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Reply by Authors to P. R. Payne

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and

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FIRST, P.R.Payne's compliments on our paper are appreciated. The paper's achievements are based on combining the optimization algorithm and a state-of-the-art hydrodynamics model which exists in the open literature. Recognizing that more work is needed in the drag modeling area, the optimization algorithm has been developed independent of the hydrodynamics code so that model in op-

timization improvements can be easily incorporated into the method. For example, the transition criterion is critical in any drag model. In this regard, the third author has recently presented a new transition prediction algorithm to be used in this optimization procedure. [1]

Second, Payne gently chided us for forgetting to credit his earlier work. We are not aware of any previous efforts by Payne and his associates in the area of automatic design of optimum bodies for minimum drag. Payne, moreover, does not quote any publication documenting such work which we might have used.

Finally, the third author believes it is misleading to be classified as "an advocate of boundary-layer suction"; rather, he is an advocate of the optimum integration of hull design, boundary-layer control, and jet propulsion (Payne's Ref. 8). Such integrated design is another problem that may be handled by the optimization strategy of the present paper.

References

[1] Goldschmied, F.R., "Transition Prediction Algorithm for Axisymmetric Submerged Bodies," U.S. Navy Ordnance Hydroballistic Advisory Committee Meeting, Newport, R.I., Oct. 1974.

Addition to the Reply by Author to a Comment by P. R. Payne

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THE reply by Sallet which was published in this journal (Vol. 8, No. 3, July 1974, p. 123) was in response to a different comment by Payne, and was not in response to the comment which is printed immediately preceeding the reply. In the original version of Payne's comment, from which the reply was drafted and which was approximately 1/5 the length of the printed version, Payne gave a short conclusion to which the author's reply was addressed. In essence this conclusion is now reflected in the two paragraphs on p. 121 below Eq. (7). It is misleading to the reader if the discusser changes his discussion after he has read the reply by the author. At the very least, the discusser should notify the author that the comment was changed.