

Abstract

The current system east of the Ryukyu Islands has been called the Ryukyu Current System (RCS) to express its possibly different origins and features. In this paper, we presented a new feature on the vertical structure of the current system by using lowered acoustic Doppler current profiler (LADCP) data in early October 2005; a southwestward countercurrent was demonstrated to flow near the eastern slope of the Nansei-Shoto (Ryukyu Islands) Ridge in a layer deeper than the northeastward current core of the RCS. This supports the existence of the countercurrent suggested by Nagano *et al.* (2009). The maximum speed of the countercurrent was measured to be 25 cm s^{-1} at a depth of approximately 600 m.