

Spread F at Buenos Aires

8th March, 1957.

Mr. W.B. Chadwick,
Radio Propagation Division,
National Bureau of Standards,
BOULDER, COLORADO, U.S.

Dear Mr. Chadwick,

Thank you for your letter of January 17th and the ionosphere data. This has been analysed for Spread F, and the results are enclosed in the form of six data sheets. If these tabulations are plotted in graphical form, I would suggest using a green cross-section paper available at Woolworths. It is numbered 0-18 on the horizontal and 0-24 on the vertical. The horizontal is to cover the hours 16-10 and the vertical the percentages 0-60. Sheets may be pasted together for higher percentages on those seasons which so require. This procedure will give the same proportions as the graphs appearing in my published articles and an easy comparison may be made. It will be found:-

- (a) There is more spread F in the summer season of November-February during the six years. Thus Buenos Aires is always a northern hemisphere station.
- (b) There is more spread F in 1954 at solar activity minimum during summer, and much more during winter, than in 1950 when solar activity was still quite high. Thus Buenos Aires is an equatorial type station.
- (c) The ratio of summer to winter is quite high in 1950 with the equinoxes in between. Thus the spread F equator was far south of Buenos Aires in 1950.
- (d) The ratio of summer to winter approaches unity in 1954 with the equinoxes less. Thus the spread F equator was nearly over and just south of Buenos Aires in 1954.
- (e) The spread F equator moved northward during a decrease of solar activity. Thus the pivot point is somewhere west of Buenos Aires, perhaps on the coast of Chile or near Easter Island.

The Sao Paulo data was rather meager and too short a run to deduce much from. However, what could be learned, in all ways confirmed the above.

Mr. W.B. Chadwick.

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My results here continue to be quite successful, so I expect to stay a while longer. Please keep me on your air mailing list for Buenos Aires data, I will analyse the 1956 results as soon as they come to hand.

Dakar is another important station in this study - I.P.S. cannot supply anything later than December 1954, I have had a couple of exchanges of correspondence with S.P.I.M. and have received fair promises, but that is all. Apparently the ionosphere station still operates but the publication of data has broken down. If you have anything after the above date I would much appreciate receiving copies of f^oF_2 hourly values only. The reproductions having black letters on a white background are much easier to read than the reverse colouring.

Hoping we can continue this profitable arrangement,

I am,

Very truly yours

(Grote Reber)