901902 - Unoccupied Aerial Vehicles for Science, Operations, and Outreach

Week 50

1. Rob McEwen
    a. Working on Believer 3 build

Week 48

1. Rob McEwen
    a. Building next UAV, Believer #3.

Week 46

1. Tom O'Reilly
    a. Reviewed results of latest test flights, planning for 2022 activities and schedule.

Week 45

1. Rob McEwen
    a. Flew the airplane at the Monterey Bay Academy airstrip. First flight was ~30 minutes and was successful. We did a catapult (ballista) launch, then did automatic self-tuning PID maneuvers. I then landed it manually. We even got aerial photographs of test patterns. Second flight again was a catapult launch. The plane then flew a lawnmower pattern completely autonomously. Then we tested the "stability" mode (for pilot flying) which did not go well.

Week 44

1. Tom O'Reilly
    a. Prepared and carried out tests of science camera mounted in Believer fixed-wing UAV; prepared calibration targets, calculated and set shutter speed to eliminate motion-blur, and analyzed resulting images of targets from overflights at 100 meters elevation - actual scale in good agreement with calculations, we can expect ~1 cm/pixel resolution at sea surface with this camera.

Week 38

1. Tom O'Reilly
    a. Working with team to plan workshop, where Bryan and Ben will bring rest of team and collaborators up to date on Believer UAV construction and configuration

Week 34

1. Rob McEwen
    a. Completed Drone License part 107 renewal.

Week 33

1. Rob McEwen
    a. Completed Part 107 License renewal.

Week 30

1. Rob McEwen
    a. Working on 107 license renewal.

Week 29

1. Rob McEwen
    a. Taking 107 renewal course on the web.

Week 22

1. Tom O'Reilly
    a. Helped team prepare abstract presentation for 2022 proposal
    b. As project manager, starting to plan tasks, milestones, resources and budget for phase 1

Week 19

1. Rob McEwen
    a. Discussing the proposal and how to restart this project.

Week 4

1. Tom O'Reilly
    a. Working with team to integrate and test science camera with *Believe*r fixed-wing UAV
    b. Working through Coursera/Stanford Machine Learning online course, which will have application to UAV image processing

Week 2

1. Tom O'Reilly
    a. Working with team on science camera integration and test
    b. Working with team to define next flight procedures, e.g. image scale calculation based on overflight of ground calibration targets