VESSEL:	Research Launch 'Labrax'
CRUISE PERIOD:	27 October 1980
LOCATION:	Southampton Water
PERSONNEL:	Dr K R Dyer Mr E J Moore
OBJECTIVES:	To use a high frequency echo sounder to investigate internal waves in Southampton Water to establish whether or not they are caused by lateral seiching, and to estimate their wavelength.
PROCEDURES AND METHODS:	A 200 KHz Raytheon echo sounder was set up and tuned to receive maximum backscattering from within the water mass. Salinity and temperature profiles were obtained while the echo sounder was recording, to determine whether the backscattering was correlated with the position of the halochine. This was carried out on several positions across the estuary about half way between Hythe and Fawley. Repetitive traverses across the estuary were also carried out so that temporal and spacial variations of halocline depth could be monitored. Measurements were obtained during the end of the flood tide, over the high water stand and at the beginning of the flood on a spring tide. Position fixing was carried out by horizontal sextant angles from known shore marks.
EQUIPMENT PERFORMANCE:	The echo sounder performed well. The sensitivity was set at its maximum and might need more amplification if further studies are carried out. The narrow beam transducer was non functional.
RESULTS:	Good results were obtained despite a SW wind gusting Force 9. Variations in backscattering were observed on the echosounder which appear to correlate with the thickness of the less saline surface layer. There was a consistent pattern of thickness variations across the estuary which appeared to slowly change with time.
ITINERARY:	26 October (Evening) KRD and EJM travelled to Southampton in official vehicle. 27 October 0830 loaded equipment onto launch Labrax. Carried out echo sounding traverses. 1700 Returned to Southampton. EJM returned to Taunton with equipment. KRD proceded to meeting at IOS Wormley.

Report prepared by: Keith Dyer K R DYER

Approved by: Keith Dyer K R DYER

Date: 22 December 1980