Guide to the 19 files for the Photometer Data for RENU2

For the most part the files cover each of the lines shown in the three figures.

The data in the files will allow these figures to be reproduced.

All times are seconds.

Figure 1

1. Fig1data- The energy flux and associated time are given. The data were provided by David Kenward from his reduction of the RENU2 EPLAS data.

Figure 2

2. Fig2altitude – the gps altitude and time during the flight

3. Fig2reddataraw – the redline unsmoothed Rayleighs vs time (converted using the instrument response)

4. Fig2reddatasmooth – the redline smoothed Rayleighs vs time (converted using the instrument response). The smoothing is over 1 second

5. Fig2greendataraw – the greenline unsmoothed Rayleighs vs time (converted using the instrument response)

6. Fig2greendatasmooth – the greenline smoothed Rayleighs vs time (converted using the instrument response). The smoothing is over 2 seconds

7. Fig2reddayglow.sav – the AURIC model redline dayglow in Rayleighs vs time

8. Fig2greendayglow.sav – the AURIC model greenline dayglow in Rayleighs vs time

9. Fig2redauroradayglow.sav – the AURIC model redline dayglow+aurora in Rayleighs vs time

10. Fig2greenauroradayglow.sav – the AURIC model greenline dayglow+aurora in Rayleighs vs time

Figure 3

11.fig3altitude.sav – the gps altitude and time during the flight (similar to fig2altitude.sav

12. fig3greenfluxsmooth – 40 times the electron flux (figure 1 smoothed over 1 second and shifted 1 second)

13. fig3redfluxsmooth – 100 times the electron flux (figure 1 smoothed over 1 second and shifted 1 second)

14. fig3greendataraw – the green data unsmoothed in Rayleighs vs time

15. fig3reddata smooth- the red data smoothed over 1 second in Rayleighs vs time

16. fig3greenmodel – the AURIC plus B3C (Strickland code) results for the green dayglow plus aurora. Here the data have been shifted by 1.5 seconds as discussed in the text. Also, the procedure here was to isolate the PMAF excitation in the model and divide that by 8. This was then added back to the background. This was optimized for 620 to 640 s and the background modification is not applicable outside that period.

17. fig3redmodel1000 – the AURIC plus B3C (Strickland code) results for the red dayglow plus aurora. Here the data have been shifted by 1.5 seconds as discussed in the text. Also, the procedure here was to isolate the PMAF excitation in the model and divide that by 1000. This was then added back to the background. This was optimized for 620 to 640 s and the background modification is not applicable outside that period.

18. fig3redmodel500 – the AURIC plus B3C (Strickland code) results for the red dayglow plus aurora. Here the data have been shifted by 1.5 seconds as discussed in the text. Also, the procedure here was to isolate the PMAF excitation in the model and divide that by 500. This was then added back to the background. This was optimized for 620 to 640 s and the background modification is not applicable outside that period.

19.fig3etemp – The ERPA electron temperature data produced by converting the raw eV data to temperature using ev (1.16e4) = electron temperature.