1. No mathematics provided on how data will be interpreted. The proposal did not provide any analysis of previous work, even though the proposal did provide data from previous work. While others could understand the experiment, the proposal did not provide sufficient detail to interpret the data the experiment would produce.
2. The proposal did not specifically address ground-based controls.
3. Science benefits include quantifying bubble draining as a function of surfactant type and microgravity time. While the proposal alluded to practical applications, it did not connect the work with those applications.
4. There is a reasonably detailed description of the apparatus. The proposal includes a photo of the apparatus, but with duct tape, which is unlikely to be part of the drop tower experiment.
5. The proposal does not explicitly discuss the ability of the package to survive the drop, but the apparatus should have no problem with repeat drops.
6. The design will likely allow adequate data collection, but the microgravity indicator light may reduce the contrast of the white light fringes, which may compromise the data. Details about this light were not provided.
7. The device appears to be safe for drop tower operation.
8. The proposal describes how the team would conduct the experiment, but not how the data would be analyzed and the final report produced. The skills and contributions of the team members was not at all clear. The proposal described one member as having “extreme attention to detail,” but no description of how that would support the project. The proposal described another team member as having experience with science fairs, but no real description of why that experience is important, or what it would add to the project.
9. The contributions of the school and community were not described.
10. The proposal cites only 4 papers from the archival literature.
11. The 1g control experiment is conducted just prior to the drop, but it would be good to add some non-drop tests to see how the soap film evolves in 1g past the point where the drop occurs.
12. What kind of cleanup will be needed after each drop? Just window cleaning?
13. Well-organized team.
14. Well-written proposal.
15. Resource list should have been more extensive.
16. Very nice figures.
17. Figures 5 and 6 are blurry, and reviewing Figure 8 it is clear why – the camera depth of field is being exceeded. Can you move the light source so the sample is more vertical so this is less of a problem?
18. The proposal is clearly stated and showcases the work already done in this area. I think it will yield useful data.
19. I am impressed with the figures and the concepts. I also think the plan offers enough data points through image analysis to plot the changes in the films.

20. The only minor issue I see is cleaning up the experiment between drops. There will be (I think) considerable splashing about. The apparatus would also have to be realigned.
21. All in all, it is a very good proposal. Well thought out.