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Report on PL 120 and PL 121

The following readings were obtained from satellite telemetry data received and recorded at Hybla Valley, Virginia on 9/14/63.

Satellite	PL 120	PL 121
Pass number	3458	3457
Package temperature	28.5°C	21.5°C
Skin Temperature	28°C	23.3°C
Solar Cell Temperature	3.5°C	11.0°C
- Battery voltage	12.25 V	12.25 V
+ Battery voltage	12.1 V	11.95 V

The battery voltages are essentially the same as the average throughout the last four weeks. Compared to last week's data, the minus battery voltage has increased 0.2 volts and the + battery voltage has increased 0.5 volts.

The package temperature data indicates an increase of 4°C during the last four weeks. The gradual rise from the low reading indicates that the % of time in sunlight may be slowly increasing again.

Both satellites were operating upon the arrival at reception range and continued to operate during the complete pass.

Ralph M. Gran

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Report on PL 120 and PL 121

The following readings were obtained from satellite telemetry data received and recorded at Hybla Valley on 15 August 1963:

	120	121
Pass No.	3080	3029
Package temperature	22°C	16°C
Skin temperature	36°C	15°C
Solar Cell temperature	28°C	13°C
-Battery voltage	12.1 volts	11.82 volts
+Battery voltage	11.9 volts	11.86 volts

Compared to the results obtained on 9 August, the package temperatures are 1.0° lower, the minus battery voltage is numerically 0.3 volts lower and the positive battery voltage is 0.1 volt higher.

The telemetry signals from both satellites was acquired at the same time and lost within a few seconds of each other which indicates that PL 120 has now gained one complete revolution over PL 121. Twenty-nine minutes of data was obtained.

Ralph M. Gran

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Telemetry Data of Pl 120 and Pl 121 During Pass #1333

On March 30, the telemetry data of Pl 120 and Pl 121 were recorded as the satellites passed near the Hybla Valley Ground station during the apogee portion of the orbit. Twenty two minutes of data from Pl 121 and five minutes from Pl 120 were successfully recorded. The results of data reduction is shown on the charts.

The decrease in temperatures of the satellite skin and solar cells indicate that the satellites just entered the dark portion of the orbit. Since the package temperature sensor is encapsulated in the package, it is subject to time delay and is never in phase with the other temperature readings. At approximately 07 13 30, the new position of commutated segment 14 of Pl 121 indicates that the motor cam reached the off position and turned the motor off. The new positions of segment 7, 10, and 12 indicate that the DL system was also turned off. Since the satellite solar cells were in the dark when the battery current drain was reduced, the battery voltage did not increase.

Telemetry data from Pl 120 did not indicate any turn off. This may be due to loss of signal before scheduled turn off.

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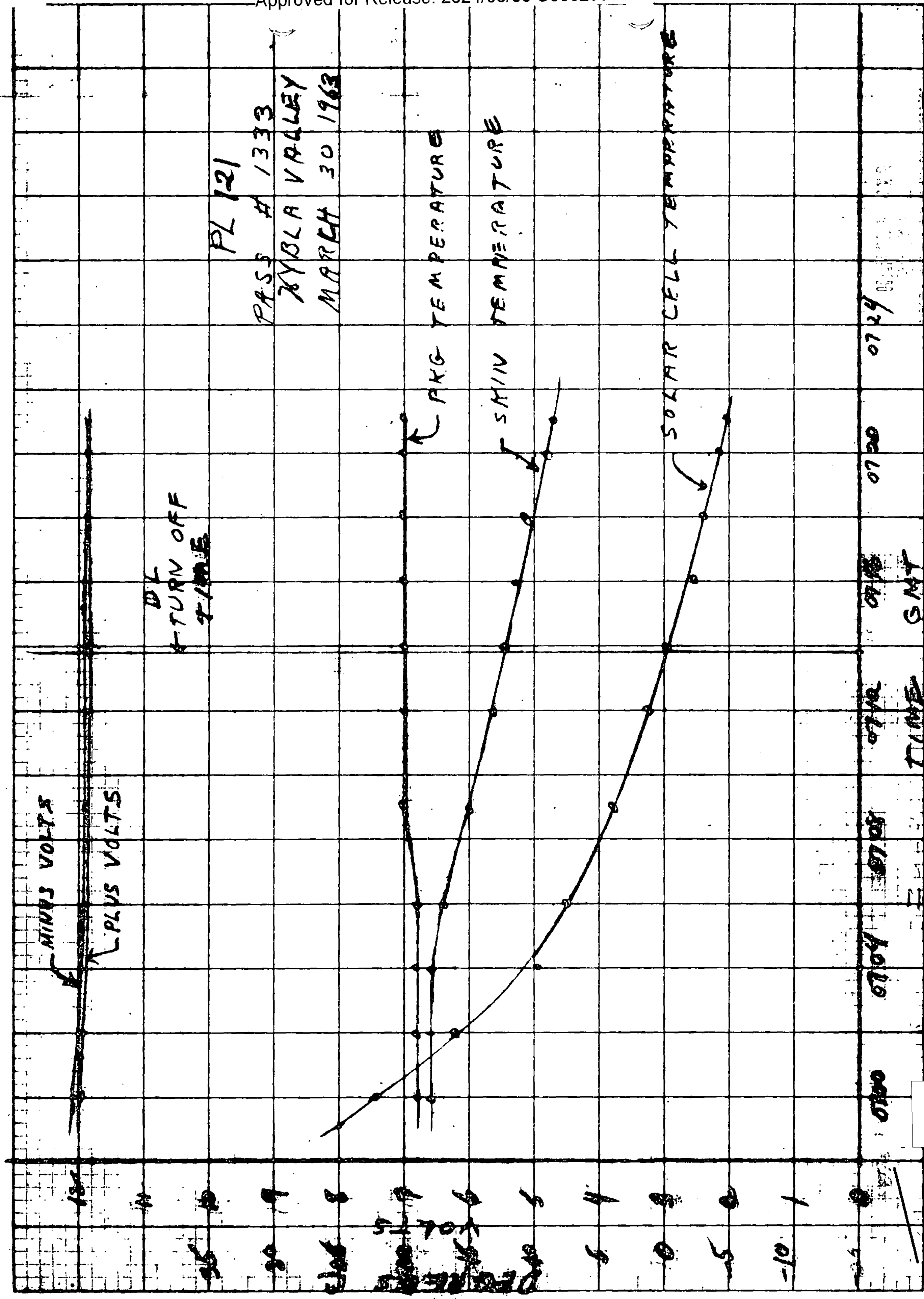
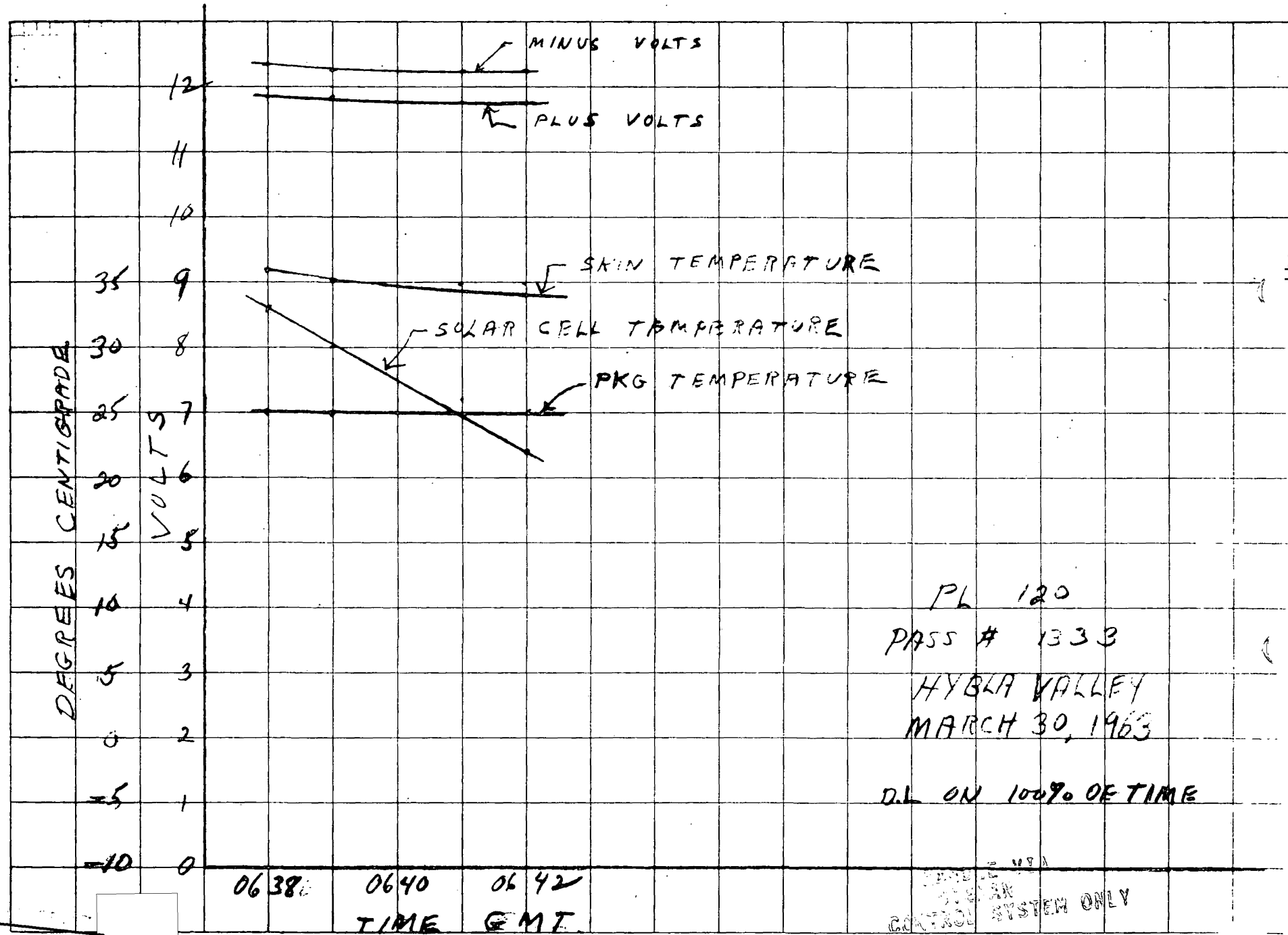

PL 121
PASS # 1333
KYBLA VALLEY
MARCH 30 1963
PKG TEMPERATURE
SKIN TEMPERATURE
SOLAR CELL TEMPERATURE
DL TURN OFF TIME
MINUS VOLTS
PLUS VOLTS
TIME GMT
VOLTS
0720
0724

TWO COLOR CO-ORDINATE PAPER
NO. 5510-L 10X10 TO THE INCH



PL 120
PASS # 1333
HYBLA VALLEY
MARCH 30, 1963

D.L ON 100% OF TIME

CONTROL SYSTEM ONLY

Approved for Release: 2024/06/08 C05025909