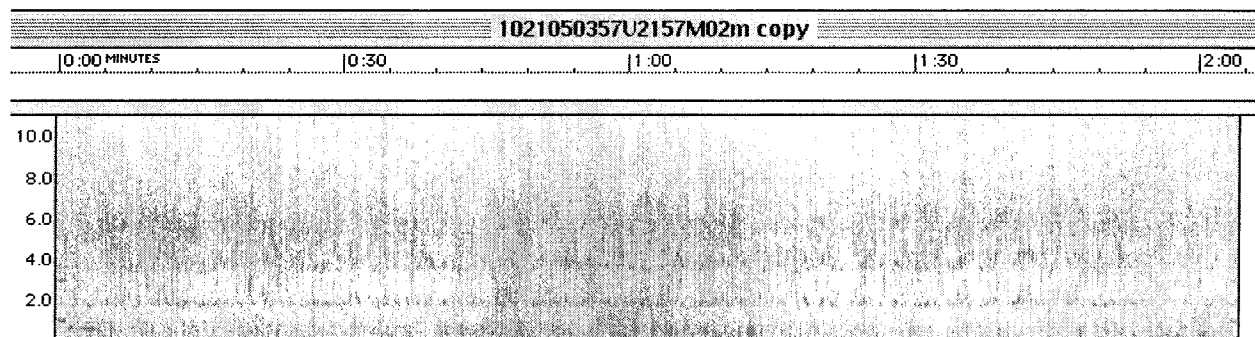


Figure-7. This is a picture at my campsite looking toward the north. My radios are set up on the table and powered by a 12-Volt deep cycle battery (the black object on the right of the table).



Figure-8. This is a picture from my campsite looking toward the east.
The mountain range in the distance is on the White Sands Missile Range.
This photo was taken late in the afternoon just before sunset.
The road to the camp site is the trail between the two mountains.

My first natural radio monitoring session occurred Friday night at about 2200 MDT (0400 UT on 22 Oct.). I did not detect either LORAN interference or 60~ hum. No whistlers were detected but the tweeks were intense and frequent. The general sferics level was high to very high.



Data from first session on Friday, October 21. Dense, strong sferics and tweeks.