

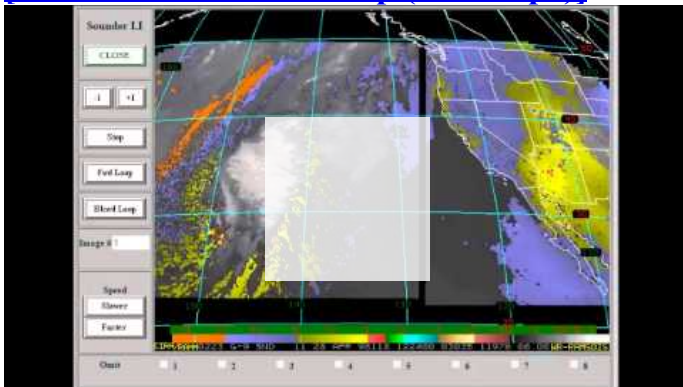
Using GOES-9 Sounder DPI to Monitor Pre-Convective Environment on 28 April 1998

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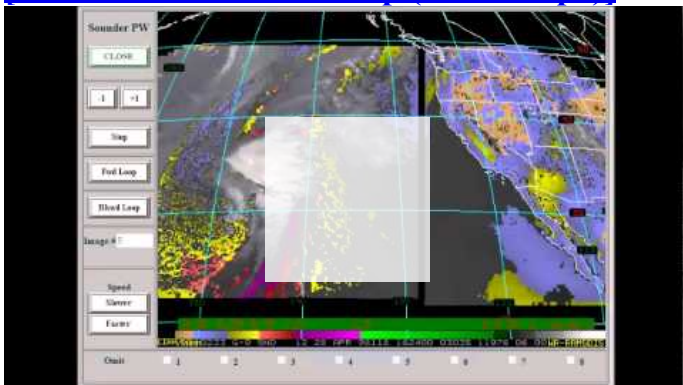
WR-SSD

GOES-9 sounder DPI (derived product imagery) can be useful to monitor the pre-convective environment. On 28 April 1998 the sounder LI DPI and PW DPI were used to determine where convection was likely to form. **The sounder LI DPI loop** (see video below) from 14Z through 20Z (remember that the LI and PW DPI are made from 2 sectors with the time stamp for the combined image coming from the Pacific sector, the sector over the western U.S. is always from the top of the next hour, so 1324Z includes the 1324Z Pacific sector and the 1400Z western U.S. sectors) shows that at 14Z an area of greater instability is in place in central AZ and southeast UT. By 16Z this area expands, especially to the northwest so that there is an axis of more unstable air from southeast UT to northwest UT. By 20Z the destabilization has continued to the point that much of UT has LIs below -3°C . The time trends and spacial distribution of values of sounder LI DPI should be used more than the actual values since the actual values may be off by a couple degrees. **The sounder PW DPI** (see video below) loop shows that the Great Basin area is rather dry (PW of about $0.25''$) at 14Z. There is an axis of higher PW ($>0.25''$) from southeast UT to northwest UT. The PW generally increases through the day so that most areas in the Great Basin are above $0.25''$ by 20Z. So there is quite unstable air present in southeast to northwest UT and limited moisture. Convection would be expected to form in southeast UT and then spread north and west. **The 4 km VIS loop** (see video below) with lightning data shows that convection did initiate in southeast UT and northeast AZ at about 19Z and spread north and west after that time.

[\[The sounder LI DPI Loop \(SNLi.mp4\)\]](#)



[\[The sounder PW DPI loop \(SNPW.mp4\)\]](#)



[\[The 4 km VIS loop with lightning data\]](#)

