

Reply by Author to R. M. James

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THE Comments by James confirm the fundamental value and purpose of a scientific journal. That is to communicate each others knowledge or opinions. We are all editors. James' comments contribute to the studies done on this subject. It is important that an author should list his own papers in the reference because this helps assure the reader this author knows what he's talking about.

In the 1940's to the 1960's leading aero theorists had little doubt but did question if the mathematical limit led to analytical exactness, as, e.g., in the Falkner method. The present theory was developed in early 1967 and provided chord loading factors applied to the Dulmovits method. In mid 1967 the

results were discussed with a reputable scientist from Saab who was also coauthoring papers with the aero staff of MIT. He was researching in lattice theory but considered the analysis of Ref. 1 of the comments as unique.

In just two pages this reference demonstrates a sequence method for inverting up to infinite-termed matrices; chord loading distribution factors derived which have been used since 1967; lift and moment are shown to be integrated exactly. Questioning this mathematical limit was not completely trivial since Eq. (15) of Ref. 1 shows that as the number of vortices, N , approaches infinity, f_n becomes one except at the leading-edge where

$$f_1 = 2\pi^{-1/2}[1 - 8^{-1}(N - \frac{1}{2})^{-1}] \cong 1.128$$

for a zero-length segment of the chord.

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