

Interactive comment on “Technical Note: A low cost Unmanned Aerial Vehicle for ship based science missions” by E. Waugh and M. Mowlem

jwb Bailey (Referee)

jbailey@whoi.edu

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Overall, I think this is a great paper. The demands of operating a small aircraft at sea in high winds is especially challenging. I think the authors concept is sound and realistic. The test results show it will work in real world conditions. Great job!

As a potential user, or as one who would recommend this platform, I'd like some more information about the aircraft and its control system.

1) You don't say what type of power plant is installed. I suspect it must be a 4 stroke gas engine given its range and its inability to operate in very cold conditions. I'd like to know how much vibration to expect. Have you addressed this issue? Have you measured it?

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2) You talk briefly about the flight control system. I'd like to know if the auto pilot capable of line following between way points. In high winds, just traveling from way point to way point can make a track that's shaped like a question mark. What flight data is available to be logged with the payload data? e.g. altitude, heading, attitude, position, etc. What is the range of the ground control station?

3) The concept of a sealed and protected fuselage carrying the autopilot and payload is a good idea. I suspect it's padded to protect against shock. Does this pose any heat build up problem? What are the approximate internal dimensions for the payload area?

4) A well engineered aerial platform can be easily shot down by regulatory red tape. Have you identified a way forward through the potential bureaucratic nightmare?

5) In section 1.1 you compared commercial systems and found them to be way too expensive. I agree. Have you looked into buying an off the shelf autopilot control system to be integrated with your airframe? Three come to mind off the top of my head. Paparazzi, Attopilot, and pico pilot. Full disclosure: I own an Attopilot.

Interactive comment on Ocean Sci. Discuss., 7, 757, 2010.