

CORRESPONDENCE

Reply

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Father Deppermann's alternate derivation naturally gives the same results as the original since only a substitution of symbols is involved. Concerning the discussion on the number of solenoids, equation (11) in its original form shows that if β/α is small the term F_a can be positive only when M'/M is small also, with respect to β/α and to unity. Therefore for any reasonable value of $\Delta w'/w'$ the term F_a must also be small. This question is discussed on page 71 of Petterssen's *Weather analysis and forecasting* for the condition that $\Delta w' = 0$. The small values of w_0' and w_0 depend on the small amount of energy available when there are but few solenoids.

The question on the fractions $\Delta w'/w_0'$ and $\Delta w/w_0$ can be answered by reference to figs. 1 and 2, which represent equations (12, 13, 18, 19) in graphical form. They show that the proportional effect of the above ratios on the cloud amount depends only slightly on the lapse rate, as stated on page 88 of the JOURNAL article.