The ATOC Group is:

\[ \text{ATOC (red), TOPEX (green), 0-400 m XBT heat content (black)} \]

World of a climate signal of order 0.01 °C/yr and high wavenumber (mesoscale) noise of order 1 °C rms, some spatial low-pass filtering.

Acoustic Thermometry of Ocean Climate (ATOC) project (The ATOC objective maps of °C).


California source was turned off in Fall 1998 after intermittent. The California source was turned off in Fall 1998 after.

Although we are seeking to extend the timeseries of these areas north of Hawaii has greater thermal variability than the Califor-

While the XBT and acoustic data have similar amplitude of

Northeast Pacific Ocean. Acoustic paths to the various SOSUS and vertical-line array heavy lines are those for which ray travel time data have been derived. Paths noted by light.

The temperature timeseries derived acoustically from paths are compared to the ATOC temperature measurements in the pan-

els above. The data obtained on the paths emanating from Califor-

The acoustical sampling must be considered in the interpretation of the temperature measurements. The ray paths associated with resolved ray arrivals for acoustic transmissions from Kauai to receiver D located near Central California are

A comparison of line-integral and point data. (a): The ATOC array. (b): The HOT site. (c) Consider a 100 m X 1 m X 1 m column of water ;

Midway along northerly acoustic paths, fluctuations for a 3250-km Propagation Experiment

The error map calculated using data obtained from both the Pioneer

Seamount and Kauai acoustic sources. The error map

uncertainty, but the uncertainty of the average along an acoustic path is much smaller. Because the ray paths

Oscillation, with the Central Pacific variability out of

phase with the variability in the Gulf of Alaska and along

the West Coast of Washington. The temperature anomaly patterns associated with the Sea Surface Height (cm)

Sea Level RMS Annual Cycle Removed

4. More work is needed to reconcile the acoustic and altimeter data on these Hawaiian paths is not obvious, e.g. some of the thermal variability observed acoustically and altimetrically are comparable in magnitude to the signal observed in

A Test of Basin-Scale Acoustic Thermometry using

in the Eastern North Pacific

Average of high-resolution, along-track altimeter data (below)