

## ***Interactive comment on “Deep-sea search and recovery: with and without operating an underwater vehicle” by Tongwei Zhang et al.***

**Tongwei Zhang et al.**

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We thank the Reviewer for the comments, which have helped improve our manuscript.

The author of this manuscript provides a novel systematic framework for deep-sea search and recovery of the lost underwater target. The new recovery system includes TV-Grab, optical camera and acoustical imaging sonar, docking system. This combination can improve the flexibility and reliability of this recovery system, and this system is very useful and effective for the small lost underwater target.

**Response:** We thank the Reviewer for his overall positive assessment of our work.

There is one point for attention. For your docking/grabbing system, what is the maximum weight for lifting a lost target? This is a very important factor for whole systematic

design, but this manuscript did not discuss it. Please add some comments.

OSD

Response: We thank the Reviewer for this comment. The maximum weight for lifting a lost target mostly depends on the armored photoelectric composite cable. In the revised paper, we explicitly state that: "Most TV-grabs can sample up to 1000 kg or more at a time (Clark et al., 2016)." (Page 8, L9–10). Furthermore, as mentioned in Page 2, L29–30, "Most salvage objects do not weigh very much in water (<1000 kg)." Hence, in the revised paper, we explicitly state that: "The maximum weight of the new deep-sea recovery system for lifting a lost target is 1000 kg in water." (Page 8, L16–17). "Clark, M. R., Consalvey, M., Rowden, A. A.: Biological sampling in the deep sea, Wiley-Blackwell, New Jersey, 207-227pp., 2016." has been added to References.

By the way, language for the whole manuscript is needed to improve.

Response: We thank the Reviewer for this comment. The revised paper has been edited by Editage [[www.editage.cn](http://www.editage.cn)] to improve the level of English.

Please also note the supplement to this comment:

<https://www.ocean-sci-discuss.net/os-2018-88/os-2018-88-AC1-supplement.zip>

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Interactive comment

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