

## ***Interactive comment on “Analytical approach for determining the mean water level profile in an estuary with substantial fresh water discharge” by H. Cai et al.***

**B. Guo**

binguo1983@126.com

Received and published: 13 October 2015

Thanks for addressing my concerns from the authors. According to the authors, it still seems that the paper just applied an existing analytical model proposed by Cai et al. (2014). Furthermore, the authors did not think the South Branch and the North Branch were considered as an entity, and cited the previous studies of Zhang et al. (2012) to support their points. However, Zhang et al. (2012) have considered the South Branch and North Branch as a unity morphologically. The morphological evolution of the Yangtze River estuary was the combined results of tidal and riverine dynamic. The morphological factor also affects the interaction between tidal and riverine dynamic.

C4241

And tidal progradation in the North Branch may influence the water level profile along the estuary, and it may be particularly true for the upstream of the estuary and the dry season. In this paper, the authors didn't provided enough evidence to support their points. Therefore, the points of the authors may be misleading. And I don't think the authors know the Yangtze River Estuary well. Reference Zhang, E. F., Savenije, H. H. G., Chen, S. L., and Mao, X. H.: An analytical solution for tidal propagation in the Yangtze Estuary, China, Hydrol. Earth Syst. Sci., 16, 3327–3339, doi:10.5194/hess-16-3327-2012, 2012.

---

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 12, 8381, 2015.