



Horizontal and overturning circulation at 32S in the Indian Ocean

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The transindian 32S section (occupied in March/April 2002) and inverse methods have been used to derive a full-depth circulation at this latitude. The overturning circulation of the preferred solution is 9Sv at 3300m. The silicate constraint of -312 kmol/s (important in determining our solution) is set to balance the input to the Indian Ocean through the Indonesian throughflow. At 32S this silicate flux is contributed to almost equally by the overturning component and the horizontal component. The majority of the horizontal silicate flux occurs in the deep water. The presence of the horizontal circulation that facilitates this silicate flux is supported by the ADCP and chemical data collected on the cruise as well as data from the ARGO float program.