General Comments

Data analysis is an artful component of oceanographic research and in this paper Banse et al., have demonstrated that the existing set of observations in the Arabian Sea contains a wealth of information required to clarify several features – that are little or partly known - of the oxygen minimum zone (OMZ) in the Arabian Sea. The authors have ploughed through each of the profiles and extracted useful information, justifying the validity of the inference drawn at every stage. The important finding of this paper are the seasonal changes in the OMZ and the decrease of O2 at decadal time scale. This paper, despite it struggles through the accuracy of sparse historical data set, would be a valuable addition to the existing literature on the OMZ of Arabian Sea. Some suggestions for improvement, particularly with younger readers in mind, are given below.

Specific Comments

Pg. 15472: L 15-20: The inference drawn here regarding the residence time is not approriately justified. I would like to see this argument justified in a bit more detail. Note that Fine et al. (1998) found the ventilation age of Indian Ocean waters to be of about 30 years. In the introduction (pg. 15457, L 10) it is simply stated that the authors prefer to accept a shorter-time scale. Why?

The result that the seasonal variation O2 is significant is in departure from results based on deSouza et al., 1996 and Sarma, 2002. deSouza et al., found that using JGOFS data that the O2 concentrations were lowest during winter. In contrast Base et al. Have noted that the (pg 15479, line 25) that the NEM and SI exhibit highest O2 value. What is the reason for this contradictory results?

Pg. 15488, L 10: Figure 3. Is it possible to conclude from this figure that advection during SWM and SI are significantly higer? Both blue and red dots appear to be present withing the same T-S ranges. The isopycnals are not clearly visible.

Pg. 15484. L 15. There is not enough data to show that the interannual variability may be substantial. From the data that is available is hard to seperate seasonal changes form interannual.

Pg. 15488. L 5. The sentence beginning with “Any time series ...” lacks clarity. A time series data set will only proived local change. Estimation of spatial gradients are necessary to compute total rate of change.

Finally, I would recommend including a summary of the main results of this paper; they are presently scattered in many sub-sections.