

LETTER TO THE EDITOR

Comments on Berson's "Spring-warming transfer processes in the lower antarctic stratosphere"

We should like to briefly examine several comments and conclusions put forth by Berson (1967) in a recent paper.

Berson (1967) stated (p. 168) that the predominant layer of maximum increasing ozone change is at 18–25 km over Antarctica. Dütsch (1964) and Bojkov (1965) indicate this layer of maximum change to be approximately 8–18 km for the polar latitudes. The 18–25 km layer generally represents the region of maximum change in the mid-latitudes.

A $\partial r/\partial z$ from 1958 is applied to a 1960 ω (p. 170, 171). Berson states that the $\partial r/\partial z$ was taken to be represented "adequately" by the Halley Bay 1958 soundings during a comparable period. Total ozone data are available for Halley Bay during the dates Berson presented ozonesonde profiles in 1958 and also during the same dates in 1960 (Table 1).

Berson calculated ten-day mean vertical velocities for periods during 1960. Table 2 presents ten-day total ozone amounts at Halley Bay for this period in 1960 and 1958 as well.

Tables 1 and 2 indicate that one should not necessarily expect a seasonal ozone fluctuation and ozone gradient of one year to compare favorably with the same season in another year especially when the total ozone amount is

Table 1. *Halley Bay total ozone (m atm cm)*

Date	6 Oct.	16 Oct.	30 Oct.	15 Nov.
1958	295	292	318	400
1960	266	297	292	362

Table 2. *Halley Bay total ozone (m atm cm)*

Date	1–10 Oct.	11–20 Oct.	21–31 Oct.	1–10 Nov.
1958	293	289	310	310
1960	269	293	282	318

different. Examination of the Halley Bay data also shows a different tendency in the total ozone amount during 1958 and 1960. In light of the above, it does not appear justifiable to use the 1958 ozone data and apply to the 1960 vertical velocity considerations. As a result, conclusions are influenced.

Rumen D. Bojkov and James E. Lovill
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- Dütsch, H. U., 1964, Uniform evaluation of Umkehr observations from the world ozone network, Part III. National Center for Atmospheric Research, Boulder, Colorado, 34 pp.