Ocean Acoustic Tomography Experiment Using a Vertical Array

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An acoustic tomography experiment, supported by European MAST contracts, has been carried out in the all occidental Mediterranean sea. During 10 months in 1994, acoustic phase shift keying signals have been emitted at a pulse rate of 1 per 4 hours and received by seven sources-receivers localized in the all basin and spaced by several hundred kilometers.

In addition, signals from two of these sources localized near Corse and Sardinia were received on a vertical array moored at 800m depth near Nice. So, it means a joint assessment of arrival angles and times of acoustic signals and a useful improvement in general problem of identification of acoustic paths.

Signals received on 16 hydrophones of this 40 meters long array were recorded and processed to extract propagation time and arrival angle of each ray path. This paper reports the results of the analysis of these last data records and discuss observation of wave fronts at each hydrophone depth, tractability, and study of arrival peaks as a function of time and angle.

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