

# Chapter 14. CURRENT AND WATER PROPERTY MEASUREMENTS IN THE COASTAL OCEAN

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## 1. Introduction

The measurement of currents and water properties is of great importance, but few comprehensive reviews have been written. Many of today's current measurement techniques were either described or anticipated nearly 15 years ago (see, e.g., Dobson et al., 1980). Since then, significant improvements have been made in sensors, electronics, computers and positioning and telemetry systems. Extensive testing, increased availability and utilization have contributed to improved systems, many of which utilize portable computers. In addition, higher-frequency sampling and longer deployments are possible. The greatest progress has been realized in the development of new bio-optical, acoustical and chemical sensors and systems, several of which can be interfaced with current measurement devices (e.g., Dickey, 1988, 1990, 1991, 1993a,b; Dickey et al., 1991, 1993a,b,c, 1997; Dickey and Siegel, 1993).

Information relevant to the selection of instrumentation for different applications and some key intercomparison studies are presented. We have attempted to provide a reasonably thorough review, but omissions were unavoidable. In particular, detailed