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Editorial/Peer Review Change Matrix

Source (*Editor, Reviewer #, or Author*)	Section	Page (old)	Page (new)	Editor/Reviewer Comment	Author Resolution or Justification
Reviewer #2	Data Summary	27	27-28	Table 8 is continued on p. 27 so continued should be in parentheses	**Resolved**: added continued in parentheses
Reviewer #2	Data Summary	26-27	27-28	Table 8 on Data Summary is thorough but does require some reformatting (realignment) of the cells.	**Resolved**: Table is split over two pages-Realigned the first column on the second page of the table to match that of the first page. I am assuming this is what the reviewer was referring to. As the two parts of the tables have a different number of columns, it is not possible to entirely get them to align without making the table off center.
Reviewer #5	-	-	-	While the paper highlights important factors to designing a propulsion system, it is not obvious to the reader the scope of a standard industry-wide approach to this practice. Perhaps the inclusion of a more defined and explicit *methodology* section would for instance educate the reader of the totality of these elements and the limit of the scope of the present study.	The methodology used for exploring the design for the BWB engine is mentioned in the paper and used throughout this study. This includes using a mission profile to determine various flight legs that have specific requirements from the propulsion system. This impacts the selection of the number, location, type and layout of the propulsion system. Design considerations including induced and wave drag, airfoil design, system design and weight and balance are taken into account. Critical mission segments including takeoff power, corresponding takeoff distances, climb rate, and reduced/de-rated power are calculated using standard industry-wide approaches. The key factors that influence the propulsion system design are taken into account. The scope and limitations are also highlighted in the conclusion section of the paper. In summary, the methodology is not summarized in one section because it is discussed and used throughout the paper.
Reviewer #5	Conclusion	30-31	34-35	While the authors of the present study provide general recommendations to the current study, I recommend expounding a little more of the limitations of the present study, their inherent effect to the results and the conclusions of the study, and recommendations to mitigate these limitation in future studies	**Resolved:** Talked about three major limitations: CFD tool, the design space being restricted to currently available engines (while intentional, this is a limitation), and finally advances in materials rendering conventional system design weight formulas less effective. Discussed how these effect results, and potential resolutions in future studies.

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Reviewer #5	Aircraft Design: Airfoil Selection	10	10	Justify "the choice of "0 degrees" and "5% fuel" and calculating the lift distribution. "	**Resolved:** The following justification was added: "This requirement is used to prevent the aircraft from having to pitch downwards near the end of the cruise portion of a flight, after most fuel has been consumed and mostly just the reserves remain. "
Reviewer #5	Takeoff Speed	16	16	Justify "lower bound' value of 2 is used (and not 2.5)."	**Resolved:** The following justification was added: "We shall use the lower bound of 2, as it is preferable for the calculated takeoff distance to be slightly larger than the actual distance rather than the other way around, due to constraints on the runway length. "
Reviewer #5	Engine Data & Selection	22	23	provide some examples of the "…(1970's) era engines…"	**Resolved**: Added two examples and a bit more clarity to the section overall
Reviewer #5	Initial Design of the Blended Wing Body	6	6	provide some examples of literatures referenced in "…previous designs in literature".	**Resolved:** Examples given and a bit more detail on what information was used from previous designs in literature provided
Reviewer #5	Multiple	-	-	Edit tables to APA formatting	**Resolved:** Header columns centered and vertical lines removed
Reviewer #5	Initial Design & Data Summary	6 & 26-27	6, 27-28	Double check whether some tables (such as 2 and 8) require referencing and citation	**Resolved**: Citations added to multiple tables
Reviewer #5	Multiple	-	-	Could you confirm if the "cantilever" and "tube and wing" are used synonymously in this paper, and if so, choose one for uniformity	**Resolved**: Yes, it was used synonymously. All instances of "cantilever" replaced with tube and wing except for a single instance in the introduction, which reads, "The first fifty years led to the eventual rise of the cantilever, "tube and wing" design so commonly seen today …"
Reviewer #5	Multiple	-	-	Similar to point three above, the words "aircraft" and "airliners"	**Resolved**: "airliners" replaced with "aircraft"
Reviewer #5	Literature Review	1-5	*1*-5	Confirm multiple in text references citation are ordered property (alphabetically).	**Resolved:** Fixed where it occurred
Reviewer #5	Literature Review	1-5	1-5	Correct all first-time in text citation with multiple authors "… et al., …" to make sure they list all authors.	**Partial Resolution & Justification**: Fixed in any case with 3-5 authors. Two papers cited in this paper (Qin et. al and Ko et. al.) had 6 authors, and according to this source in APA all authors need not be listed in that case, even first-time: https://owl.english.purdue.edu/owl/resource/560/03/ However, if still the change is requested I will go ahead and make the change for those two in text citations as well.

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Reviewer #5	Multiple	-	-	Correct the inconsistent use of acronym BWB and its full wording (after the initial definition) in the paper	**Resolved**: Replaced full wording with acronym after initial definition
Reviewer #5	Weight Estimation	7	7	Page 7, last paragraph: complete the citation "According to Kroo, …".	**Resolved**: In-text citation completed
Reviewer #5	Data Summary	26-27	27-28	Page 28: Table 9 titled as table "8"	**Resolved**: it should have read Table 8 (continued); was not a separate table (see very first item in change log)
Reviewer #5	CFD Analysis	25	26	The sentence starts with acronym "CFD".	**Resolved**: now reads "Computational Fluid Dynamics (CFD) analysis was used to …" instead of "CFD was used to …"
Reviewer #7	Multiple, mainly Data Analysis	28-30	21-23, 29-34	To present the findings clearly, please plot graphs such as L/D, SFC, T/W, take-off run, MTOW variations of engines.	**Resolved:** Plots added for L/D, SFC, T/W, Takeoff, Weight (Both Empty & MTOW), and Climb rate. Most graphs added to data analysis section, graphs on Takeoff Distance and Climb rate added in section where engines are finalized.
Reviewer #7	Literature Review	1-5	1-5	Please extend your literature survey and include recent studies related to the topic	Due to the somewhat unconventional propulsion system design conducted in this paper (namely, utilizing existing engines and examining integration), not many papers were available to build from, beyond the rather broad ones that provide more general information on BWBs and were published many years ago. Most recent papers, especially those on propulsion, focus on more specific topics such as Boundary Layer Ingestion rather than the overall integration of the system into the aircraft. (I did mention BLI in my literature survey, but did not design the system with it. I briefly discussed its implications for the results in the conclusion section). Remainder of the changes suggested, however, have been implemented.
Reviewer #7	Multiple	-	-	Please define acronyms, symbols and similars where it is appropriate in the text even if it is a standard representation.	**Resolved**: Fixed for T/W, MTOW, L/D, and in various equations where errors were found. The first use of any of these terms is followed by the acronym. If any remain please let me know
Reviewer #7	Multiple, mainly Data Summary	26-27	27-28	Please check units of quantities in text and tables. It is better to indicate the unit at header of the column instead of unit with quantity in cell. See Table 8.	**Resolved**: Fixed for Tables that needed it (specifically Table 6, 7, and 8)
Reviewer #7	Multiple, mainly Data Analysis	28-30	21-23, 29-34	Please plot your results in addition to tables for a better understanding of reader.	**Resolved:** Plots added for Lift, Drag, L/D, SFC, T/W, Takeoff, Weight (Both Empty & MTOW), and Climb rate

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Reviewer #7	Data Analysis	28-30	30	Please re-export your CFD results. The scale is not proper for the flow field coloring.	**Resolved:** Scale min and max decreased to provide more contrast for coloring.
Reviewer #7	Engine Data & Selection, Data Analysis	21, 28-30	21, 30	Please provide more readable plots. See Figs. 7, 9 and 10. -	**Resolved:** Plots increased in size significantly, and two parts of Figure 7 removed. Remaining two parts of Figure 7 split into two figures. For the flow trajectories in Figure 9 and 10, the flow field's lines are made thicker for greater clarity, and view direction is changed. These changes, combined with the recoloring make Figure 9 and 10 significantly clearer and more valuable.
Reviewer #7	Conclusion	30-31	34-35	Please exclude obtained results and equations from the conclusions section. The results and derived equations should be given in results section where they need to be discussed	**Resolved:** Moved that section on the Range Equation into Results to explain why fuel consumption was not calculated.
Reviewer #7	Conclusion	30-31	34-35	Please clearly indicate your contribution and future studies related to your study in the conclusions section.	**Resolved:** Wrote a little bit more on contribution clearly in beginning of the conclusion. Please let me know if it is still unclear. I would write more, but the section has become quite long after fixing both your and Reviewer #5's comments, and I do not want to make it any longer. Final section provides recommendations for future studies.
Author #1	Data Analysis & Conclusion	28-31	29-35	-	Rewrote several parts of data analysis & conclusion, in addition to what was mentioned by reviewers.
Author #1	Multiple	-	-	-	Fixed various small errors in the paper