R O S E T T A

FLIGHT REPORTS
of RPC–MAG

RO–IGEP–TR–0011

Issue: 5 Revision: 0

Febuary 11, 2019

Report of the

INTERFERENCE CAMPAIGN

Time period: September 20. - October 14., 2004

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Contents

1 Summary

The interference campaign for ROSETTA was executed in the time period September 20. – October 14., 2004. All the performed steps were successful. MAG worked as expected.

The next sections give a brief description of the executed activities and show the obtained data. Housekeeping data (Temperature of the OB & IB sensor, Filter Stages A & B, Filter configuration register, Reference voltage, negative and positive 5V supply voltage, and the coarse HK sampled magnetic field data of the OB sensor) are presented as well as magnetic field science data of the OB and IB sensor in the activated modes. Magnetic field data are plotted in instrument coordinates if not otherwise stated. They are calibrated according to the results of the ground calibration and the results of the new created temperature model 009 using the flight data from the complete ROSETTA mission from 2004 until 2016. Sensitivity, Misalignment, and Temperature effects are taken into account. The s/c residual field is not subtracted.

The dynamic spectra show some clear lines which are varying with the time. A detailed investigation showed, that these lines have their origin in the reaction wheels of the ROSETTA S/C. As they are rotating with different speeds they generate different disturbance frequencies. The signatures of the reaction wheels are folded down in the measurement range of the magnetometers. A detailed investigation of this phenomenon is given in RO–IGEP–TR0012.

From time to time there are also horizontal lines in the dynamic spectrum to be seen. These lines represent constant frequencies and are caused by the LAP instrument. This behavior was investigated and proofed during the PC10 campaign in November 2010. See RO-IGEP-TR0030 for further details.

2 September 20, 2004:

2.1 Actions

MAG was switched on immediately after PIU and set to HK mode at 16:02. All commands passed smoothly and the instrument followed in the expected way.

Time	Stage A, Stage B,Filter cfg	Stage 1, Stage 2, Stage3	Mode
16:22 – 24:00	0 0 0	0 0 0	SID3

2.2 Plots of Calibrated Data using the new Temperature Model

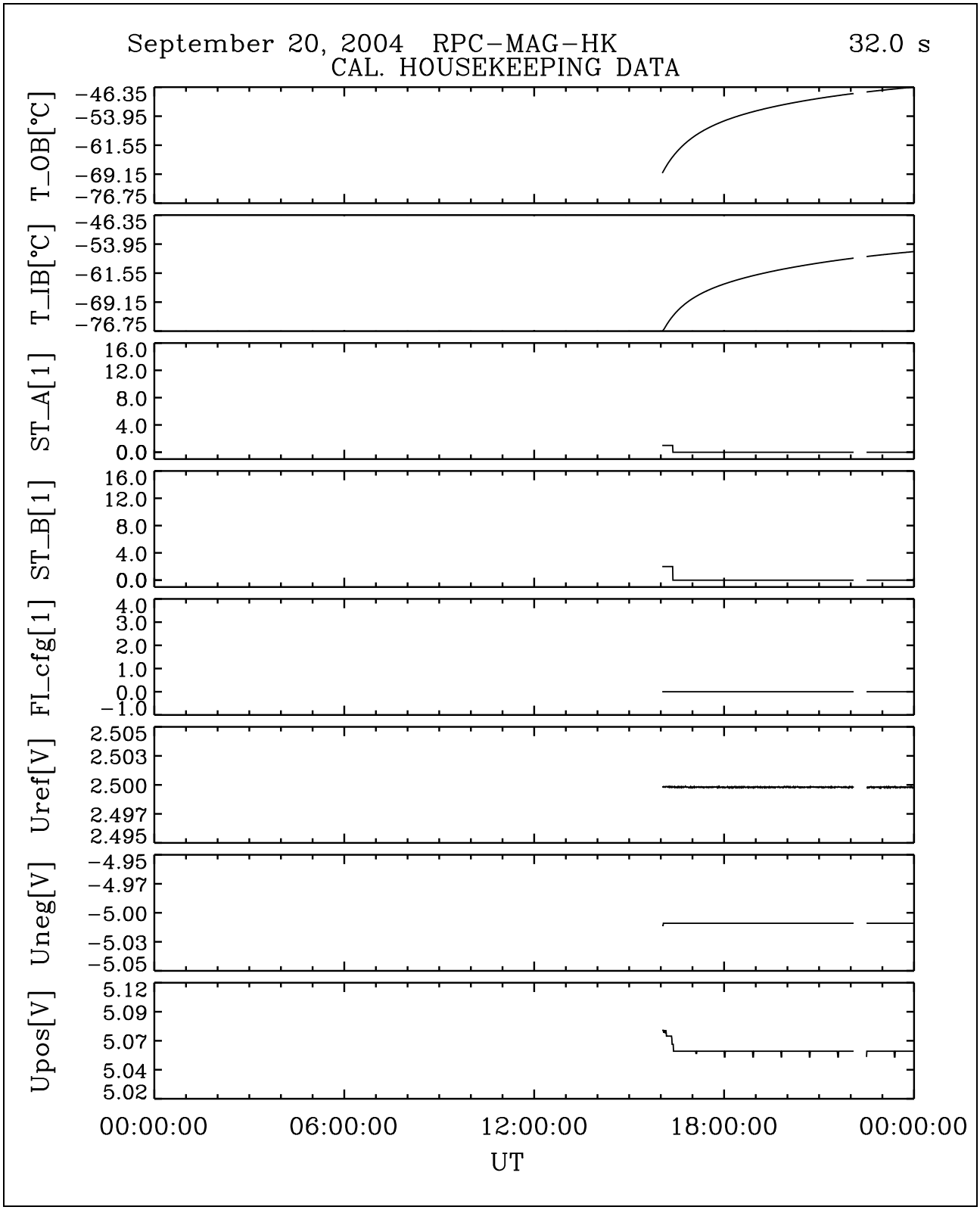

Figure 1: File: RPCMAG040920T1602_CLA_HK_P0000_2400

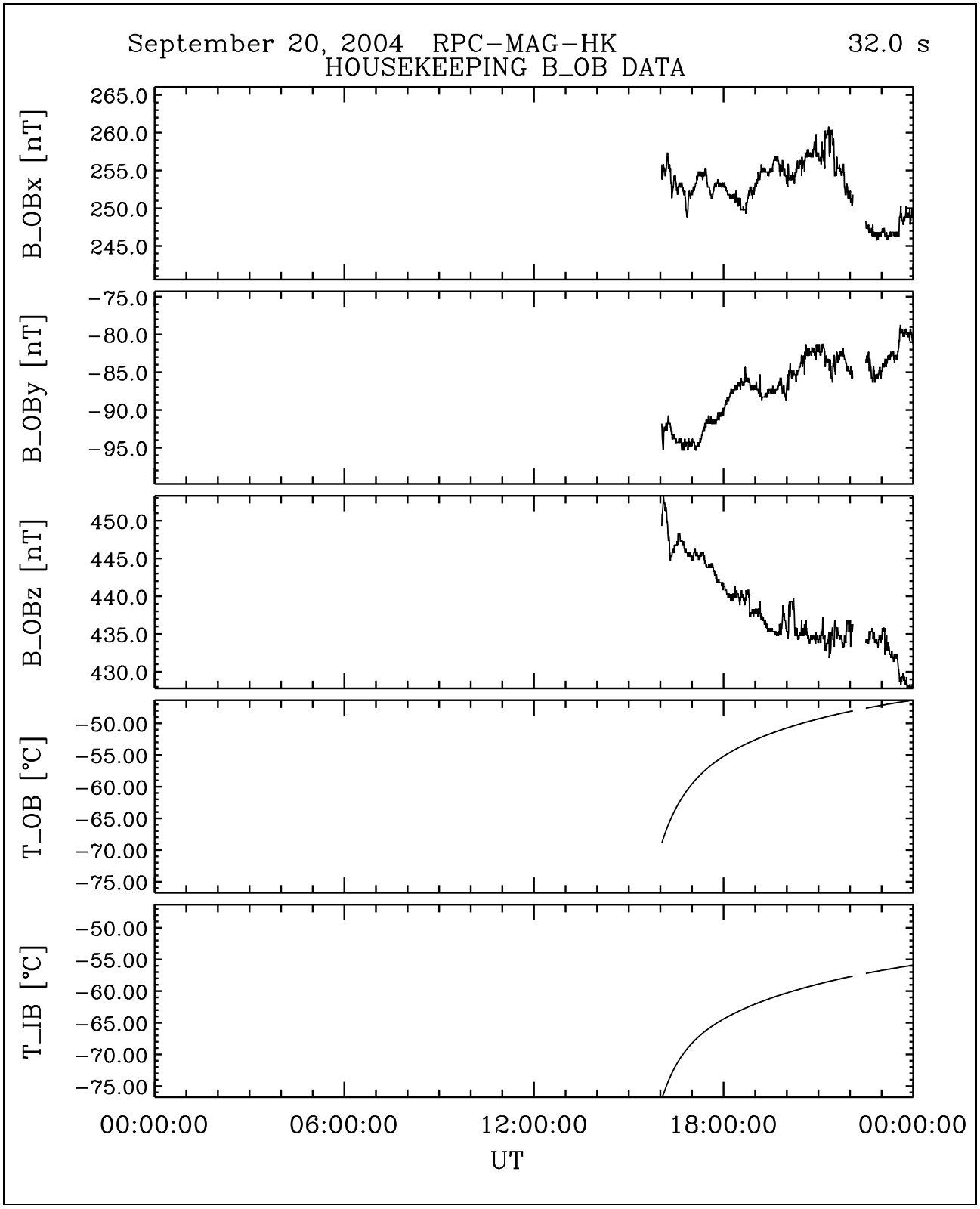

Figure 2: File: RPCMAG040920T1602_CLA_HK_B_P0000_2400

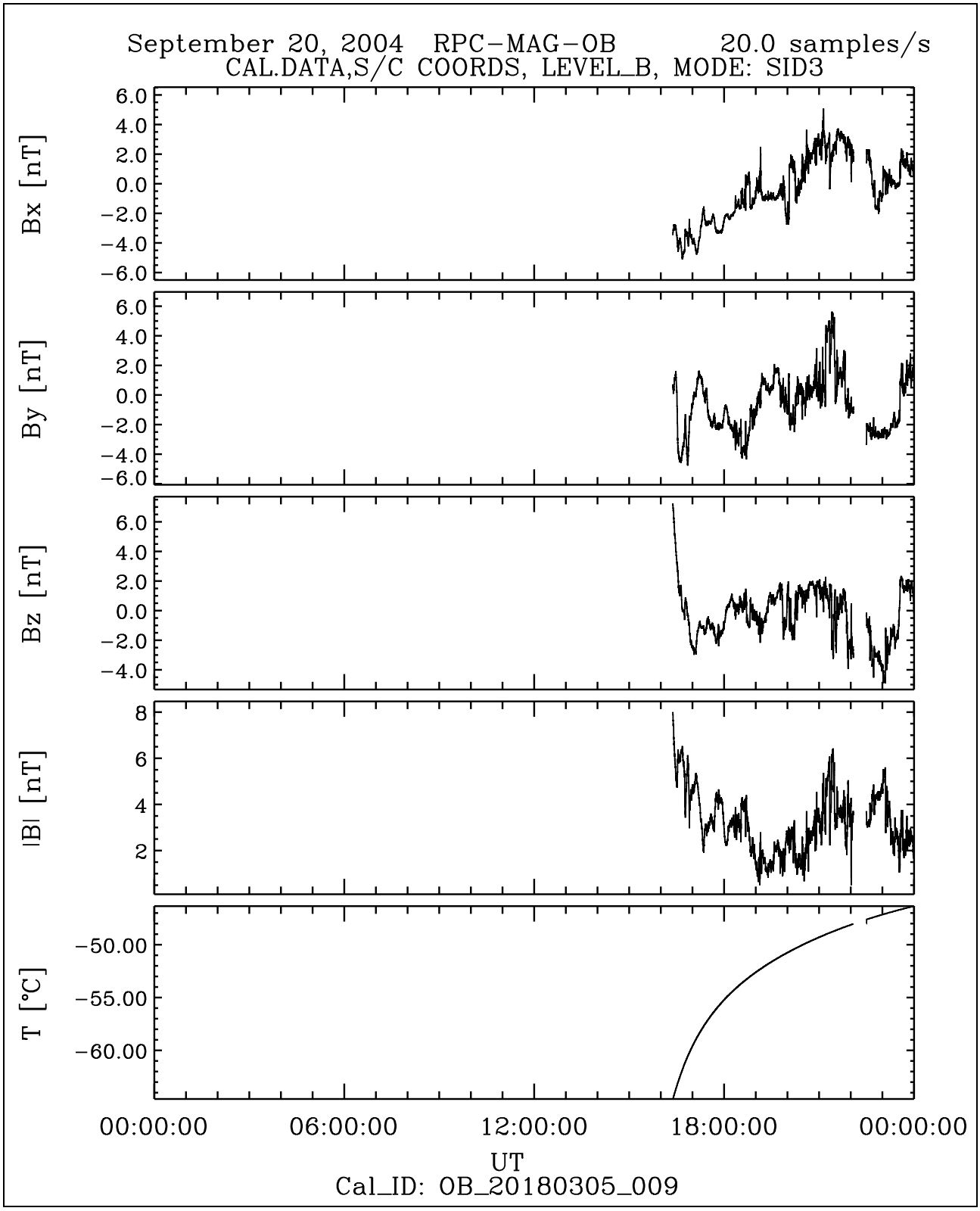

Figure 3: File: RPCMAG040920T1622_CLB_OB_M3_T0000_2400_009

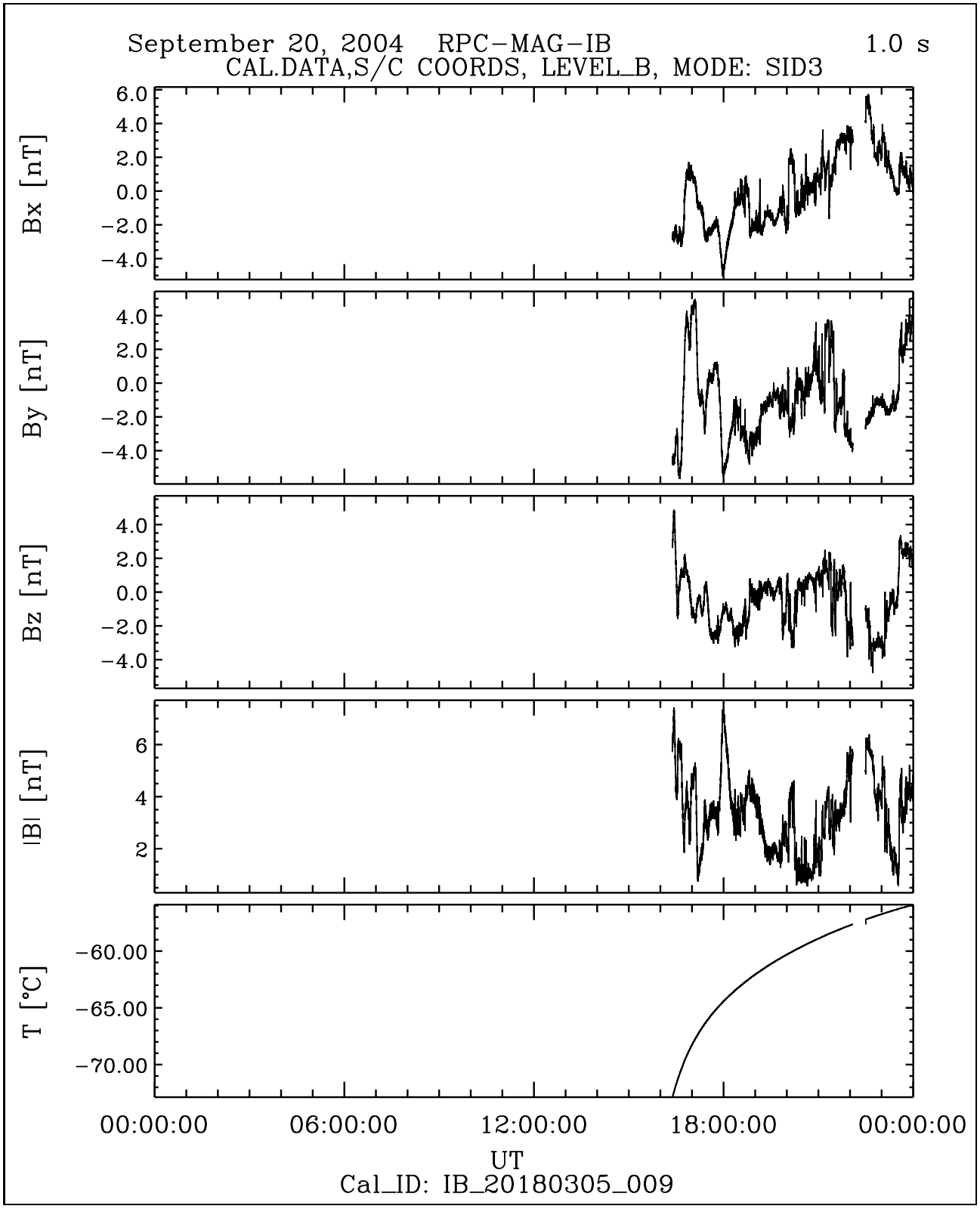

Figure 4: File: RPCMAG040920T1622_CLB_IB_M3_T0000_2400_009

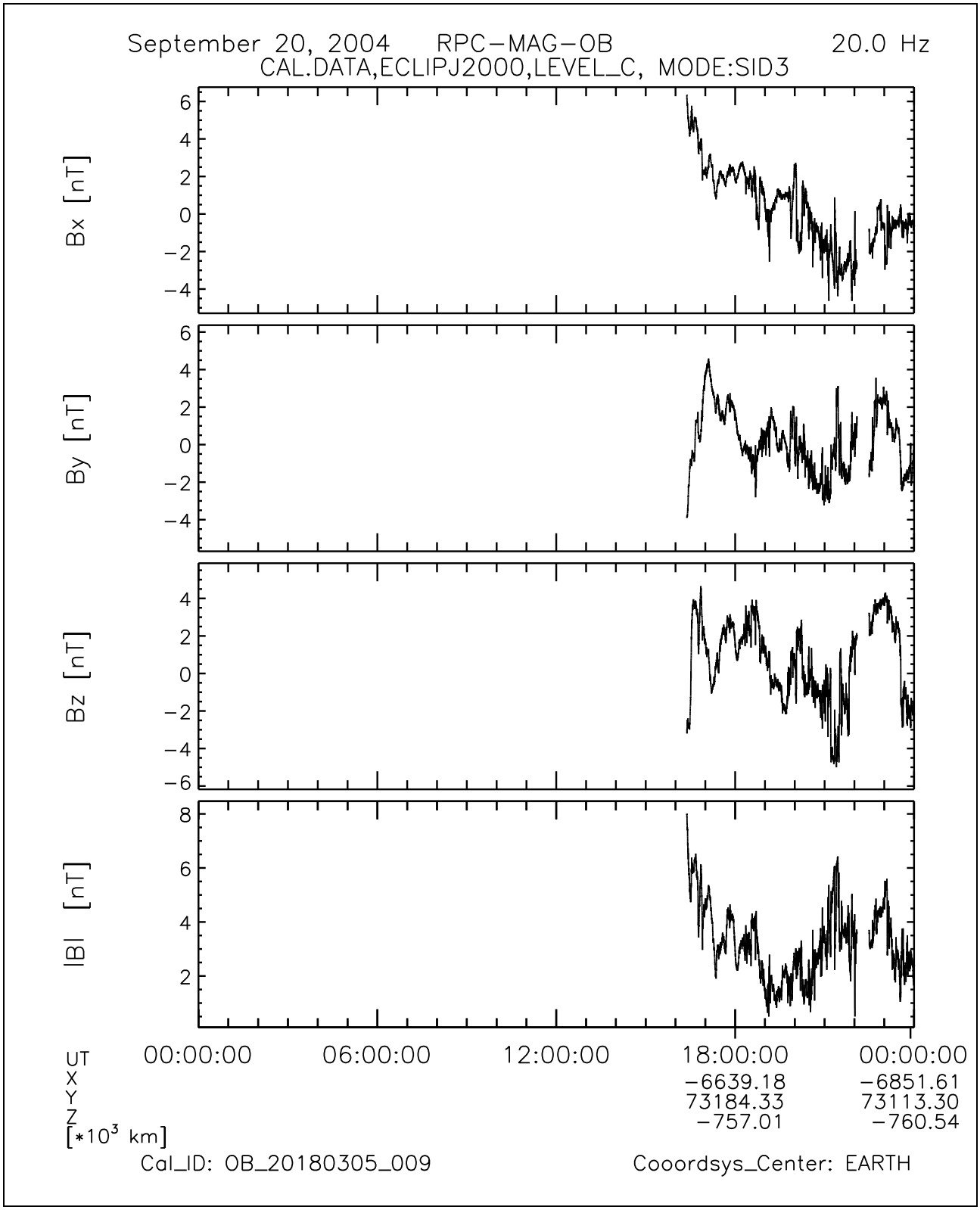

Figure 5: File: RPCMAG040920T1622_CLC_OB_M3_T0000_2400_009

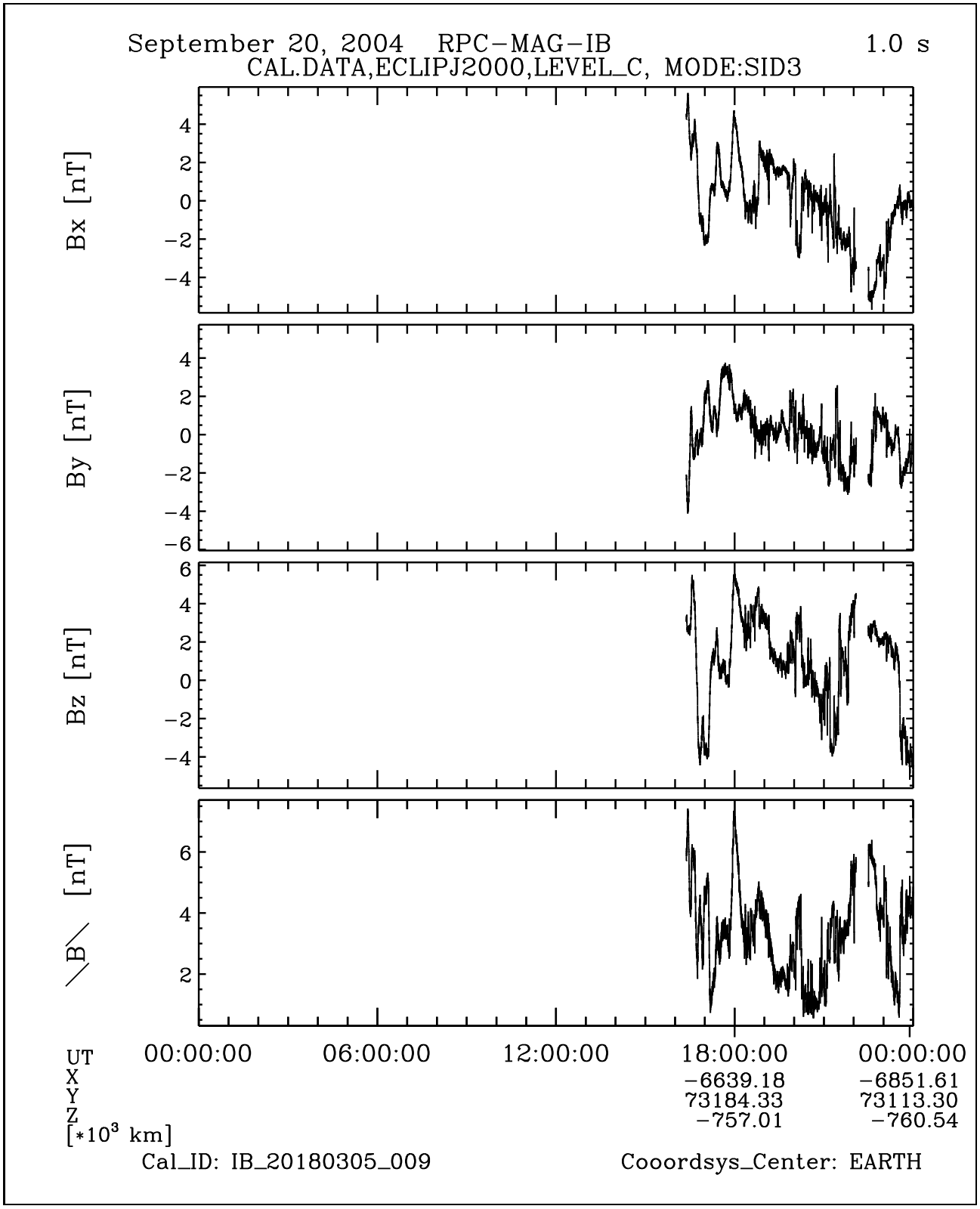

Figure 6: File: RPCMAG040920T1622_CLC_IB_M3_T0000_2400_009

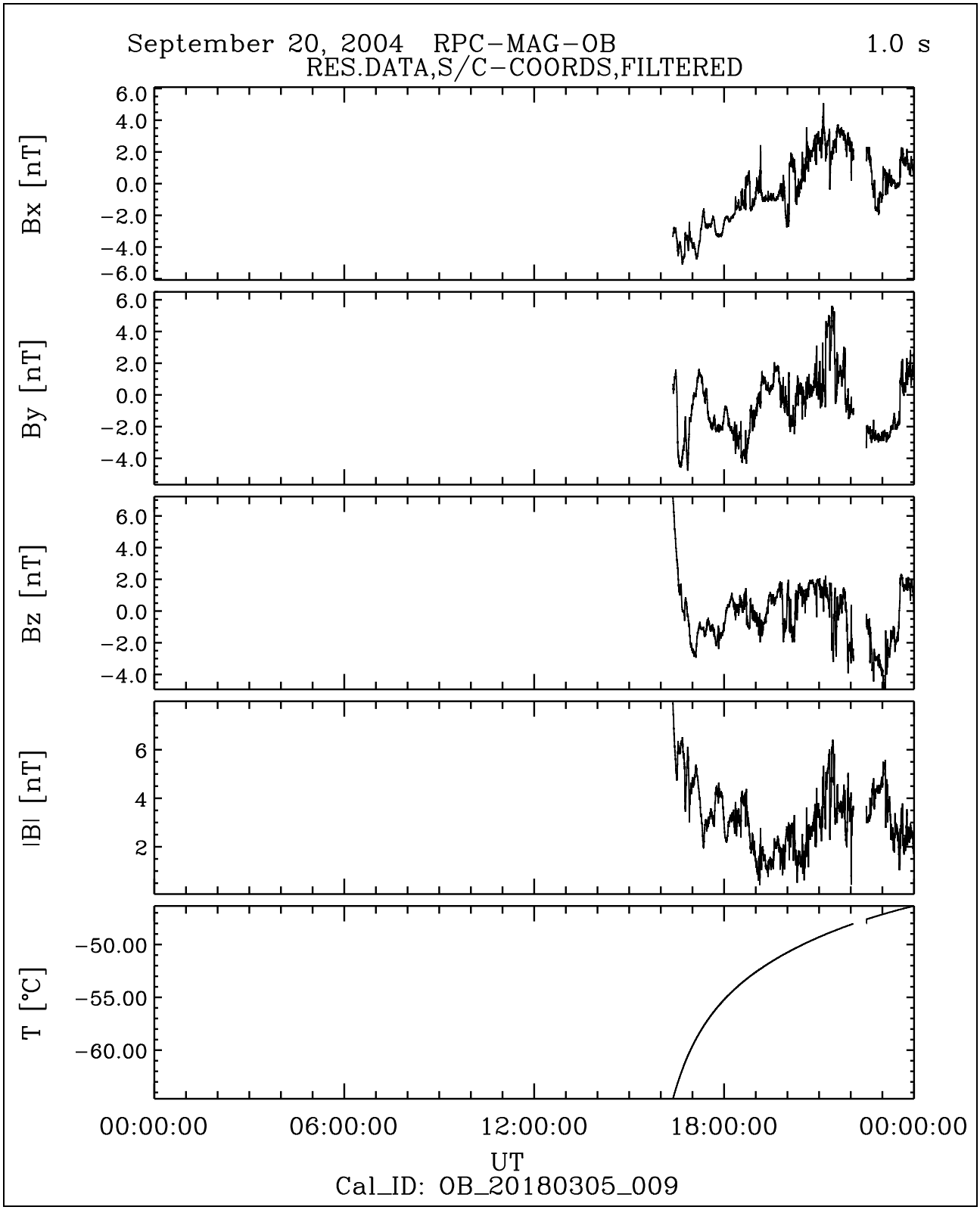

Figure 7: File: RPCMAG040920_CLF_OB_A1_T0000_2400_009

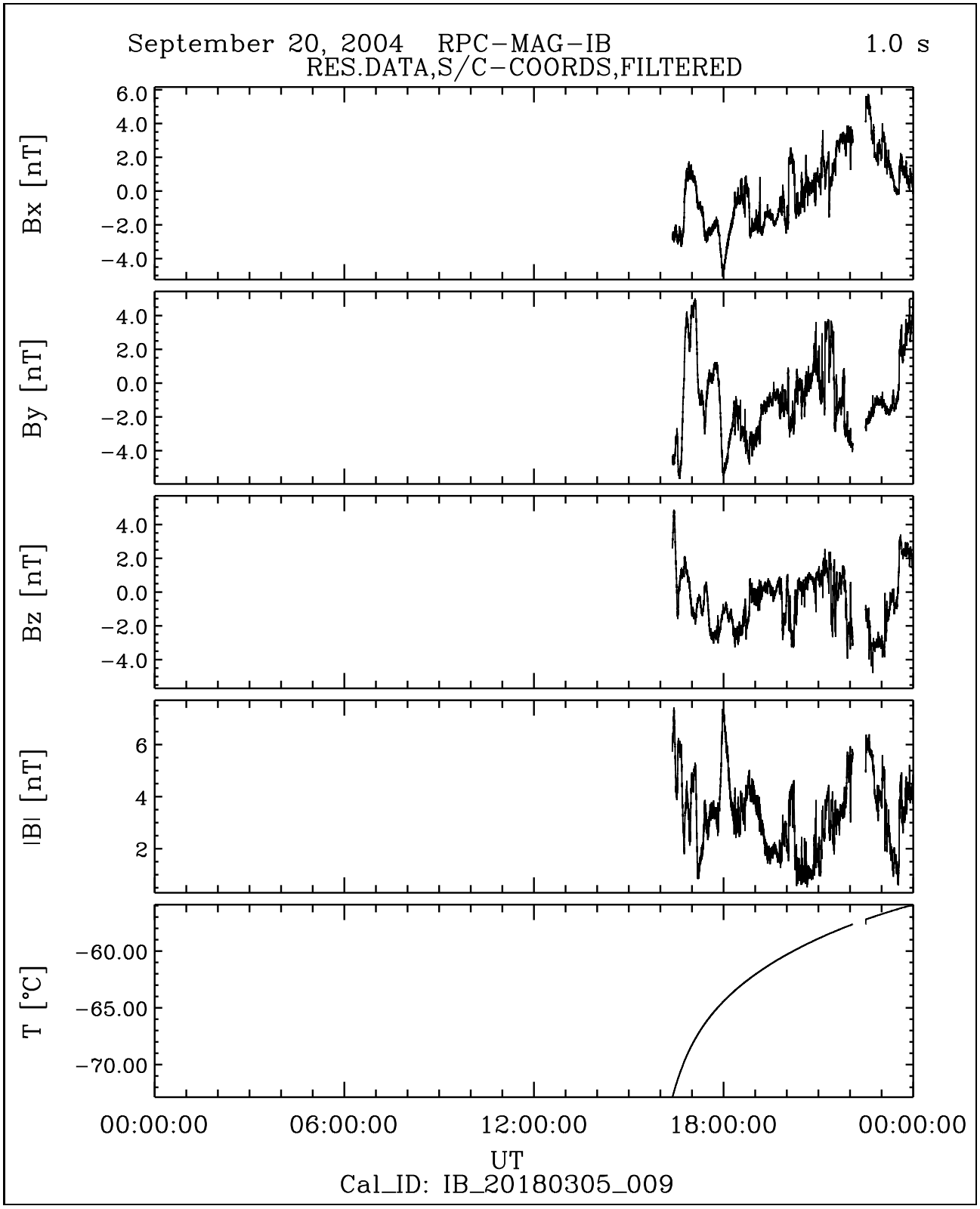

Figure 8: File: RPCMAG040920_CLF_IB_A1_T0000_2400_009

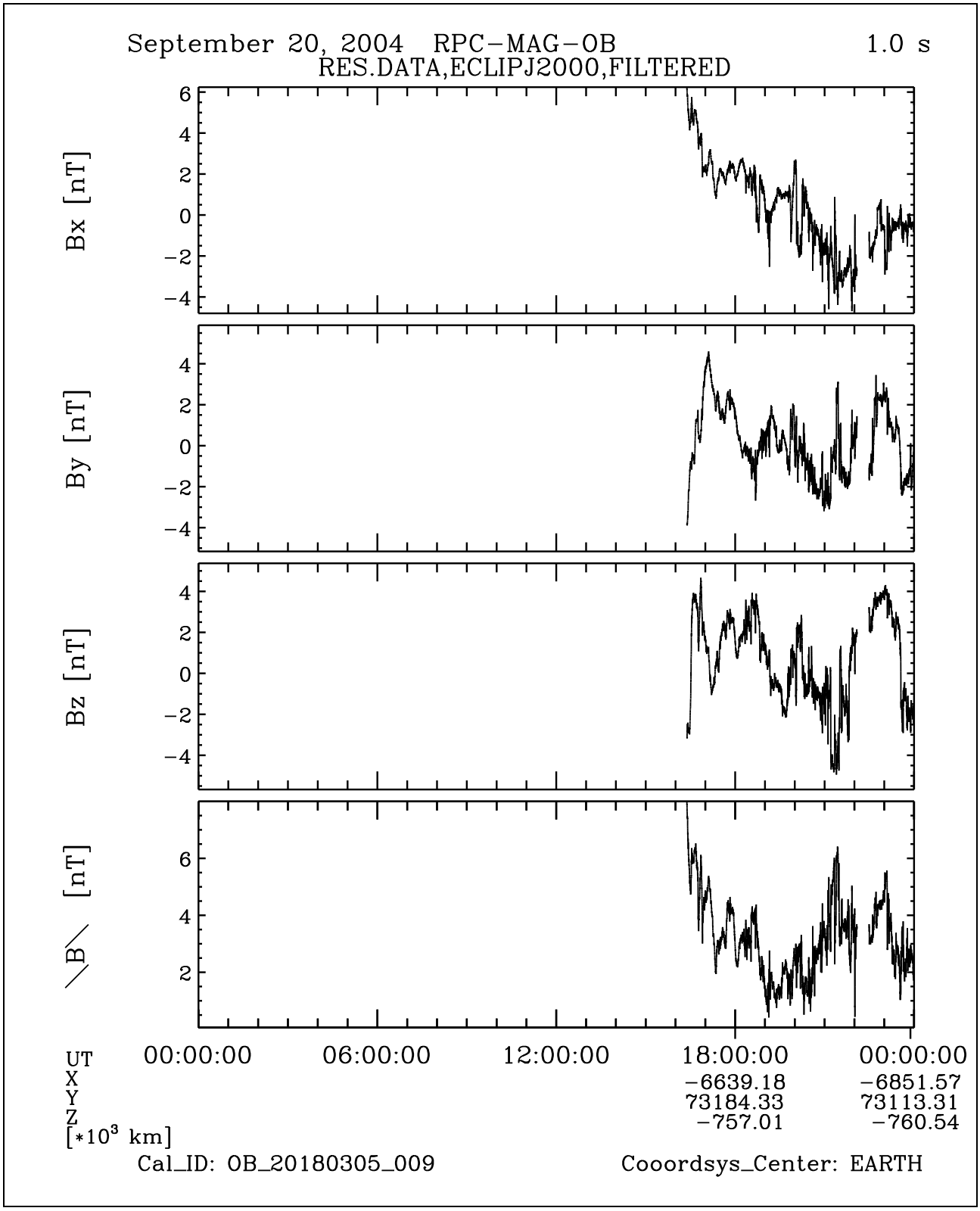

Figure 9: File: RPCMAG040920_CLG_OB_A1_T0000_2400_009

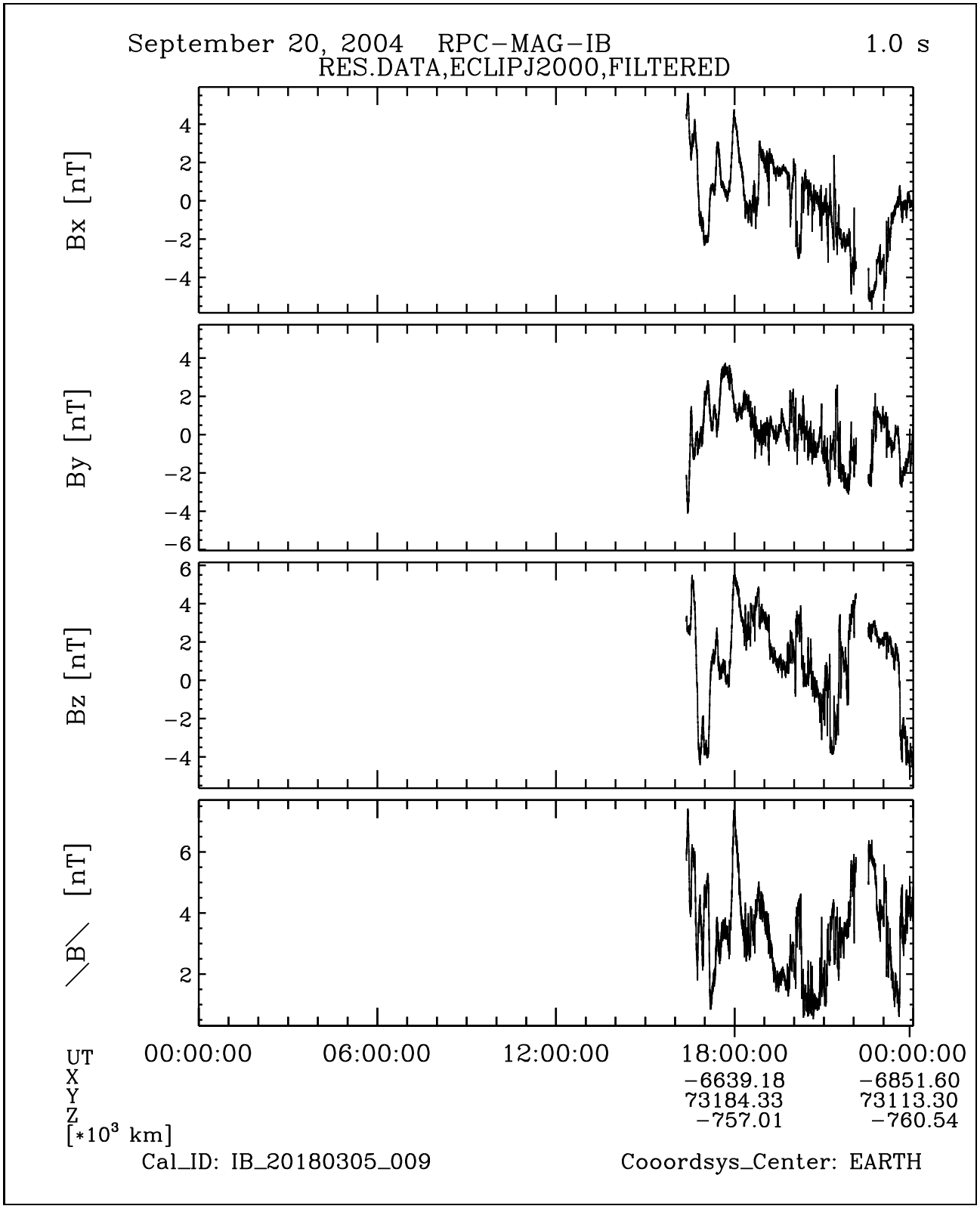

Figure 10: File: RPCMAG040920_CLG_IB_A1_T0000_2400_009

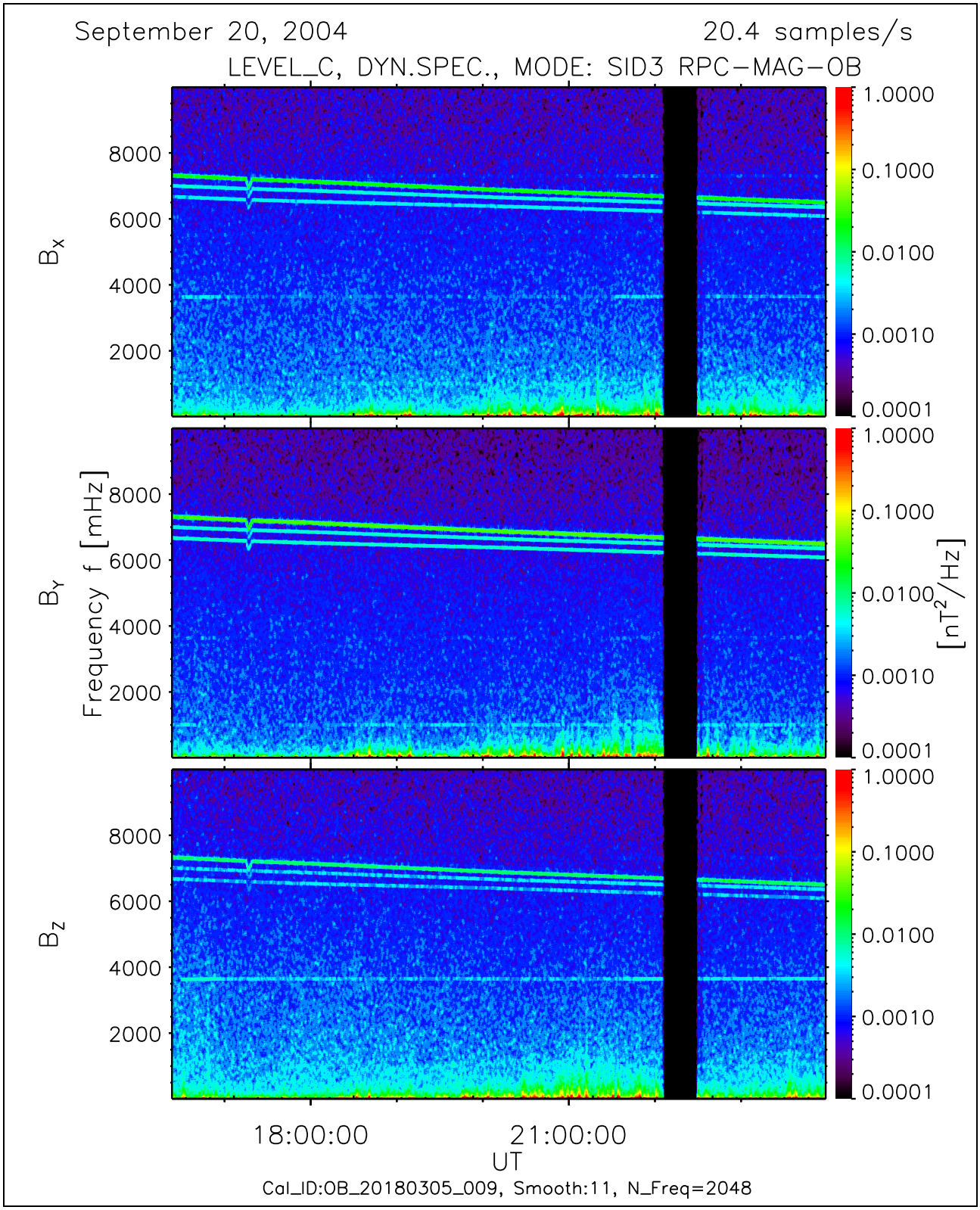

Figure 11: File: RPCMAG040920T1622_CLC_OB_M3_DS0_10000_009

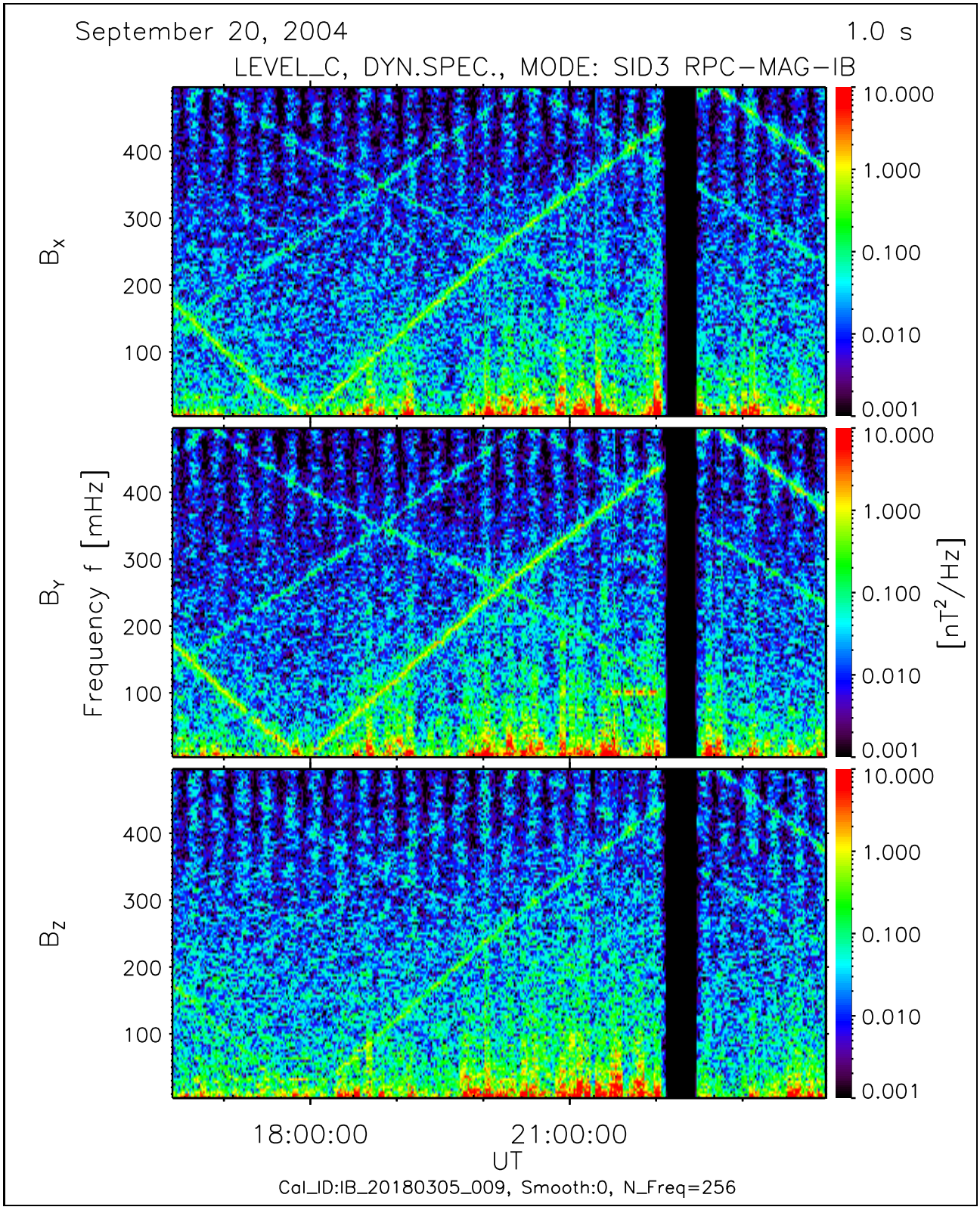

Figure 12: File: RPCMAG040920T1622_CLC_IB_M3_DS0_500_009

2.3 Plots of ROSETTA's Reaction Wheels Speeds

The following plots show the time series of the revolutions of the 4 reaction wheels. Two kinds of data are shown:

- The original reaction wheel data as they are stored in the DDS.
- The theoretical response of the wheels impact seen by an instrument sampling with different frequencies. Here the response at 20 Hz and 1 Hz sampling frequency is plotted.

A comparison with the dynamic spectra of the MAG data gives an impressive accordance between the reaction wheel frequencies and the spectral lines observed in the dynamic MAG spectra.

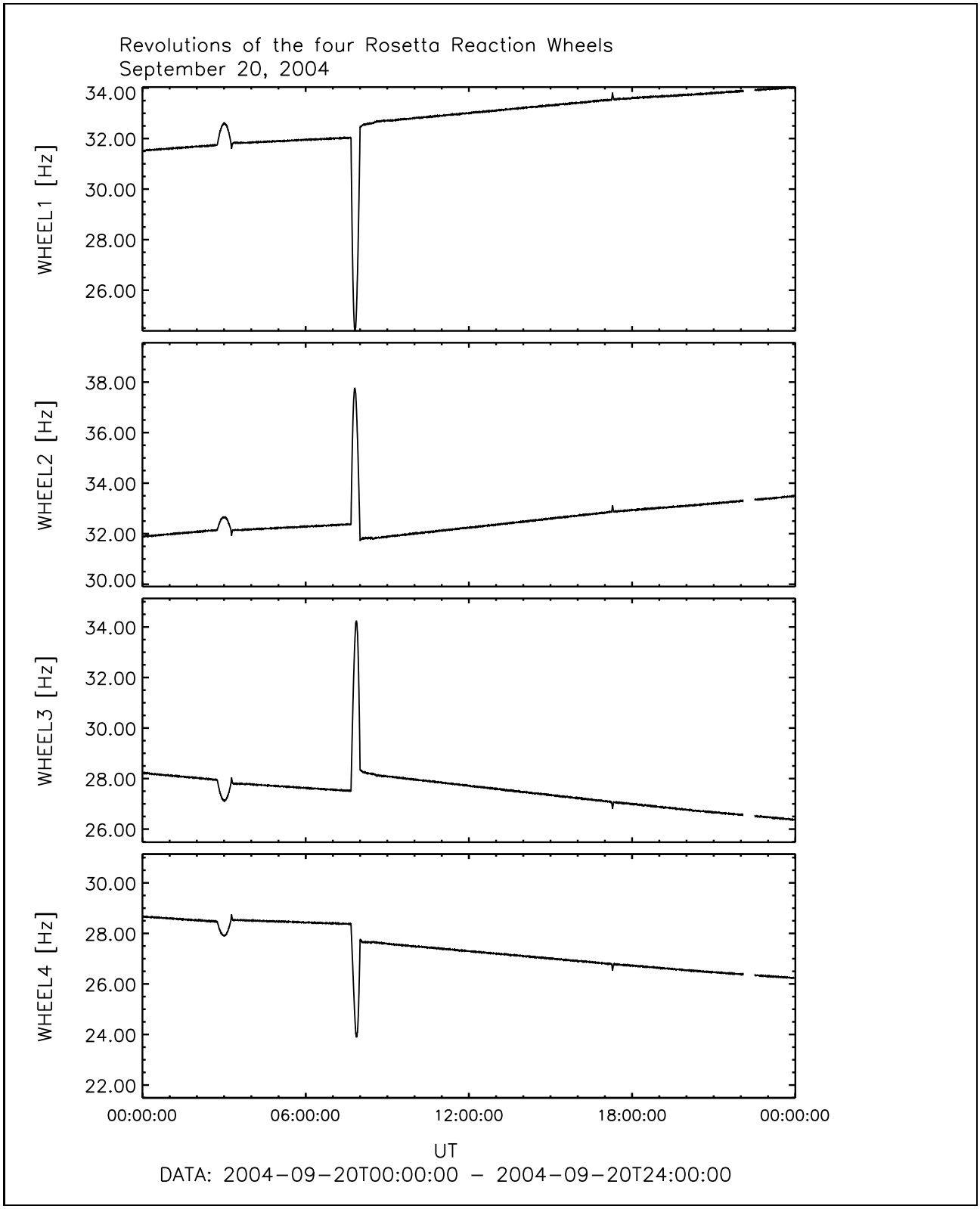

Figure 13: File: wheels_Hz2004-09-20T00-00

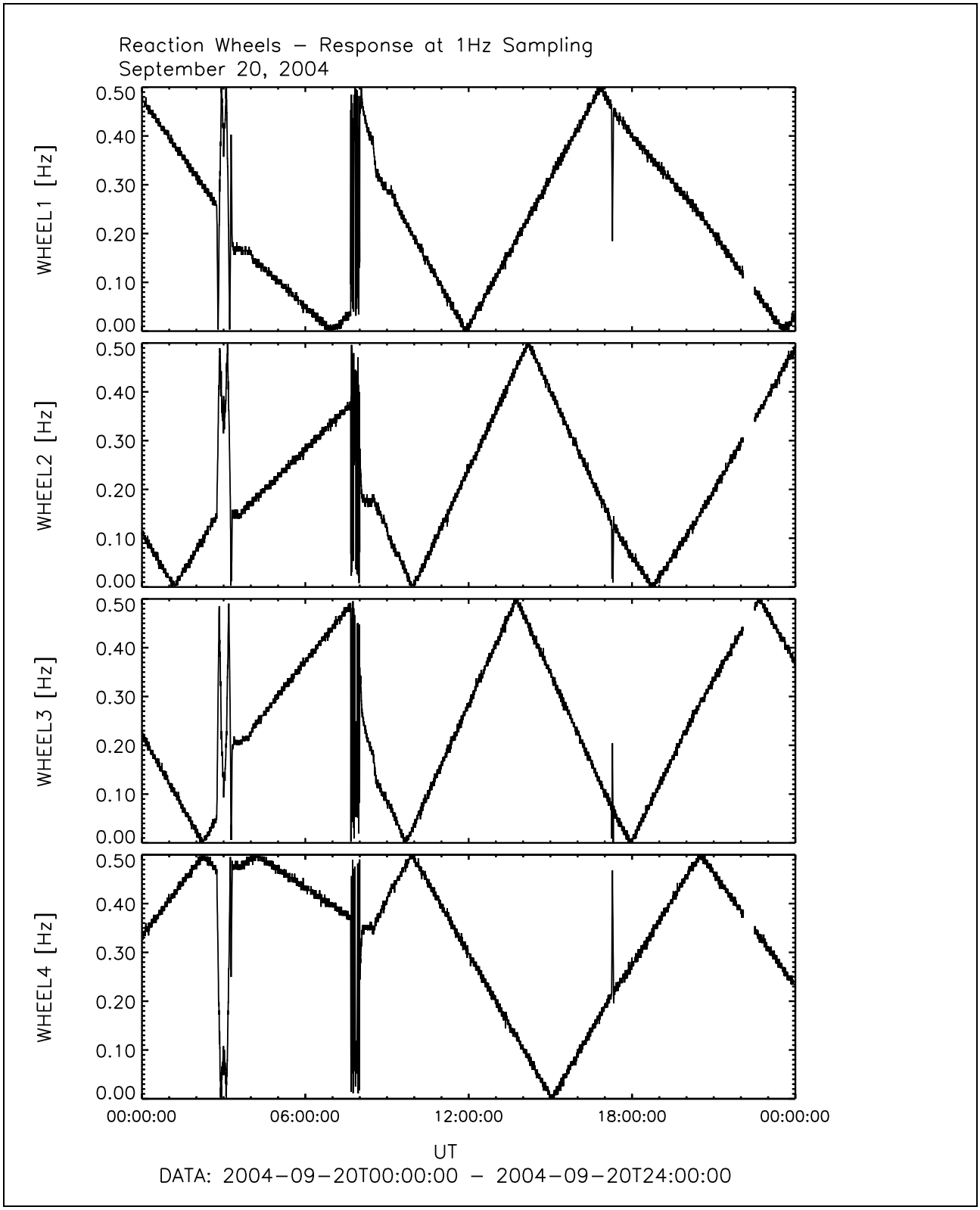

Figure 14: File: wheels_1Hz_Sampling2004-09-20T00-00

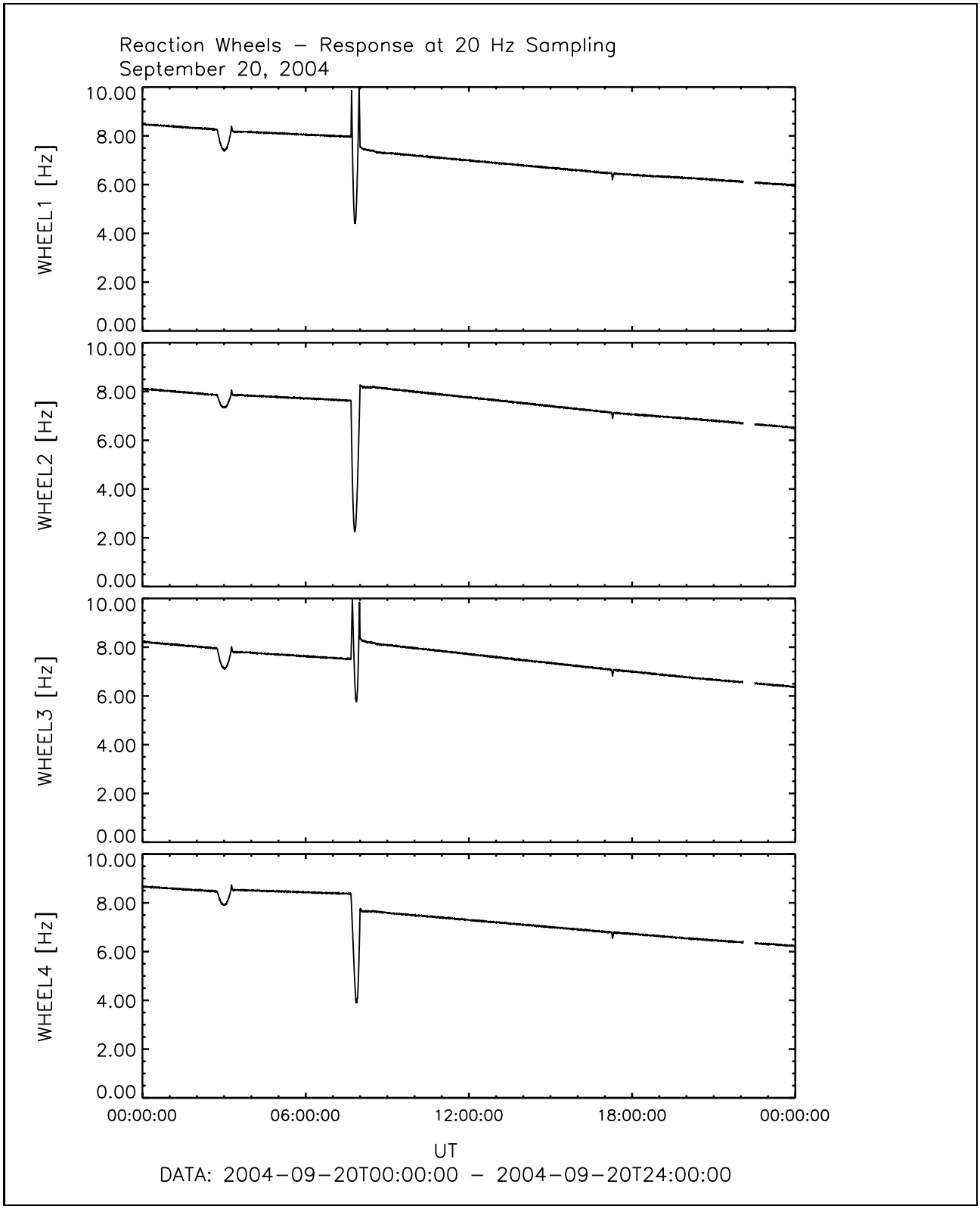

Figure 15: File: wheels_20Hz_Sampling2004-09-20T00-00

2.4 Plots of Reaction Wheel and LAP Disturbance corrected Data

The following plots show the dynamic spectra of the LEVEL_H data. These data have been purged from ROSETTAs reaction wheel disturbance and also from the disturbance of the LAP instrument. Plots are only shown for the primary sensor.

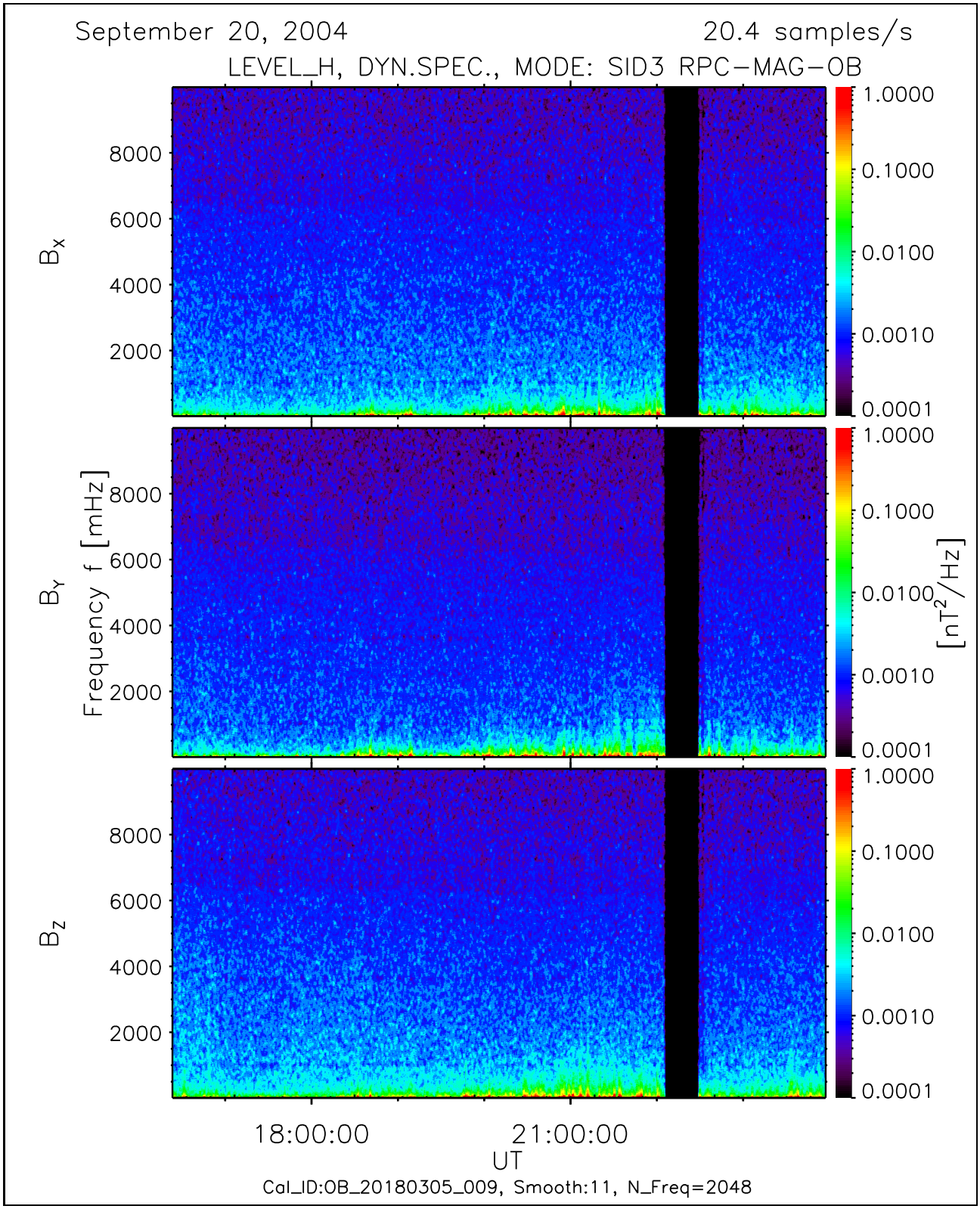

Figure 16: File: RPCMAG040920_CLH_OB_M3_DS0_10000_009

3 September 21, 2004:

3.1 Actions

The Instrument remained switched on until 02:02. It was switched on again at 17:02.

Time	Stage A, Stage B,Filter cfg	Stage 1, Stage 2, Stage3	Mode
00:00 – 02:01	0 0 0	0 0 0	SID3
20:19 – 24:00	0 0 0	0 0 0	SID3

3.2 Plots of Calibrated Data using the new Temperature Model

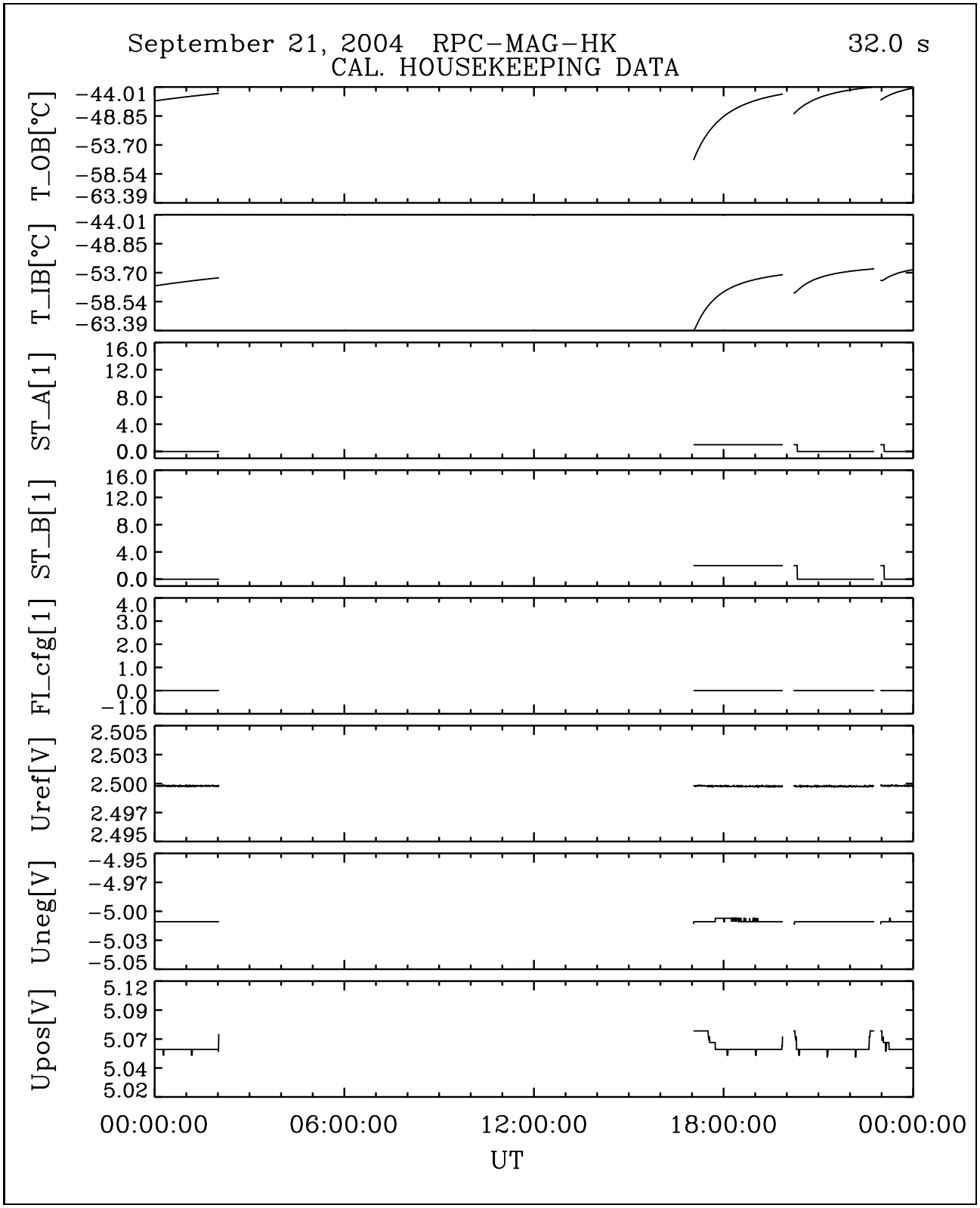

Figure 17: File: RPCMAG040921T0000_CLA_HK_P0000_2400

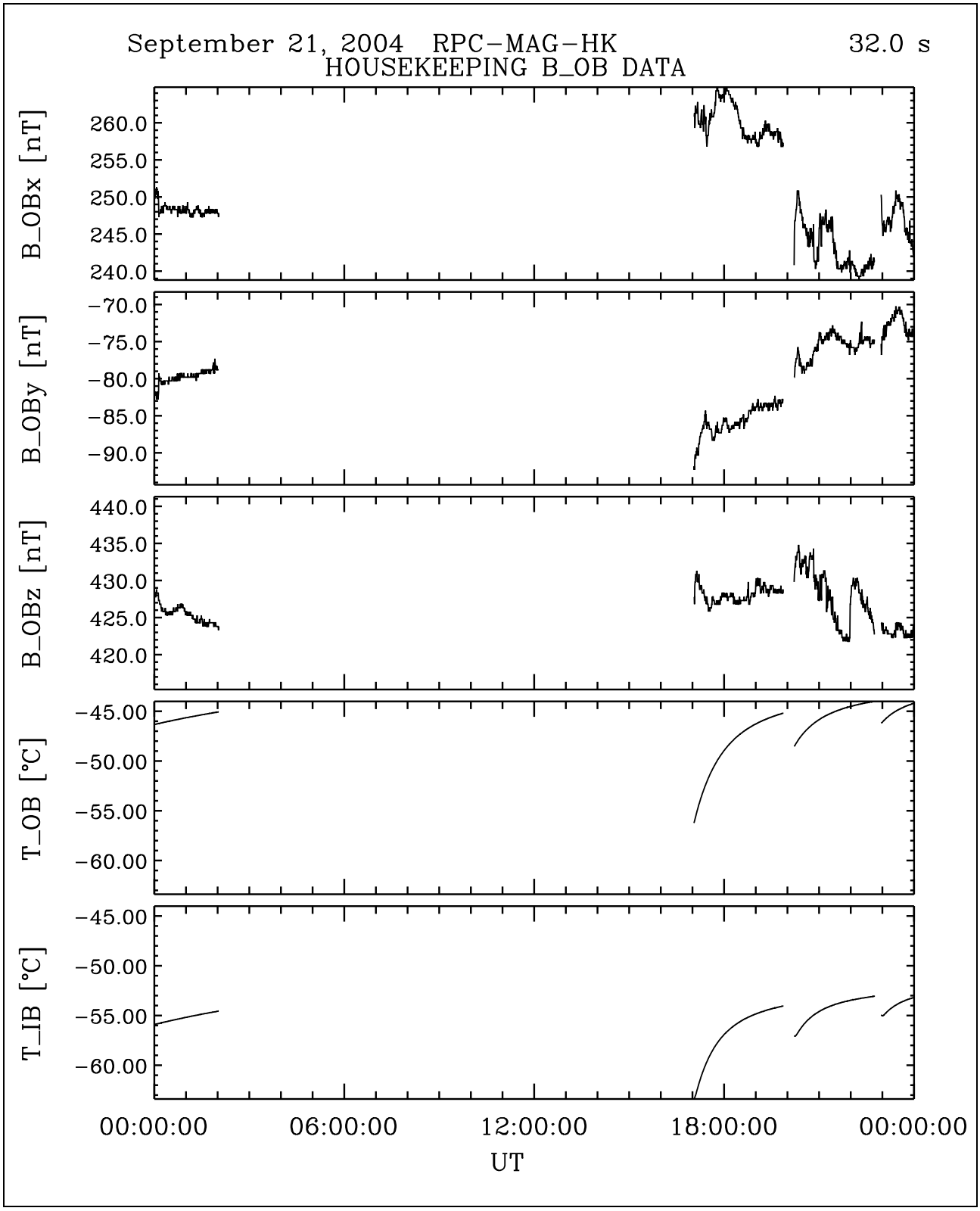

Figure 18: File: RPCMAG040921T0000_CLA_HK_B_P0000_2400

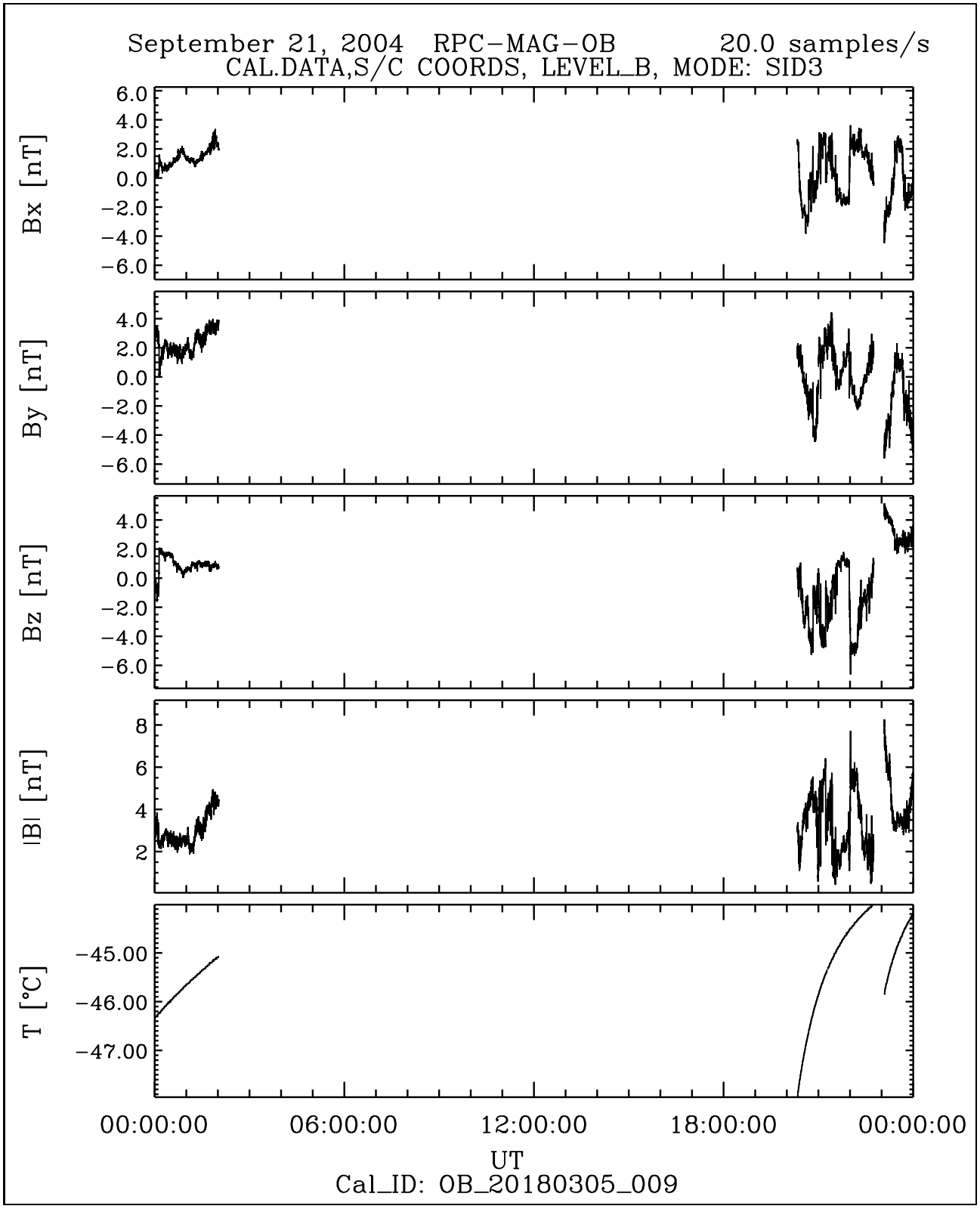

Figure 19: File: RPCMAG040921T0000_CLB_OB_M3_T0000_2400_009

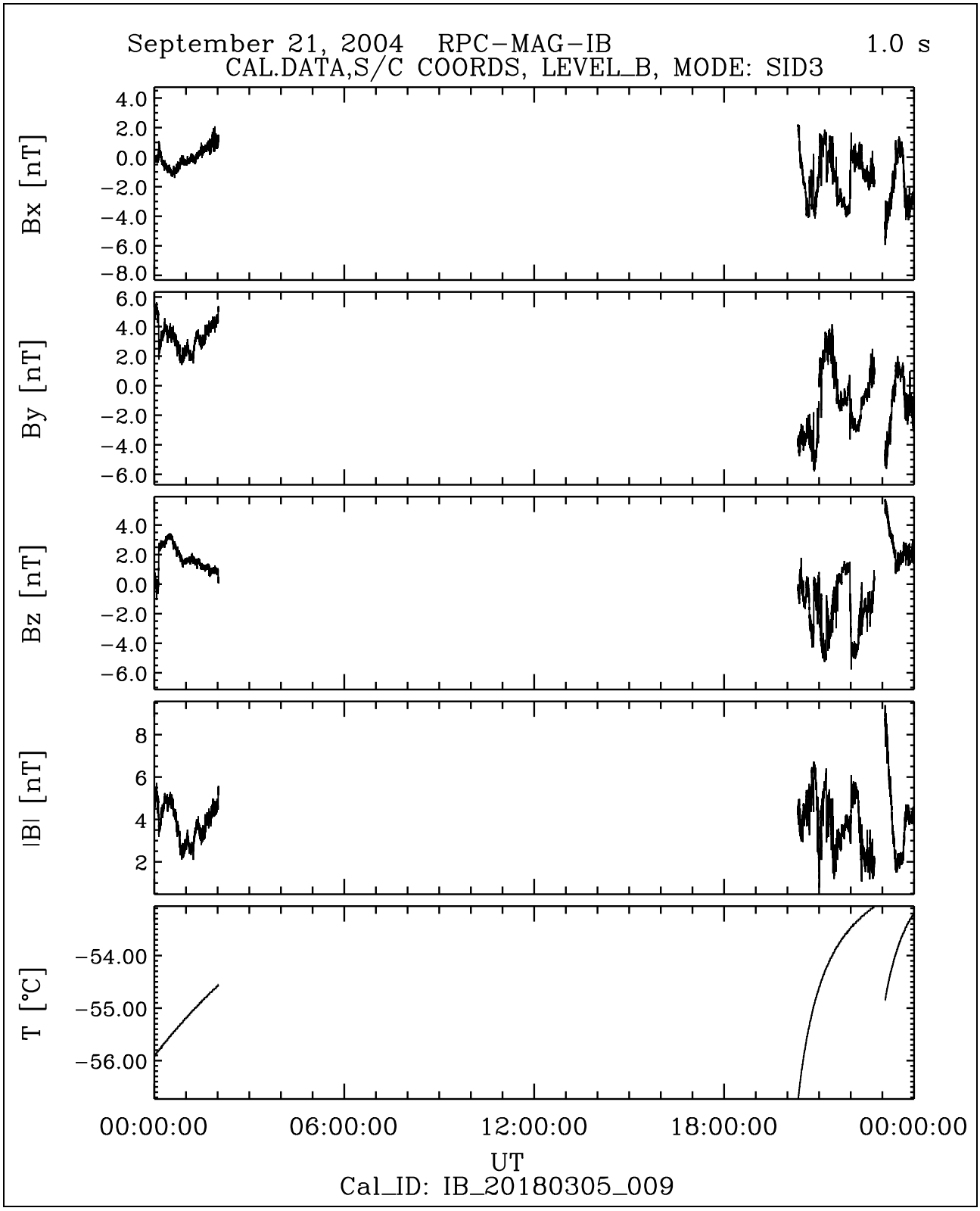

Figure 20: File: RPCMAG040921T0000_CLB_IB_M3_T0000_2400_009

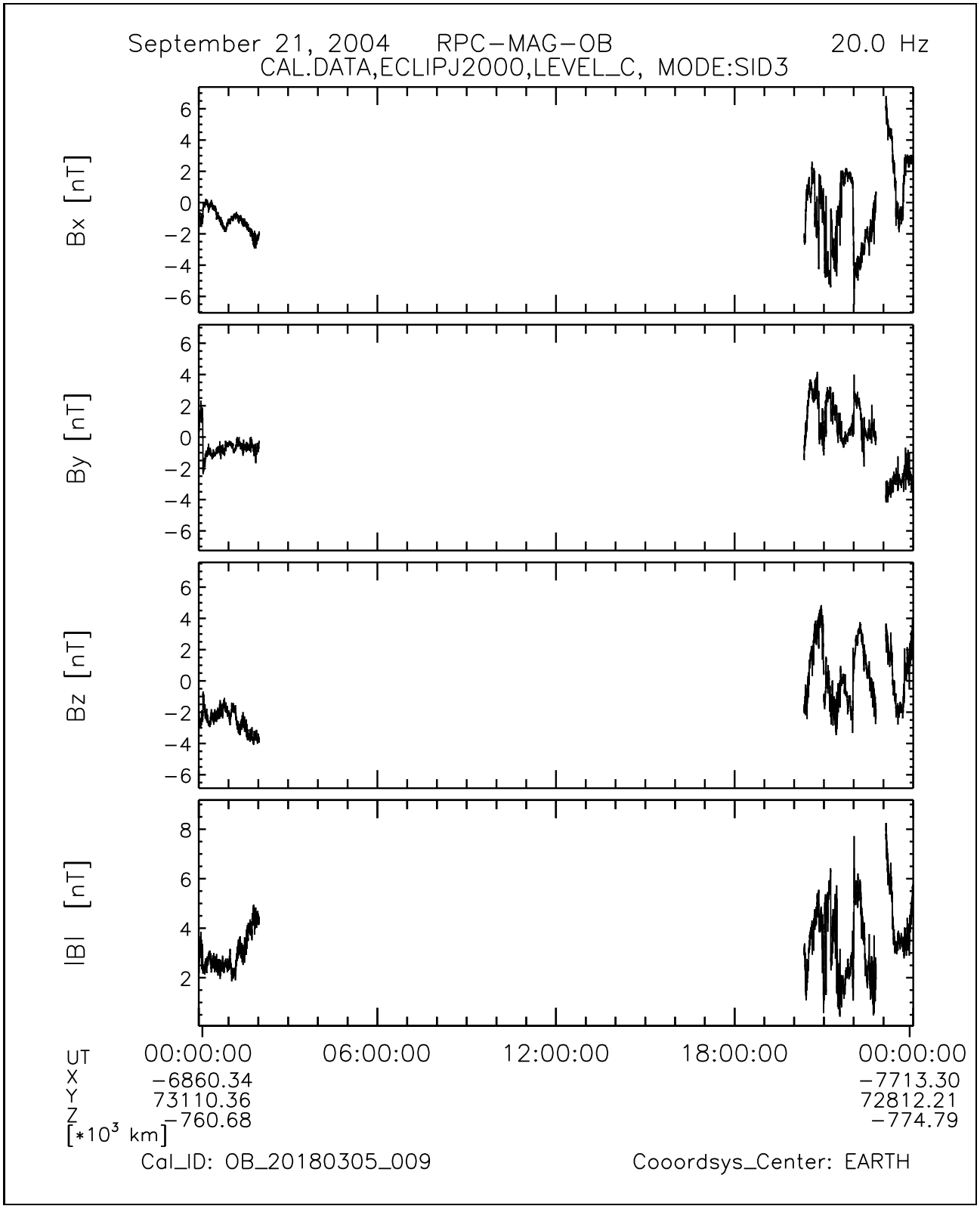

Figure 21: File: RPCMAG040921T0000_CLC_OB_M3_T0000_2400_009

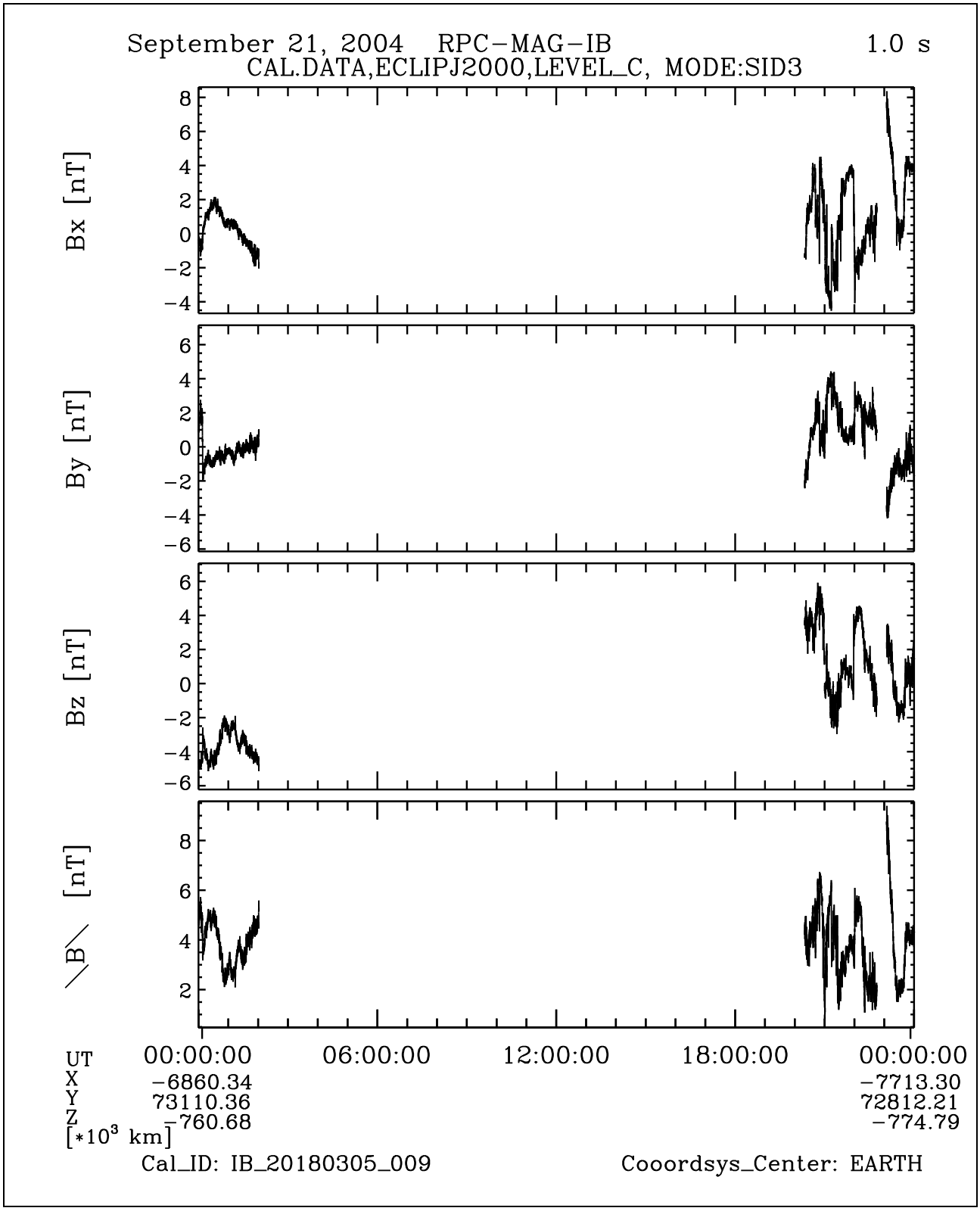

Figure 22: File: RPCMAG040921T0000_CLC_IB_M3_T0000_2400_009

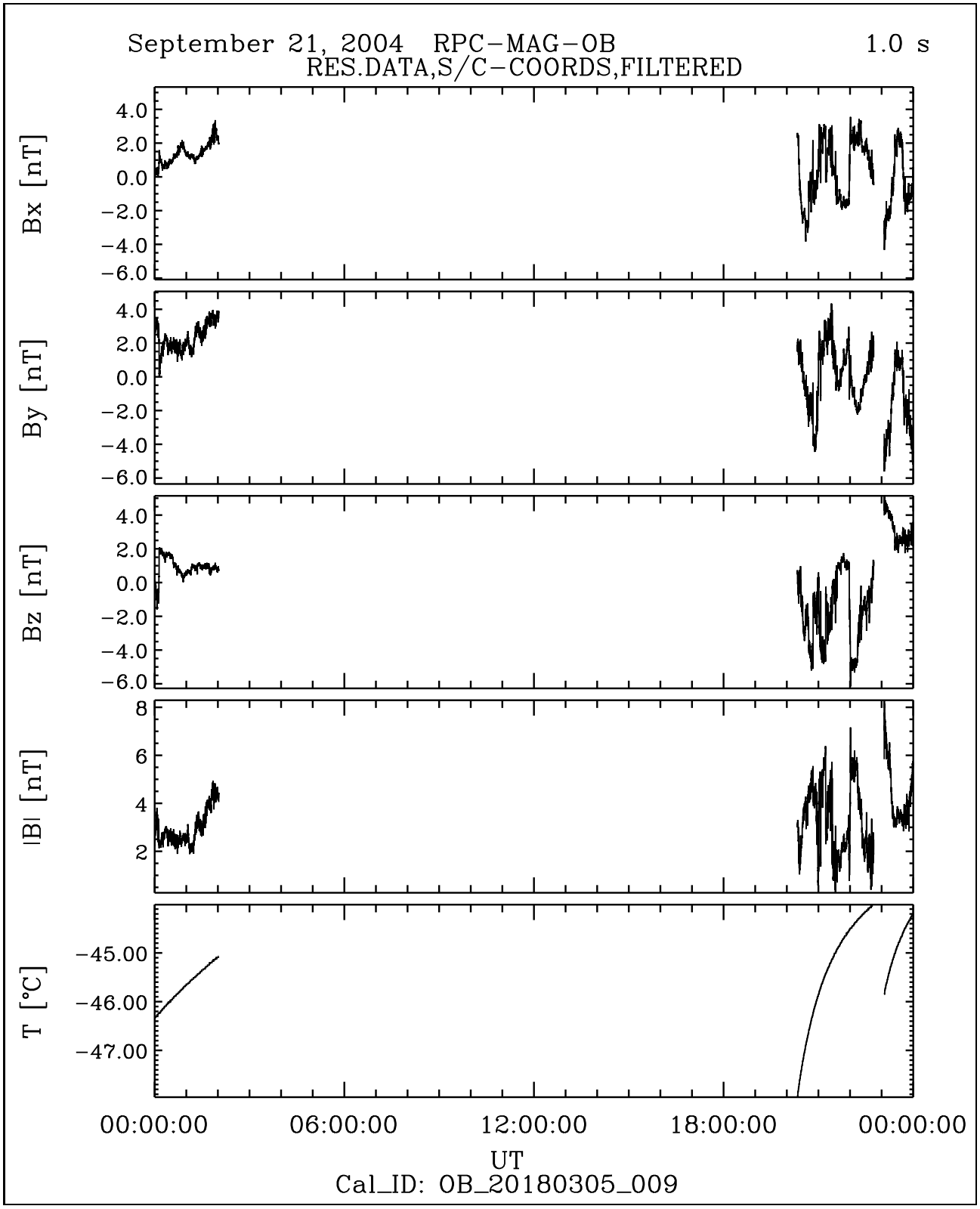

Figure 23: File: RPCMAG040921_CLF_OB_A1_T0000_2400_009

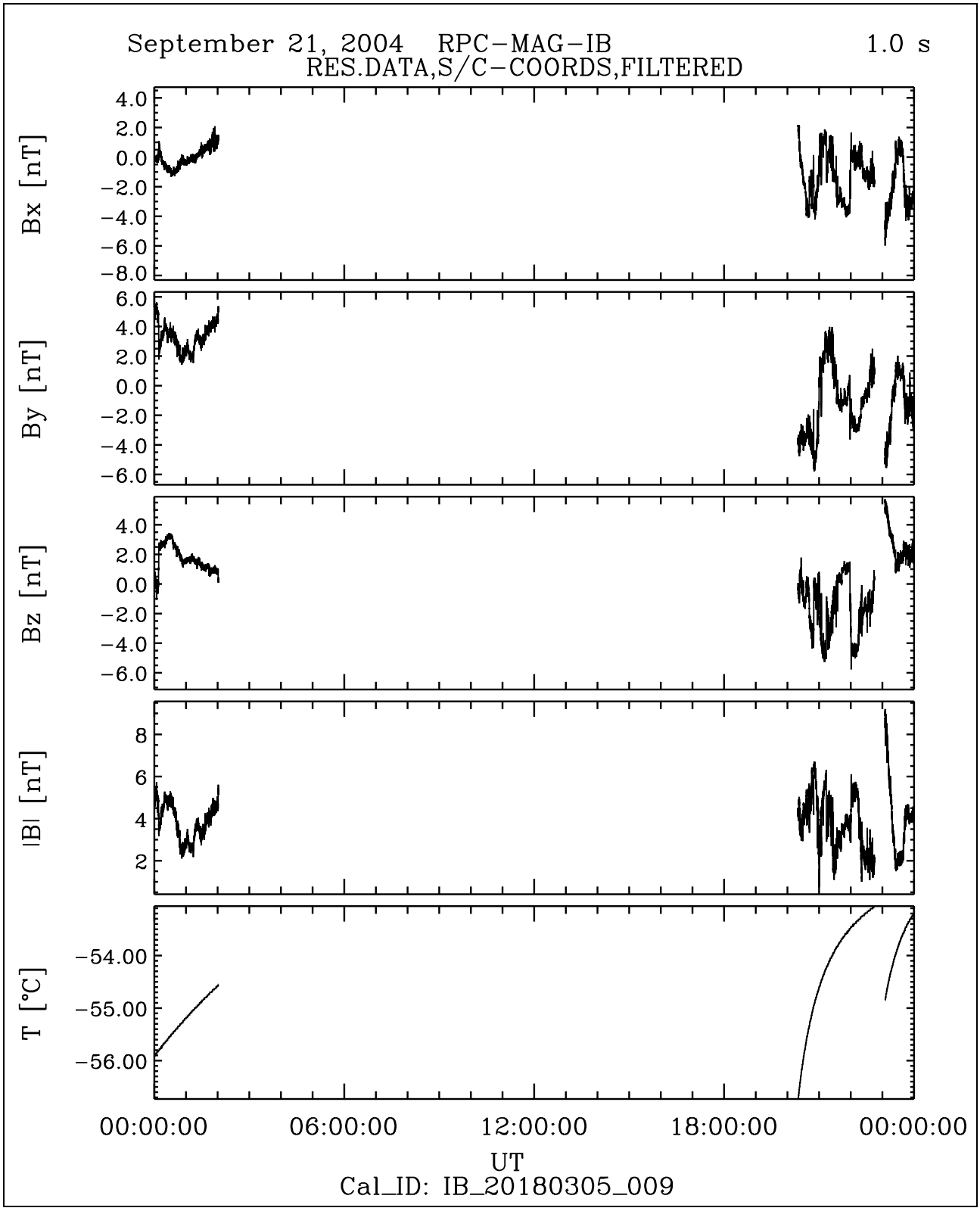

Figure 24: File: RPCMAG040921_CLF_IB_A1_T0000_2400_009

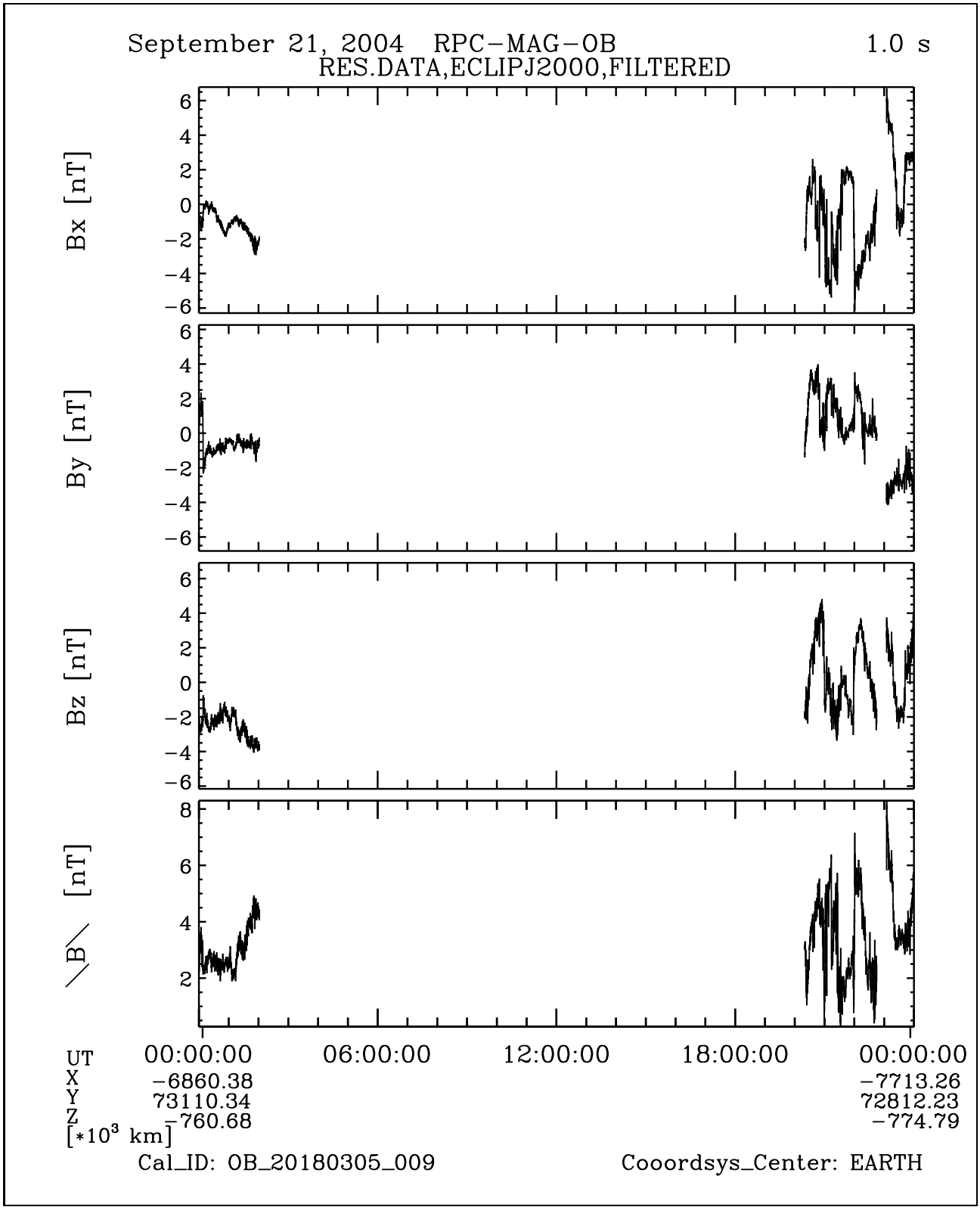

Figure 25: File: RPCMAG040921_CLG_OB_A1_T0000_2400_009

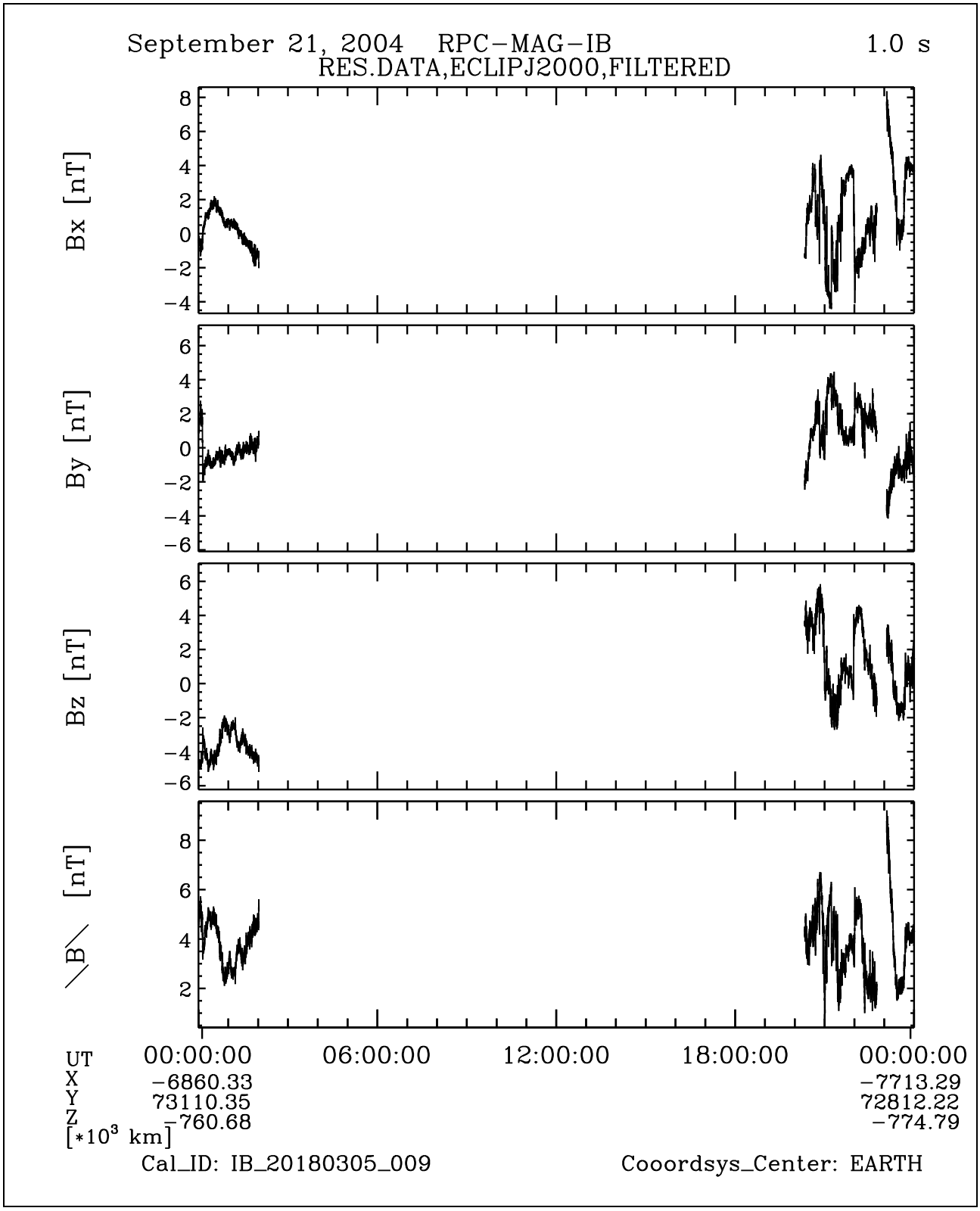

Figure 26: File: RPCMAG040921_CLG_IB_A1_T0000_2400_009

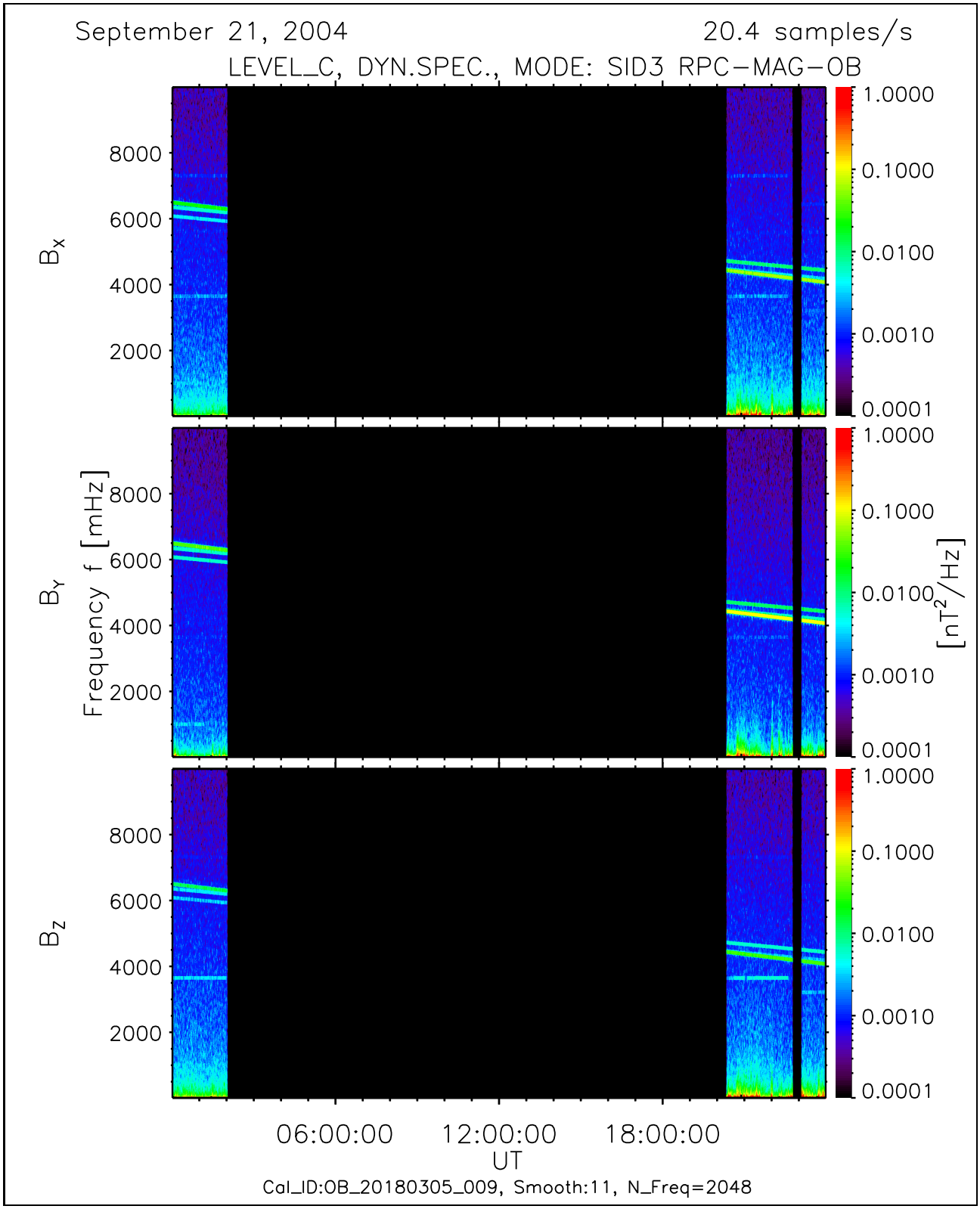

Figure 27: File: RPCMAG040921T0000_CLC_OB_M3_DS0_10000_009

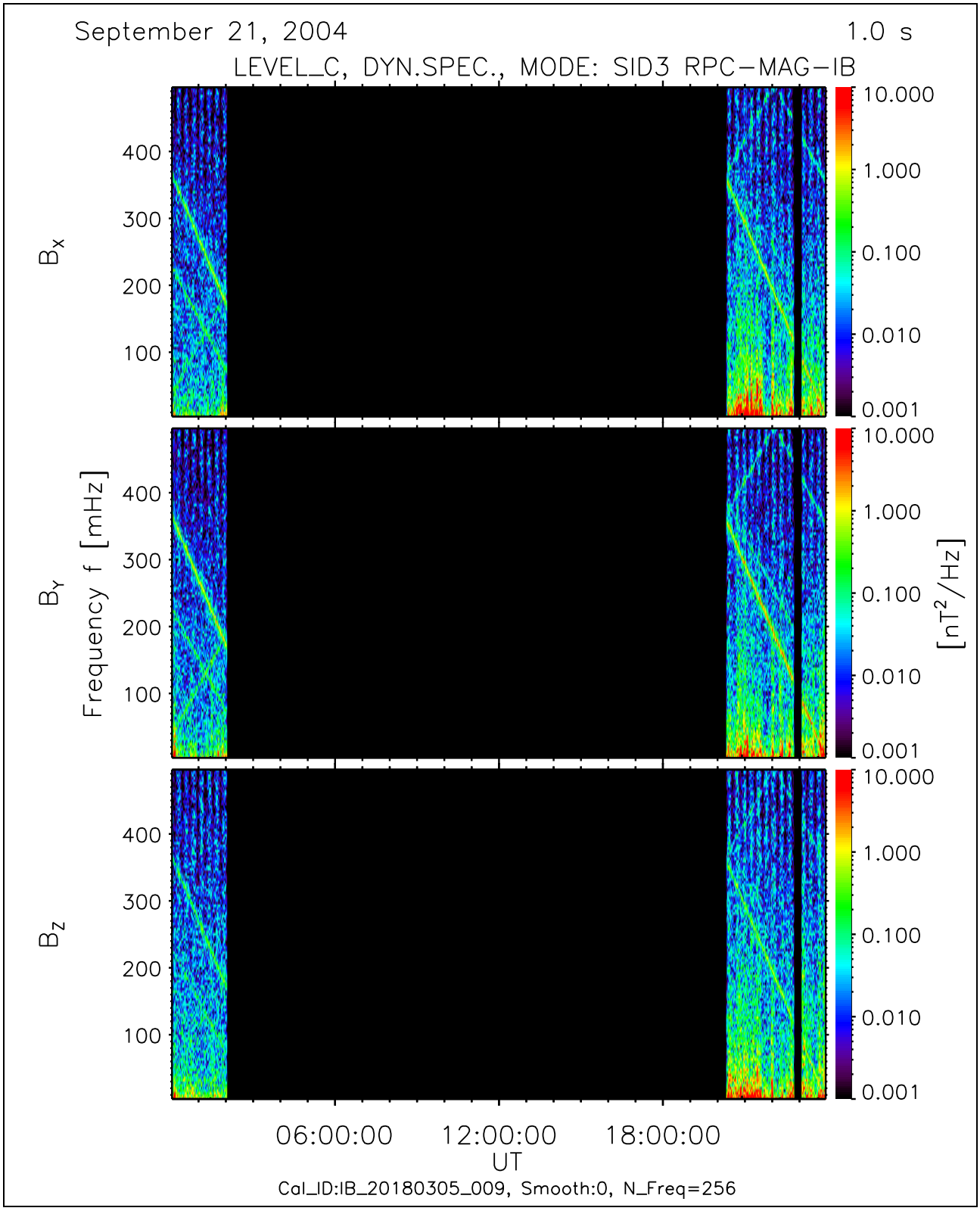

Figure 28: File: RPCMAG040921T0000_CLC_IB_M3_DS0_500_009

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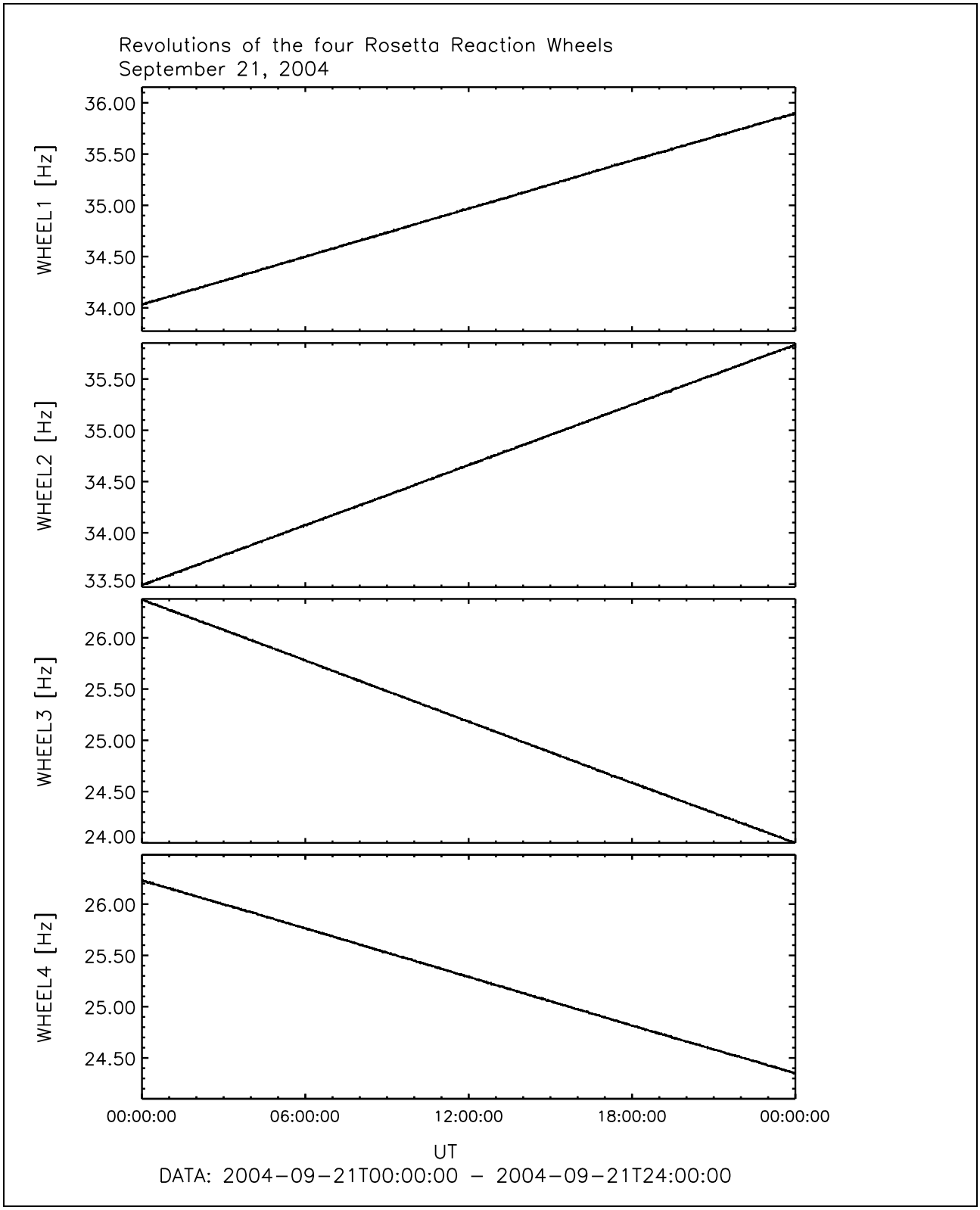

Figure 29: File: wheels_Hz2004-09-21T00-00

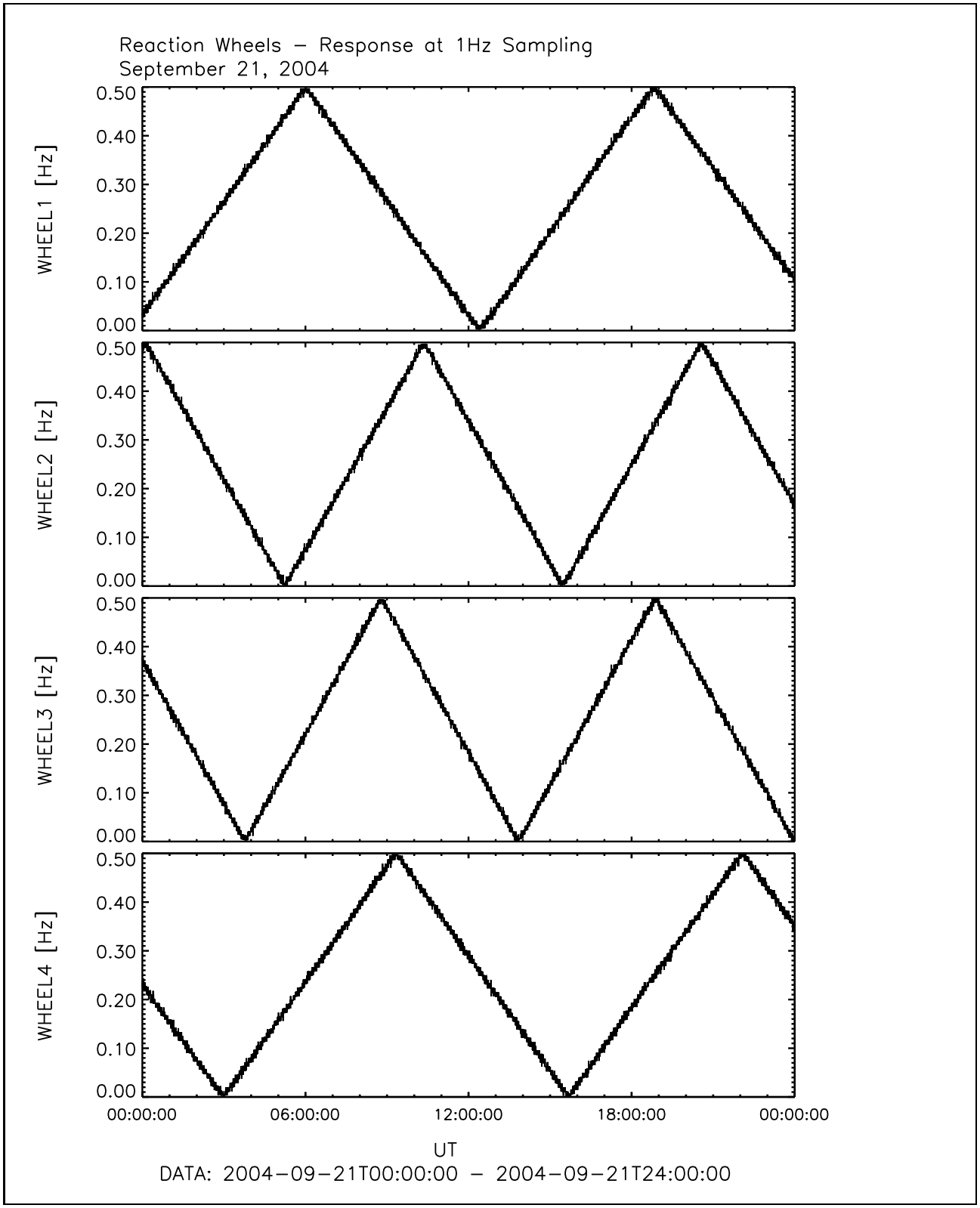

Figure 30: File: wheels_1Hz_Sampling2004-09-21T00-00

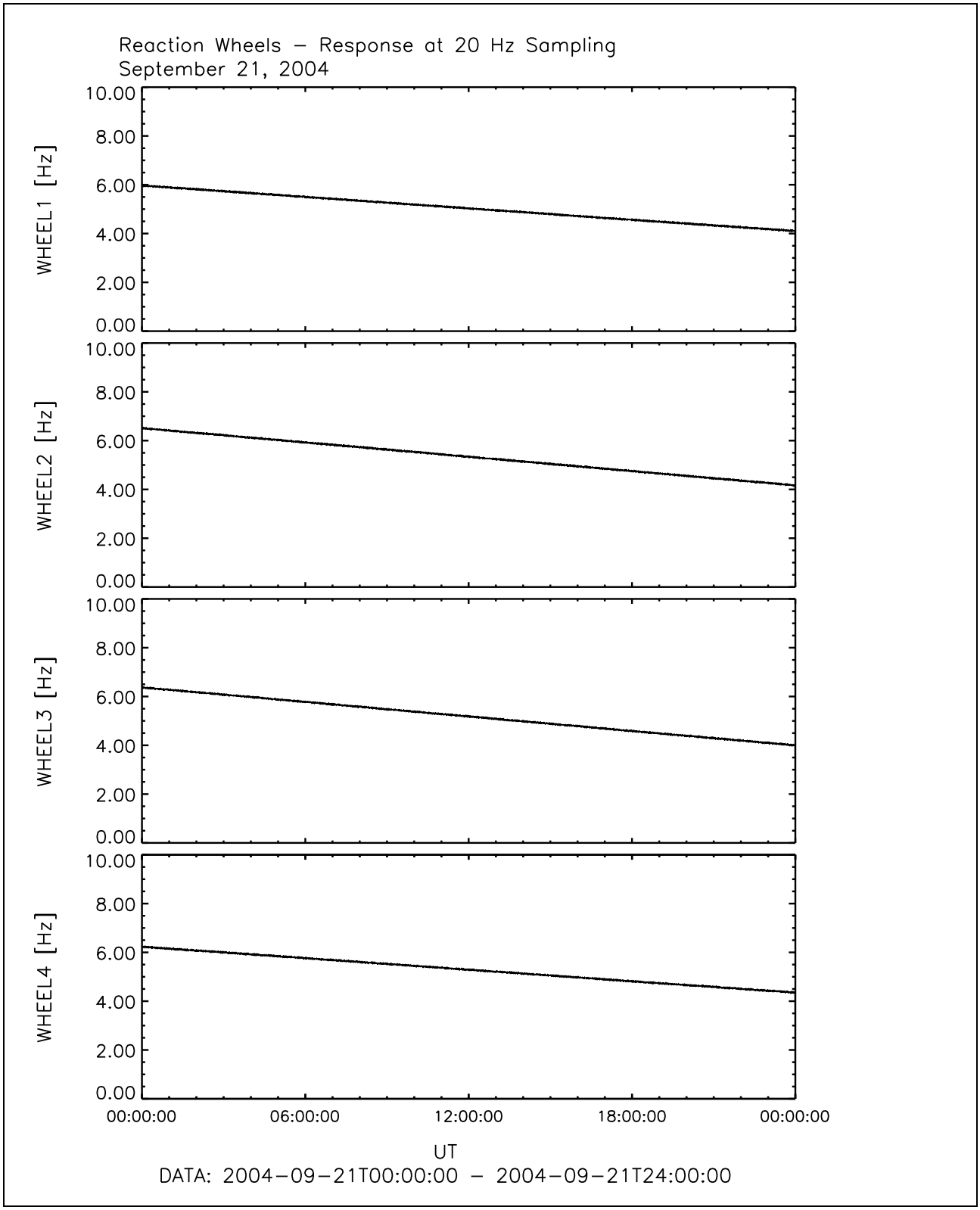

Figure 31: File: wheels_20Hz_Sampling2004-09-21T00-00

3.4 Plots of Reaction Wheel and LAP Disturbance corrected Data

The following plots show the dynamic spectra of the LEVEL_H data. These data have been purged from ROSETTAs reaction wheel disturbance and also from the disturbance of the LAP instrument. Plots are only shown for the primary sensor.

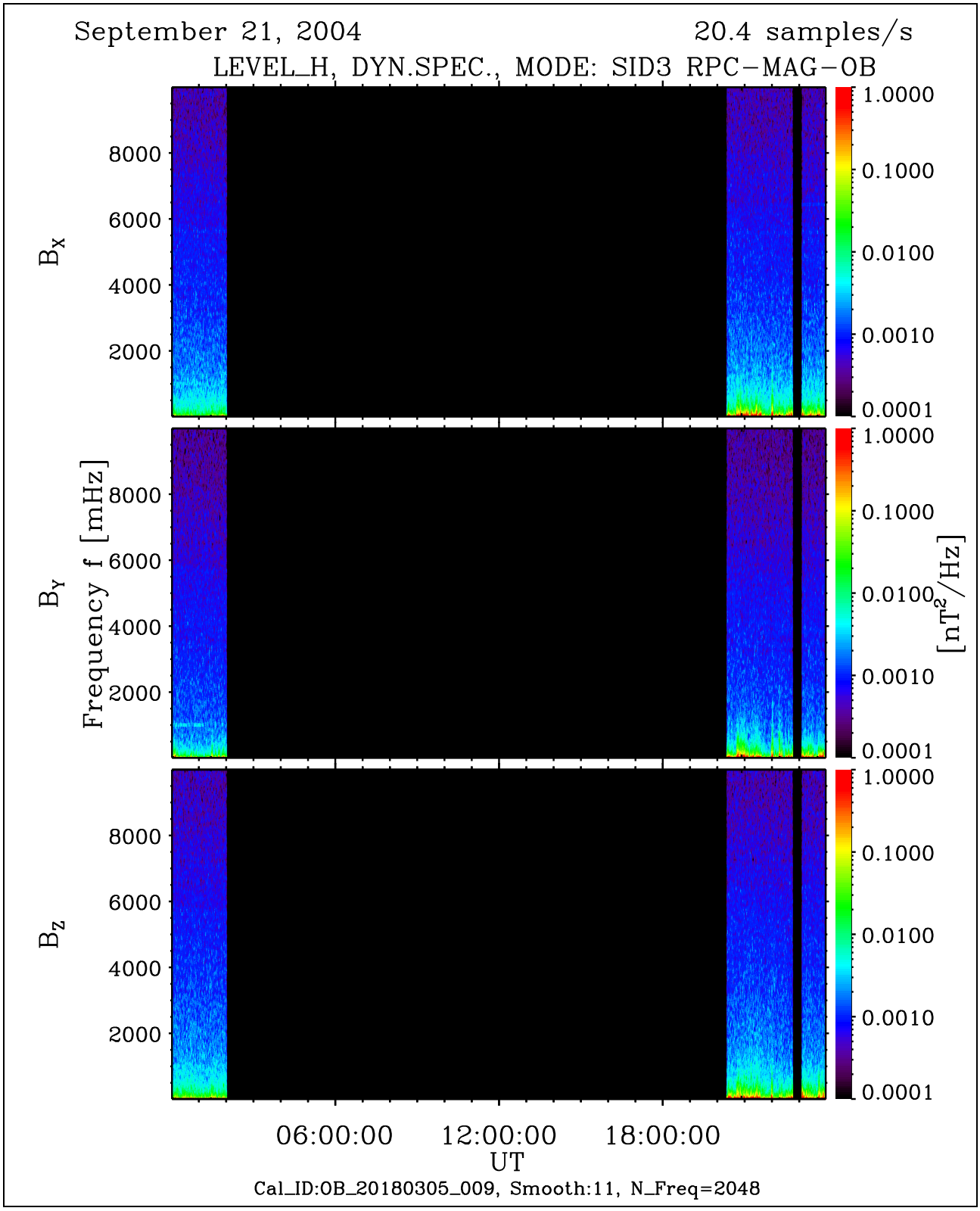

Figure 32: File: RPCMAG040921T0000_CLH_OB_M3_DS0_10000_009

4 September 22, 2004:

4.1 Actions

The Instrument remained switched on until 02:01.

Time	Stage A, Stage B,Filter cfg	Stage 1, Stage 2, Stage3	Mode
00:00 – 02:01	0 0 0	0 0 0	SID3

4.2 Plots of Calibrated Data using the new Temperature Model

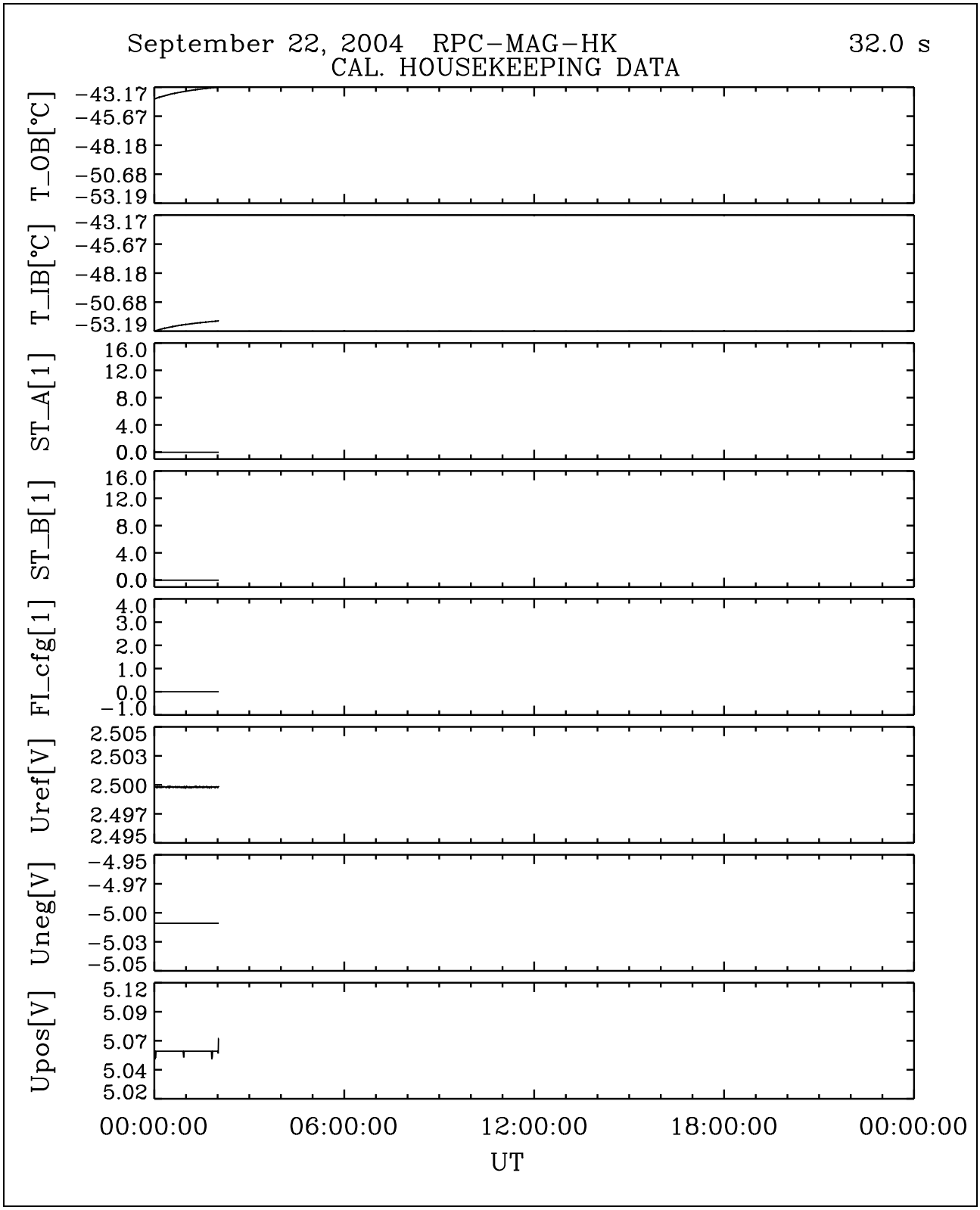

Figure 33: File: RPCMAG040922T0000_CLA_HK_P0000_2400

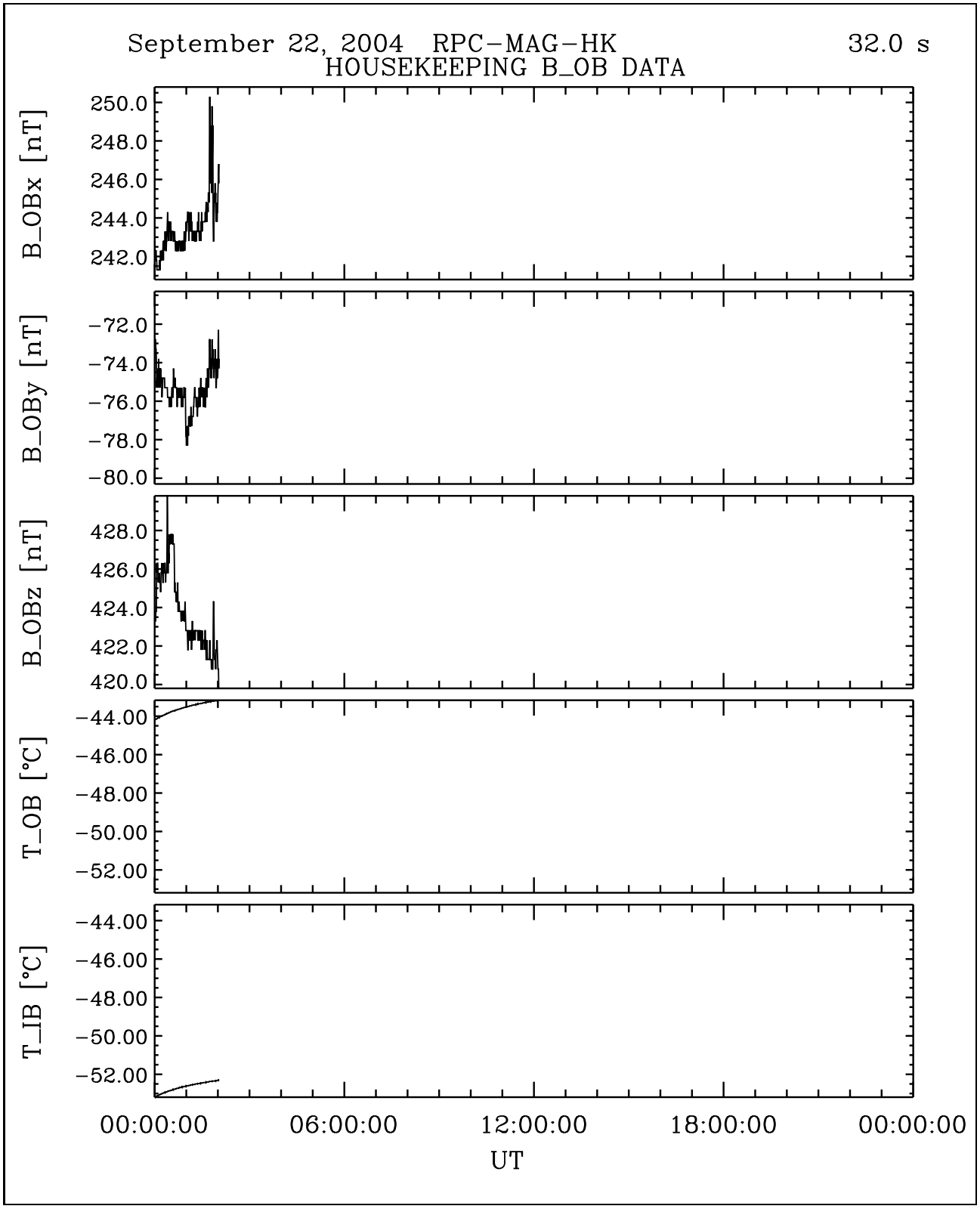

Figure 34: File: RPCMAG040922T0000_CLA_HK_B_P0000_2400

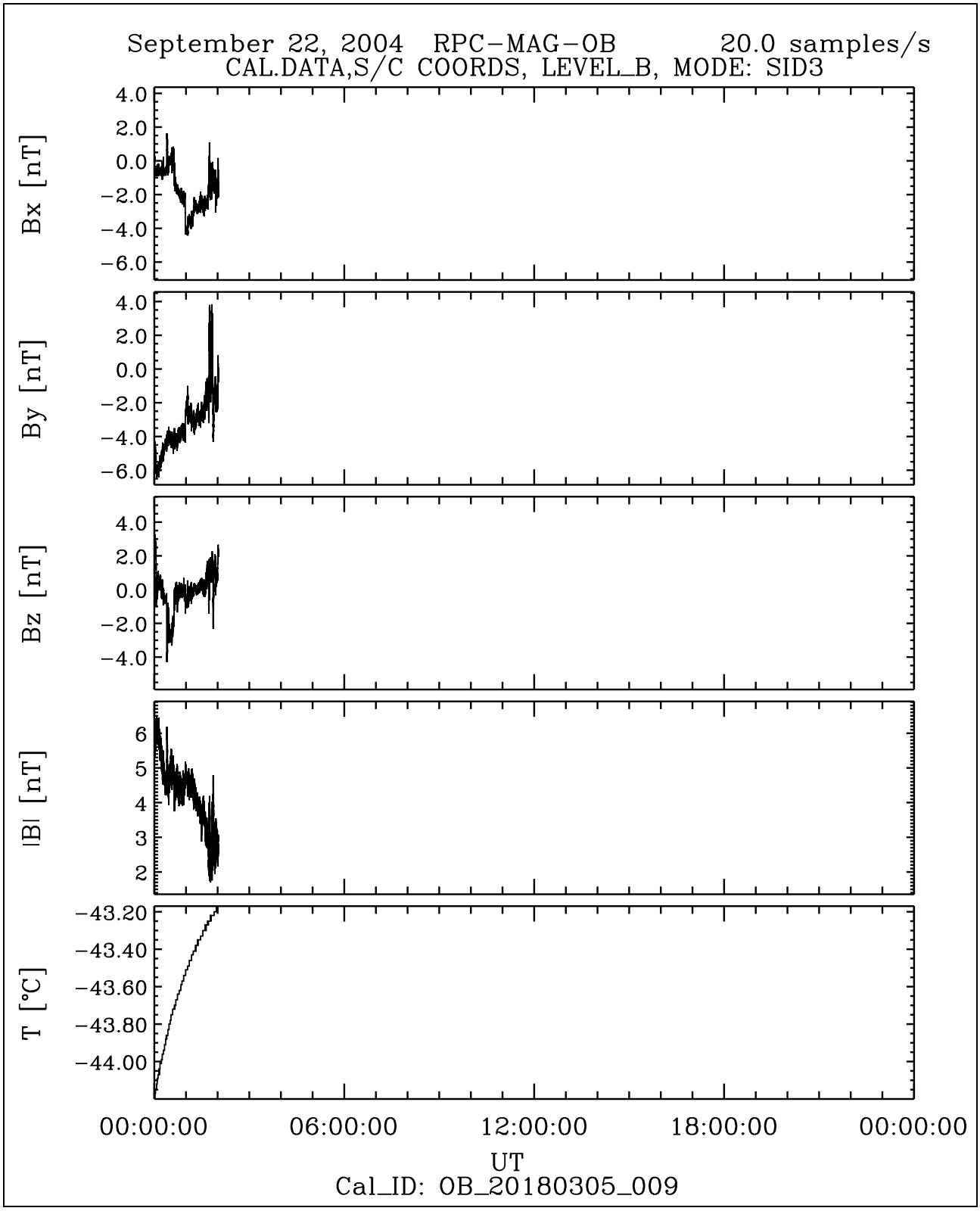

Figure 35: File: RPCMAG040922T0000_CLB_OB_M3_T0000_2400_009

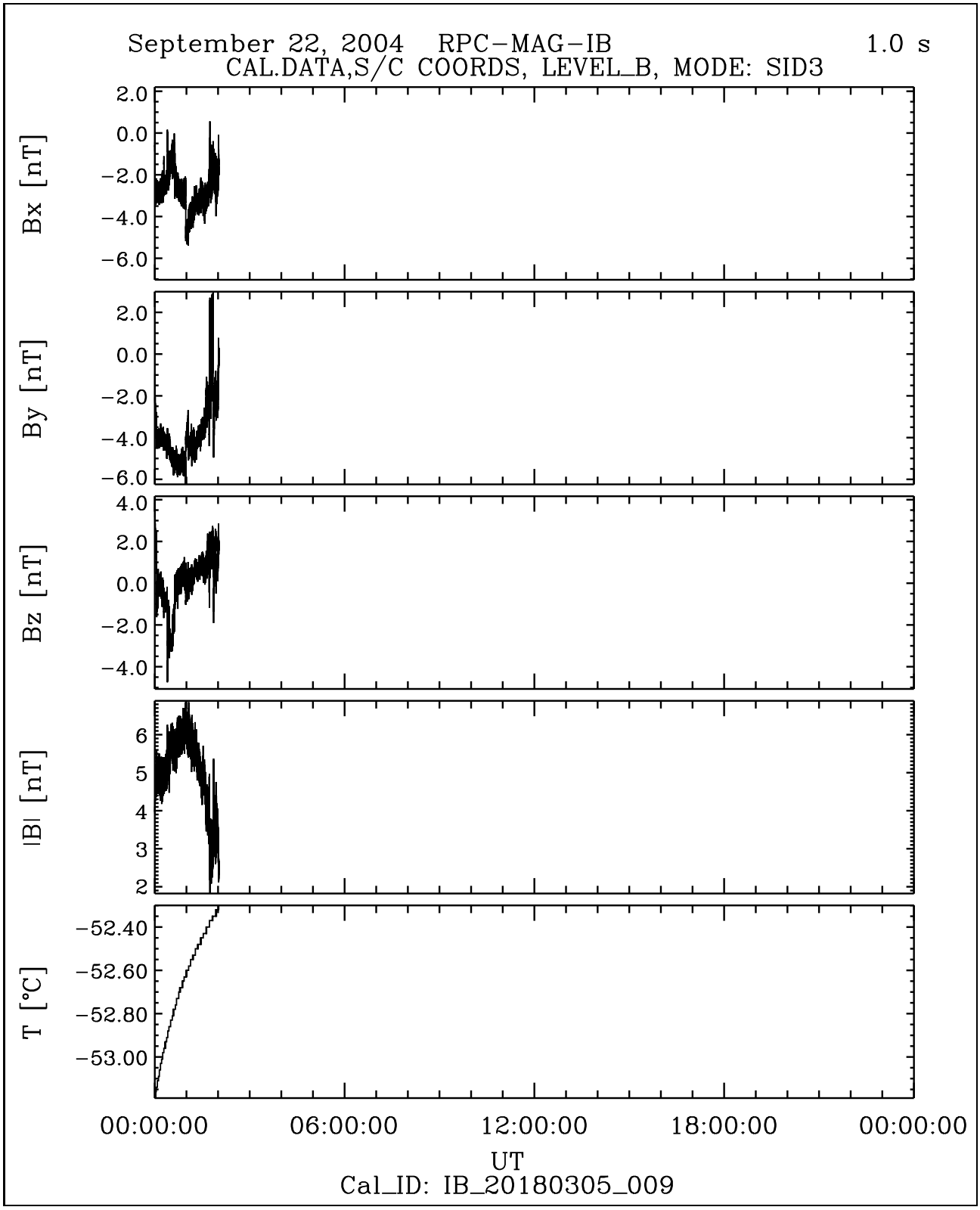

Figure 36: File: RPCMAG040922T0000_CLB_IB_M3_T0000_2400_009

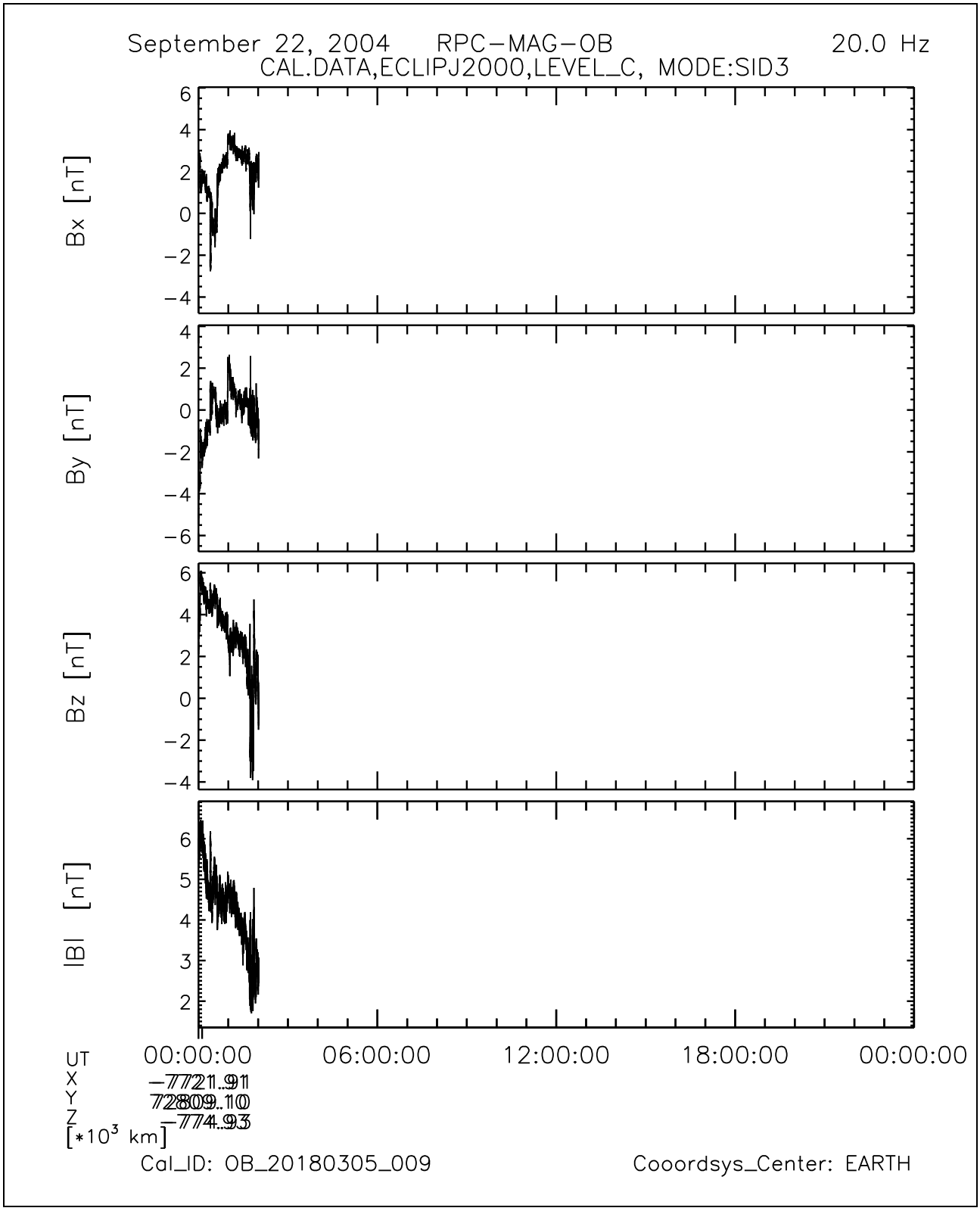

Figure 37: File: RPCMAG040922T0000_CLC_OB_M3_T0000_2400_009

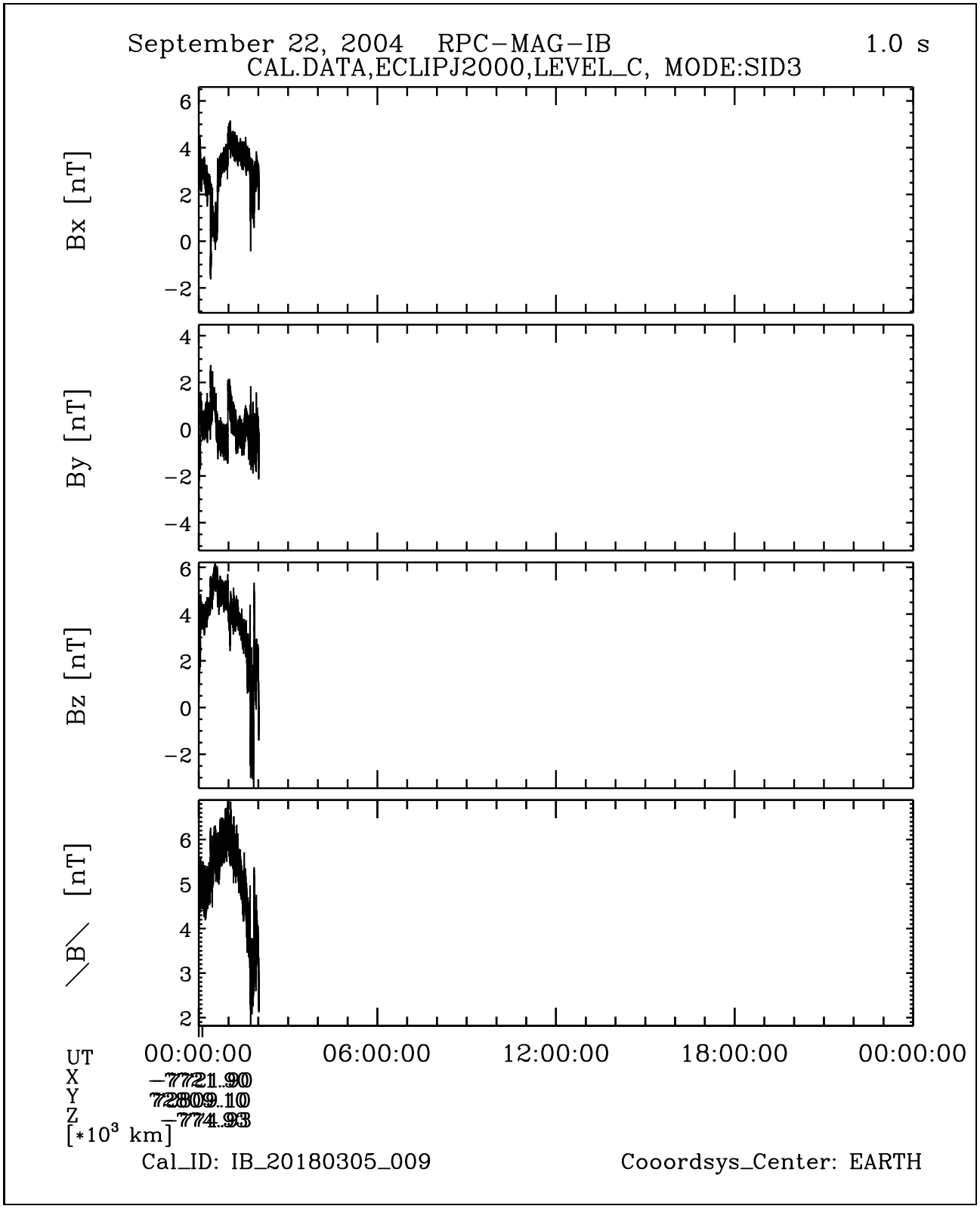

Figure 38: File: RPCMAG040922T0000_CLC_IB_M3_T0000_2400_009

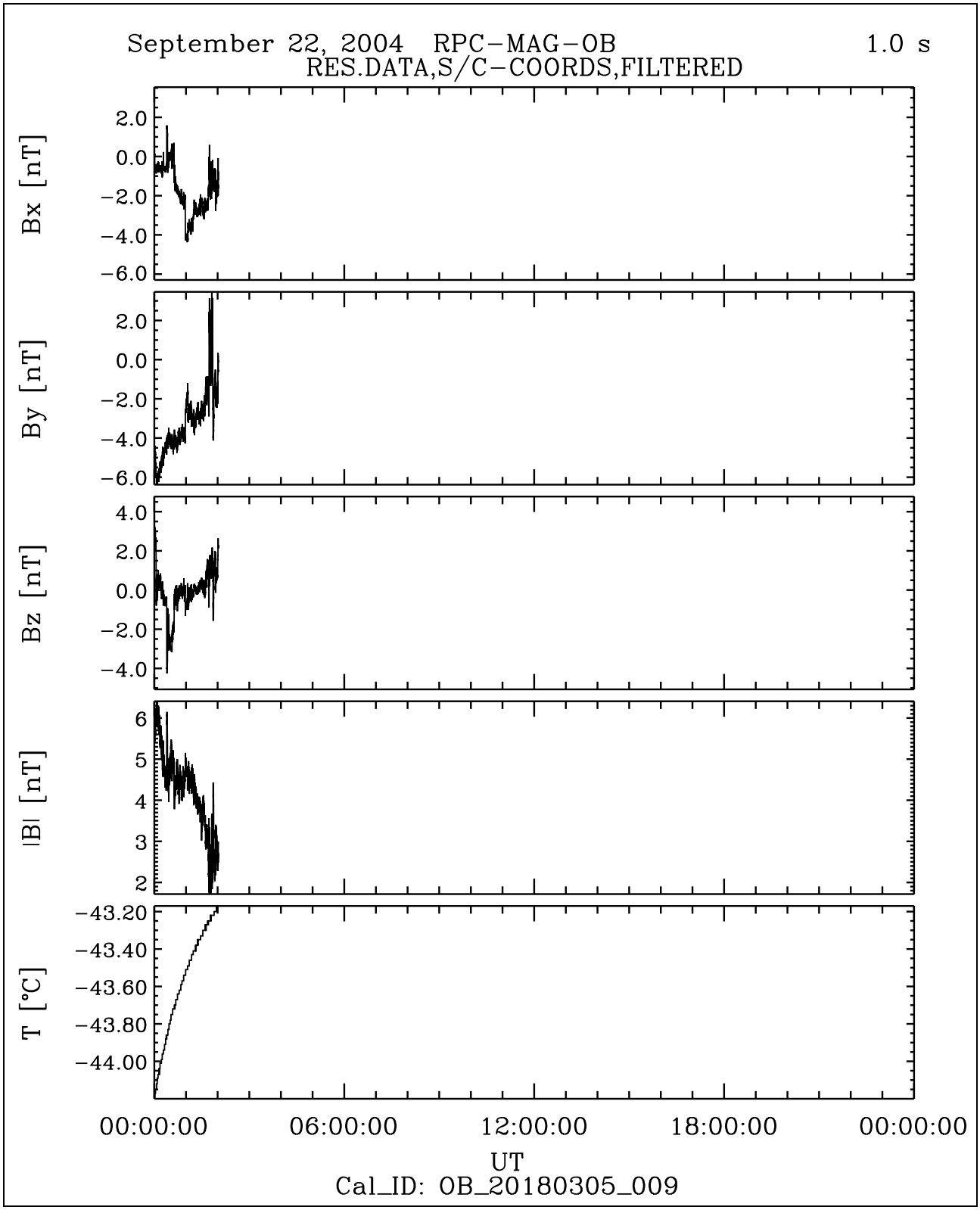

Figure 39: File: RPCMAG040922_CLF_OB_A1_T0000_2400_009

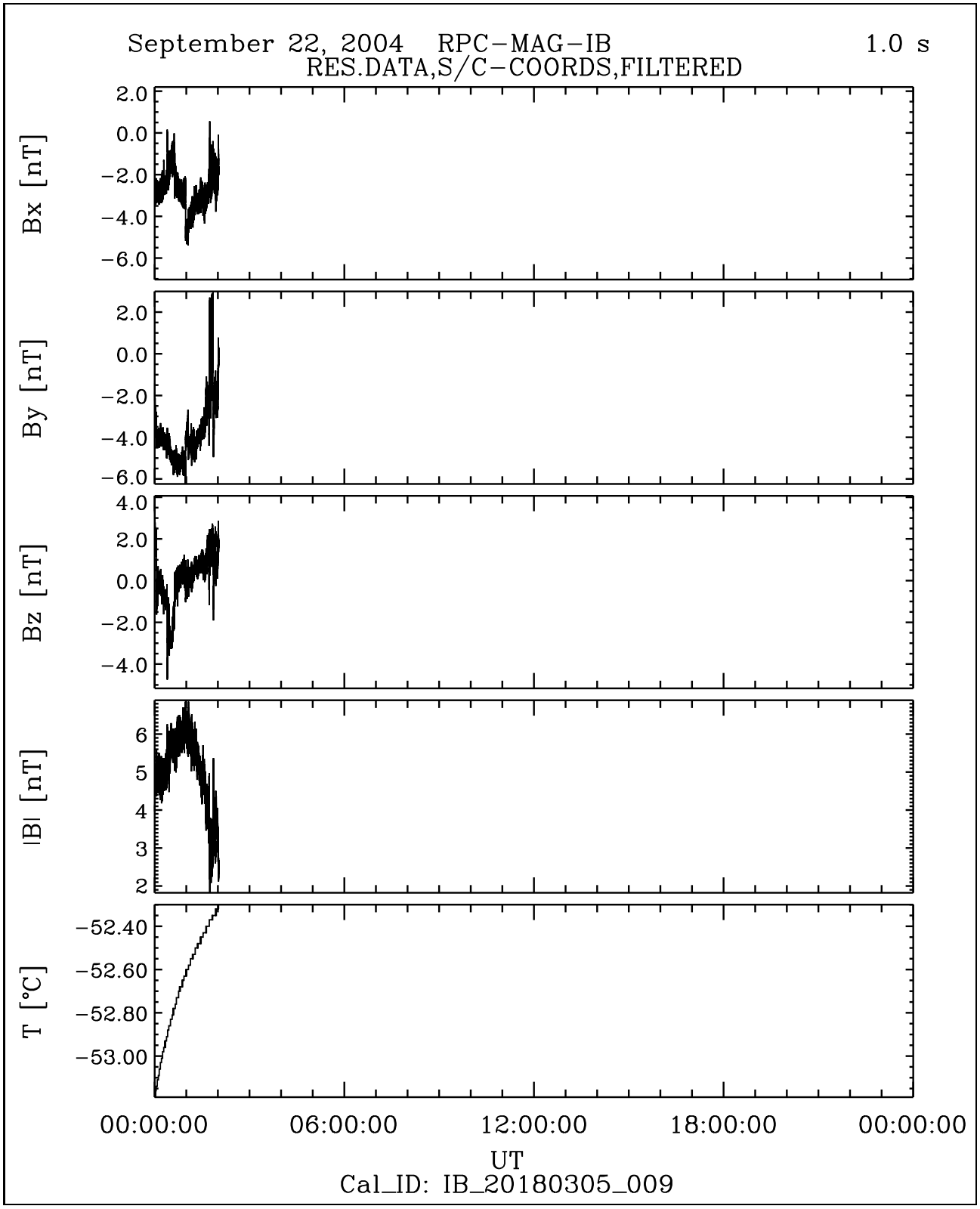

Figure 40: File: RPCMAG040922_CLF_IB_A1_T0000_2400_009

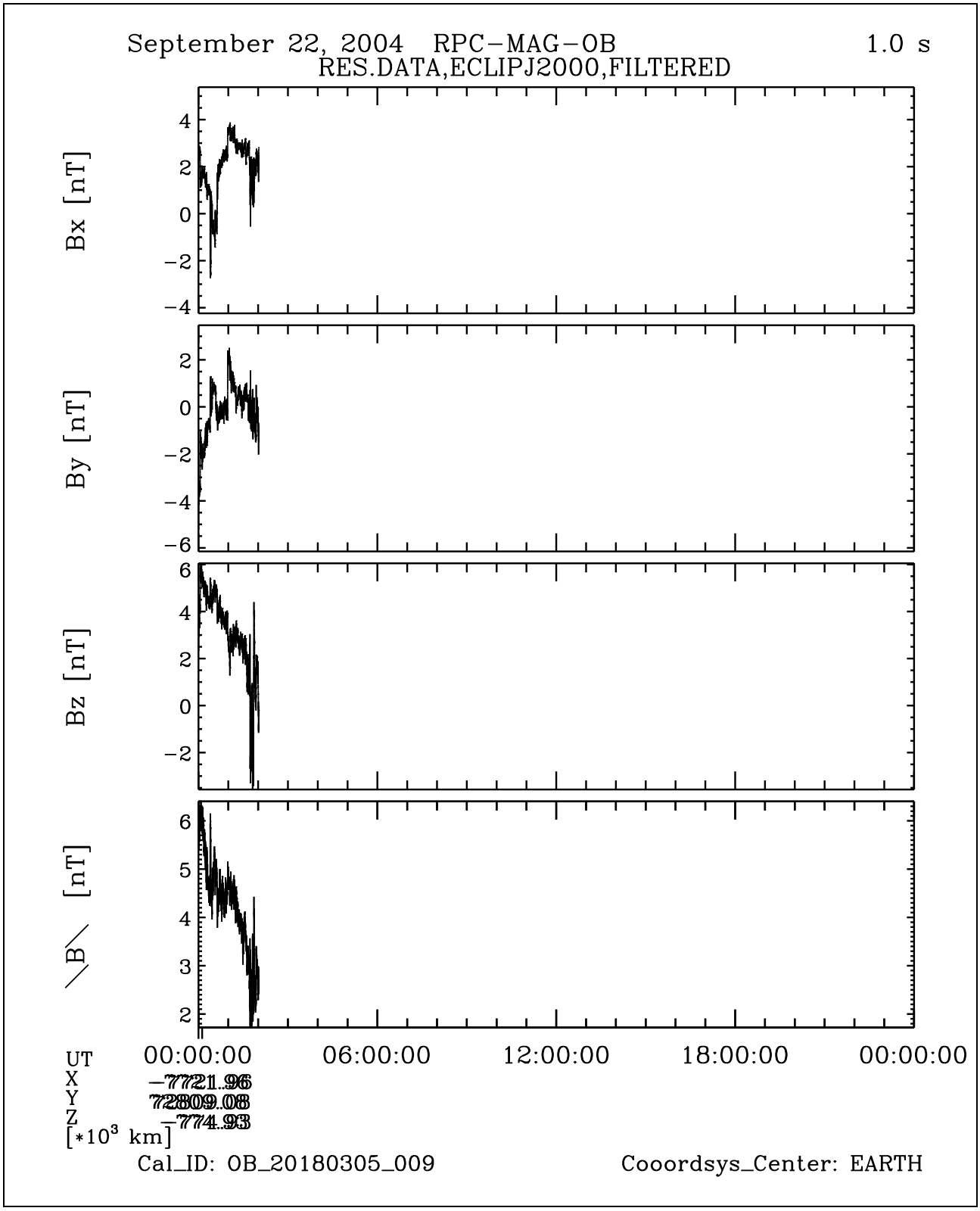

Figure 41: File: RPCMAG040922_CLG_OB_A1_T0000_2400_009

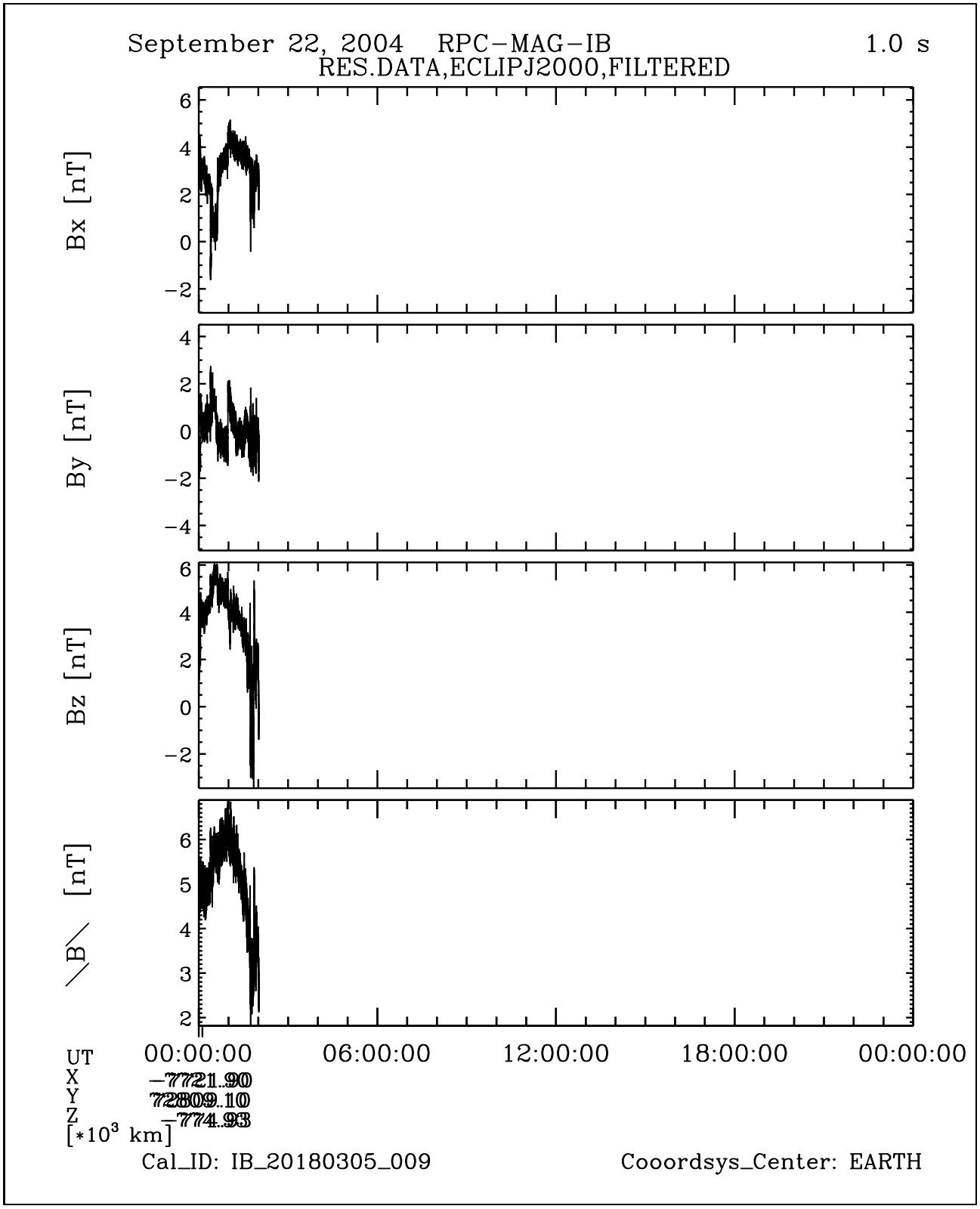

Figure 42: File: RPCMAG040922_CLG_IB_A1_T0000_2400_009

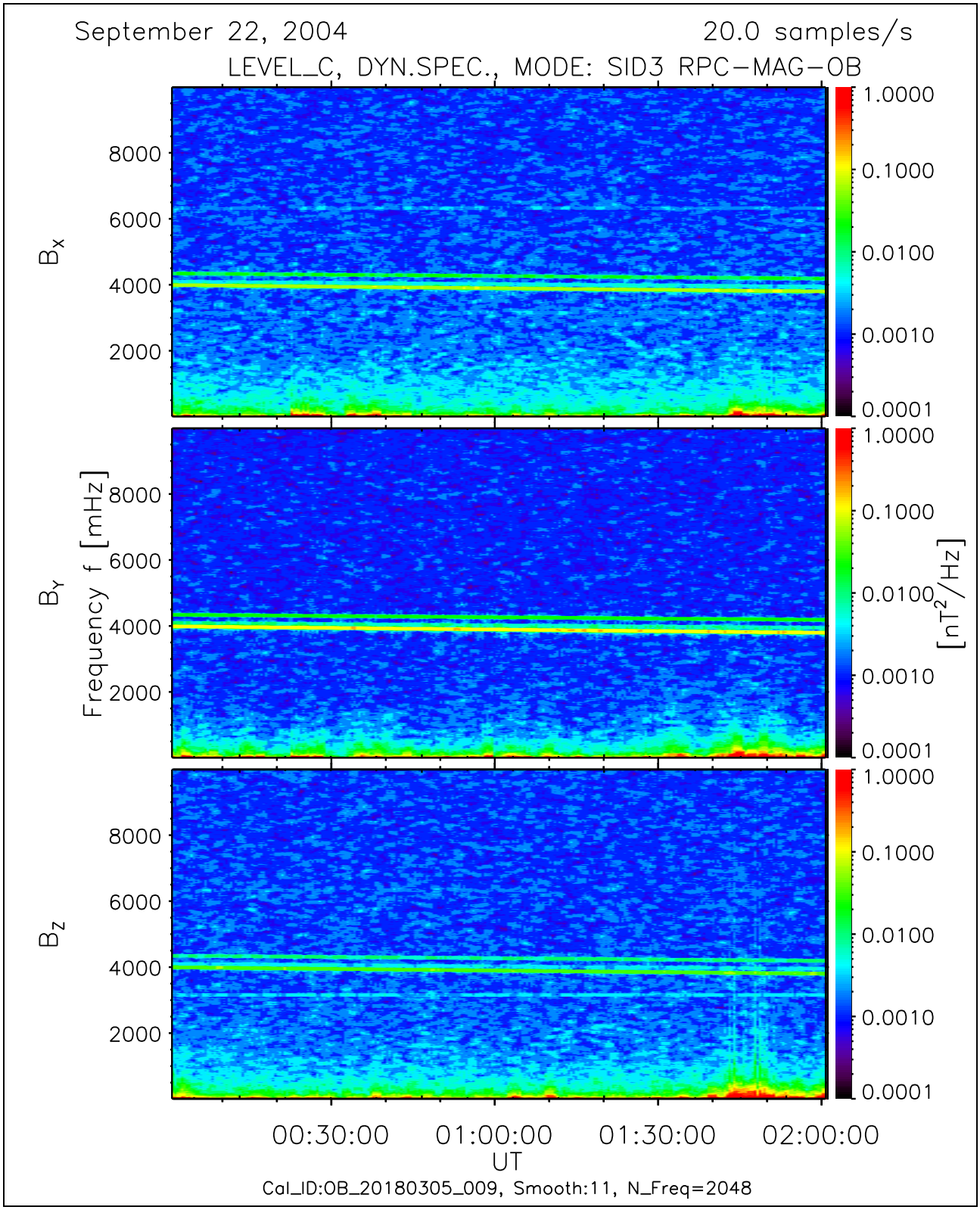

Figure 43: File: RPCMAG040922T0000_CLC_OB_M3_DS0_10000_009

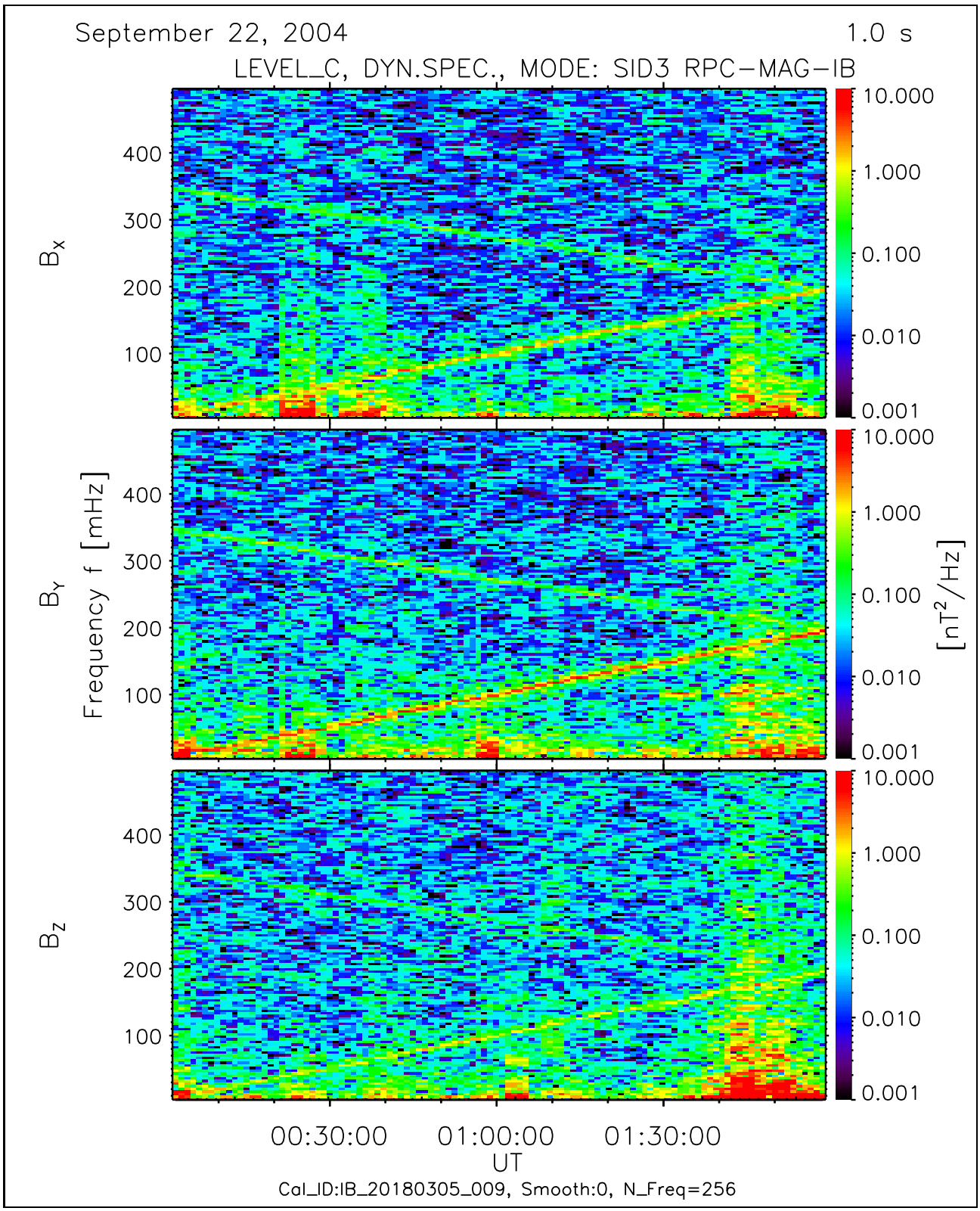

Figure 44: File: RPCMAG040922T0000_CLC_IB_M3_DS0_500_009

4.3 Plots of ROSETTA's Reaction Wheels Speeds

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- The original reaction wheel data as they are stored in the DDS.
- The theoretical response of the wheels impact seen by an instrument sampling with different frequencies. Here the response at 20 Hz and 1 Hz sampling frequency is plotted.

A comparison with the dynamic spectra of the MAG data gives an impressive accordance between the reaction wheel frequencies and the spectral lines observed in the dynamic MAG spectra.

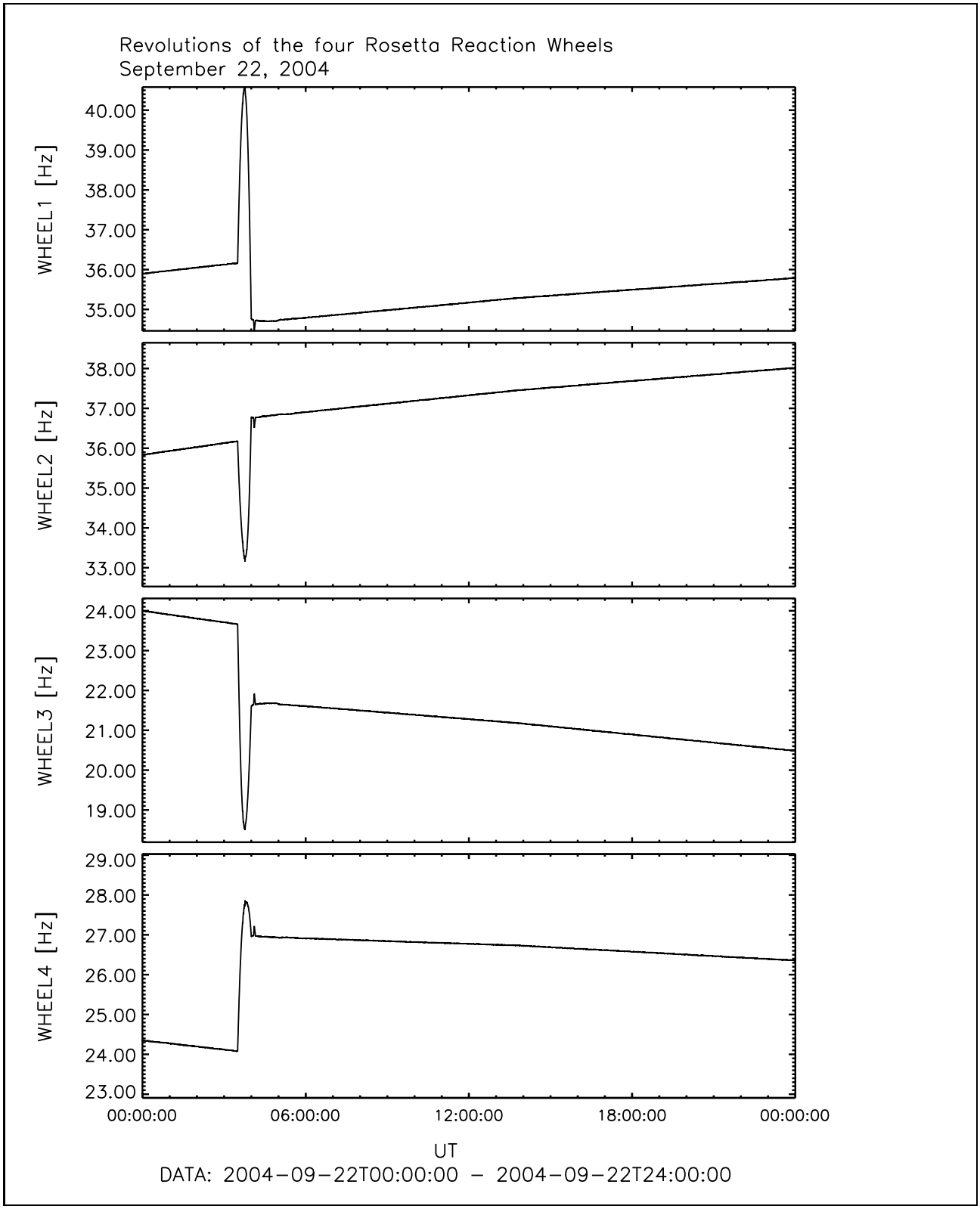

Figure 45: File: wheels_Hz2004-09-22T00-00

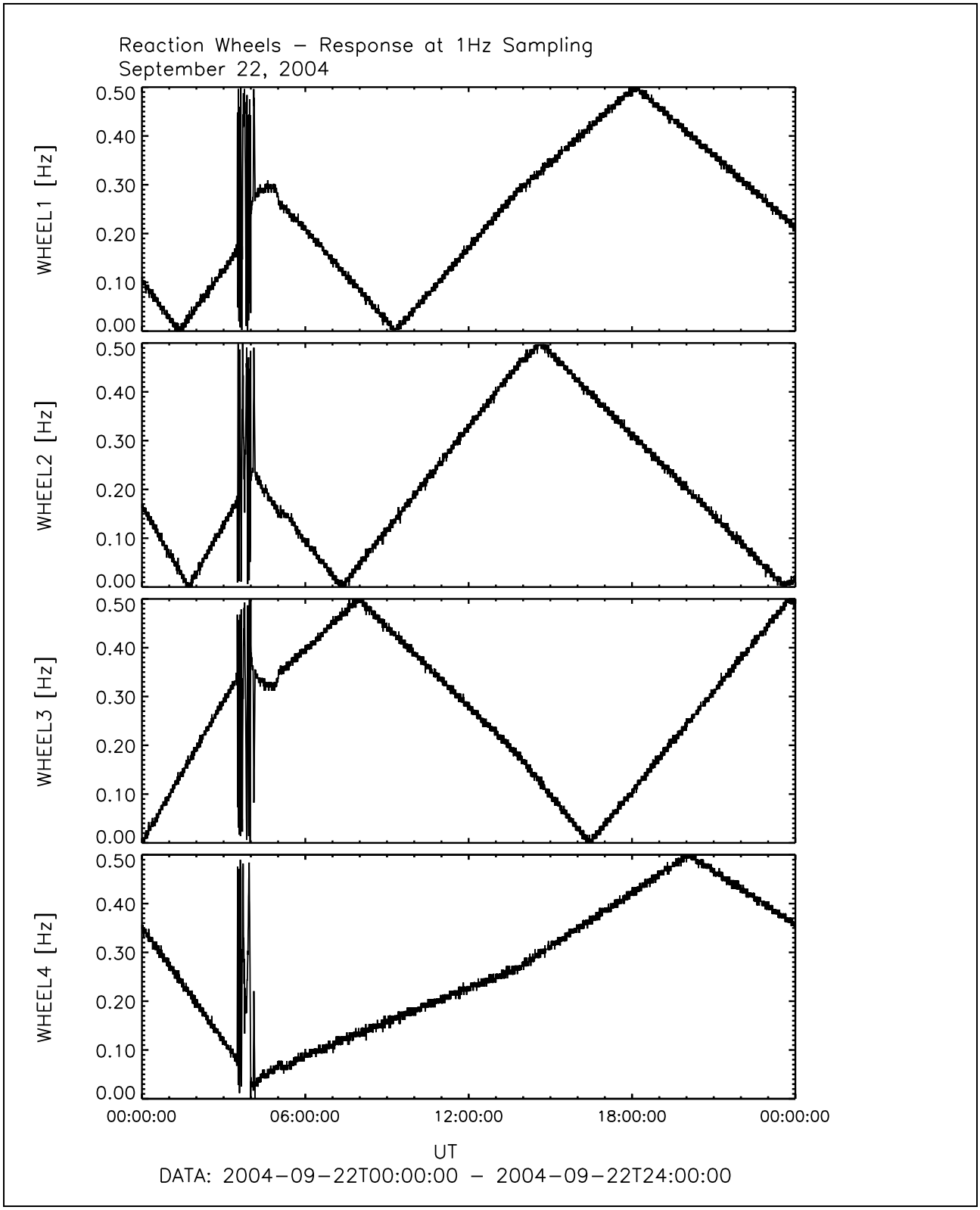

Figure 46: File: wheels_1Hz_Sampling2004-09-22T00-00

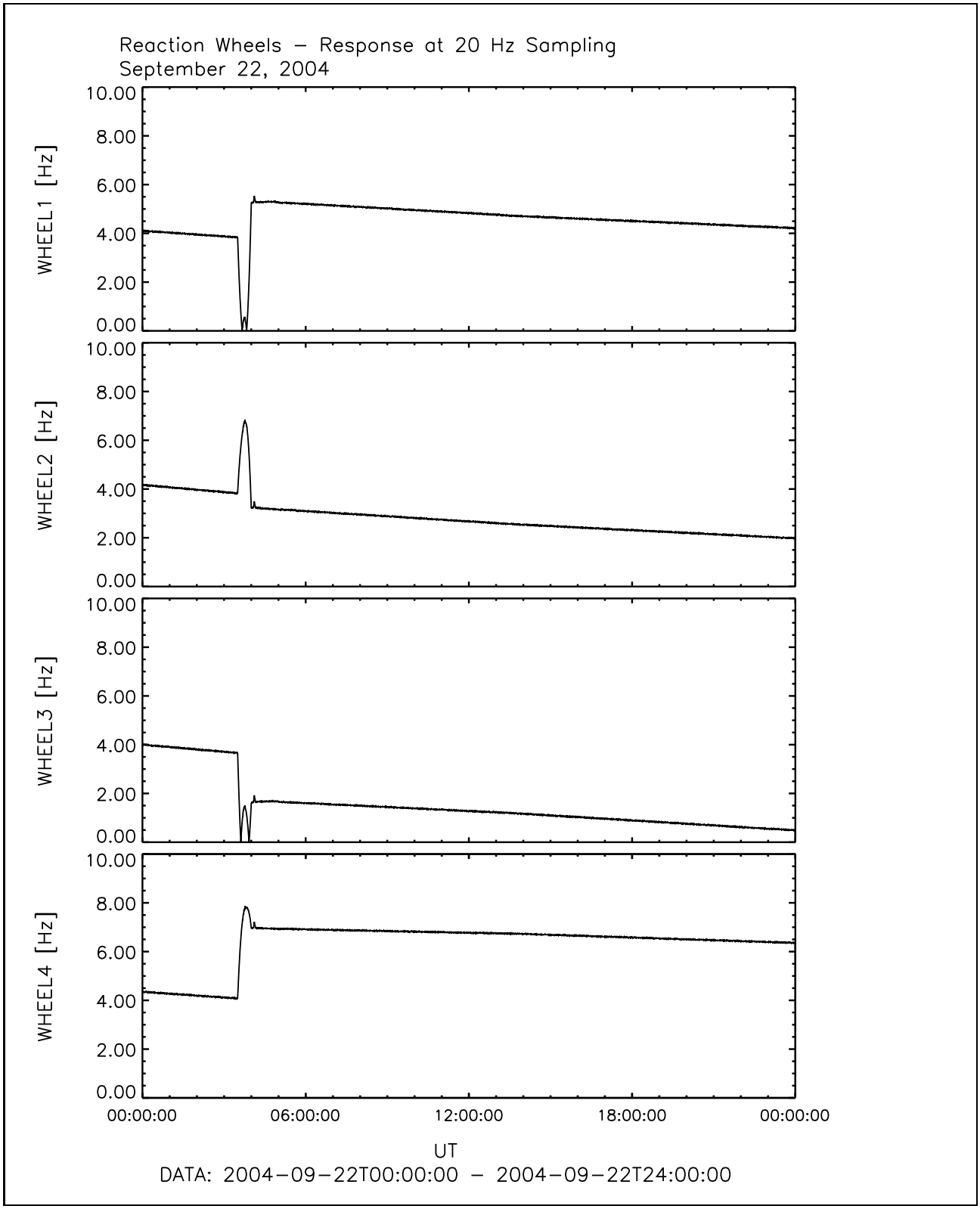

Figure 47: File: wheels_20Hz_Sampling2004-09-22T00-00

4.4 Plots of Reaction Wheel and LAP Disturbance corrected Data

The following plots show the dynamic spectra of the LEVEL_H data. These data have been purged from ROSETTAs reaction wheel disturbance and also from the disturbance of the LAP instrument. Plots are only shown for the primary sensor.

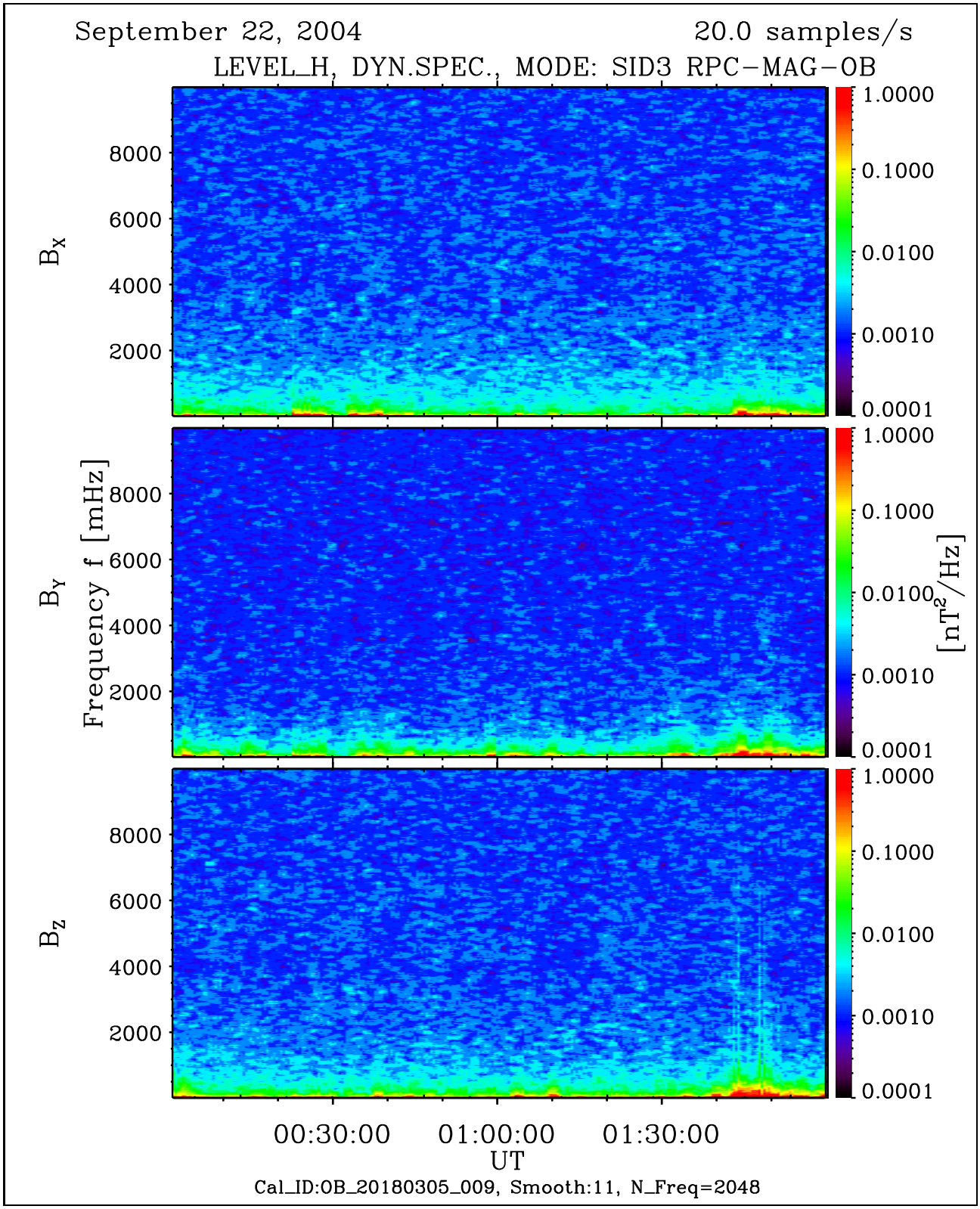

Figure 48: File: RPCMAG040922T0000_CLH_OB_M3_DS0_10000_009

5 September 23, 2004:

5.1 Actions

The Instrument was switched on at 06:32 and switched off at 16:39.

Time	Stage A, Stage B,Filter cfg	Stage 1, Stage 2, Stage3	Mode
06:40 – 10:25	1 2 0	1 2 0	SID2
10:25 – 10:42	4 3 0	4 3 0	SID5
10:42 – 16:24	1 2 0	1 2 0	SID2

5.2 Plots of Calibrated Data using the new Temperature Model

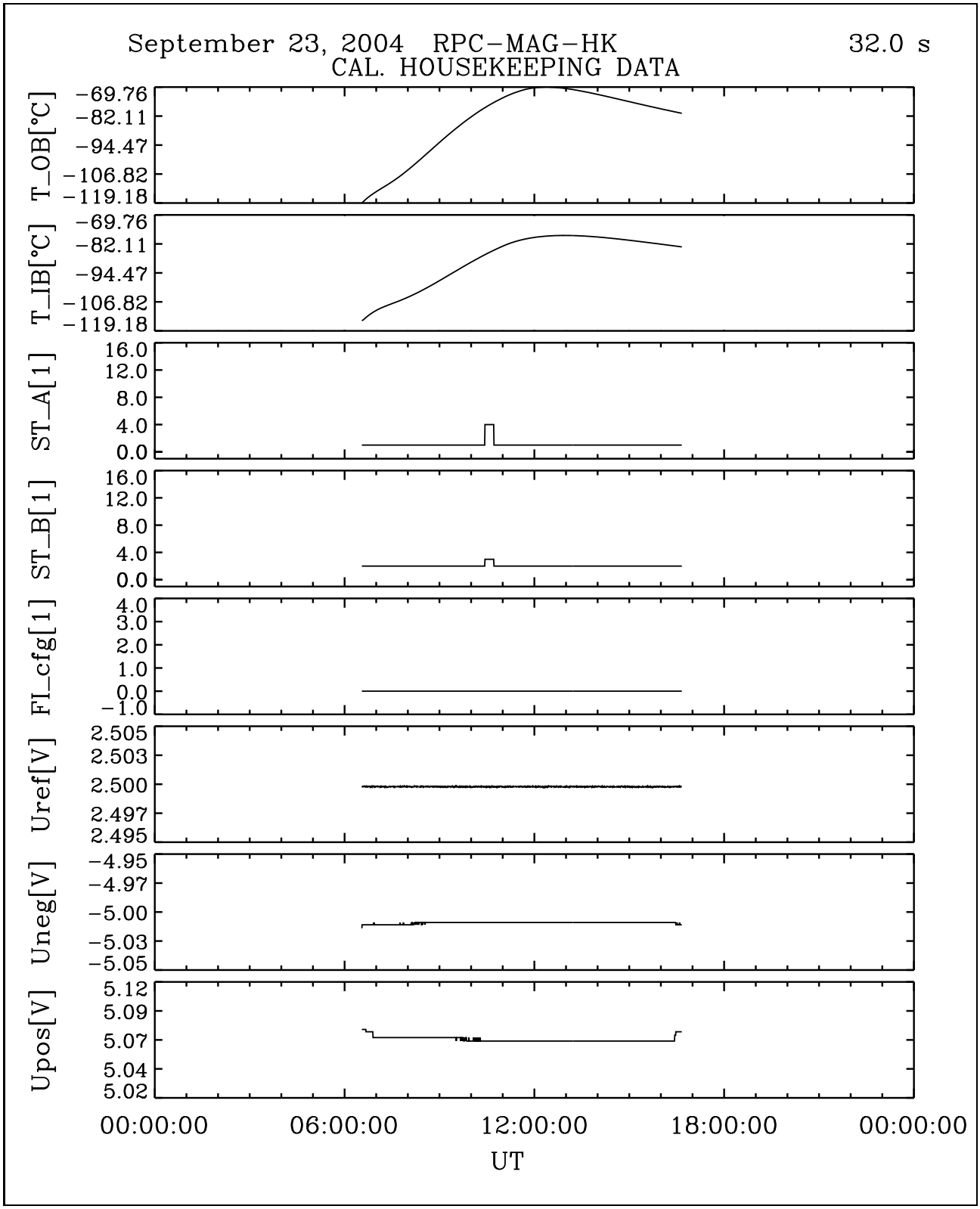

Figure 49: File: RPCMAG040923T0632_CLA_HK_P0000_2400

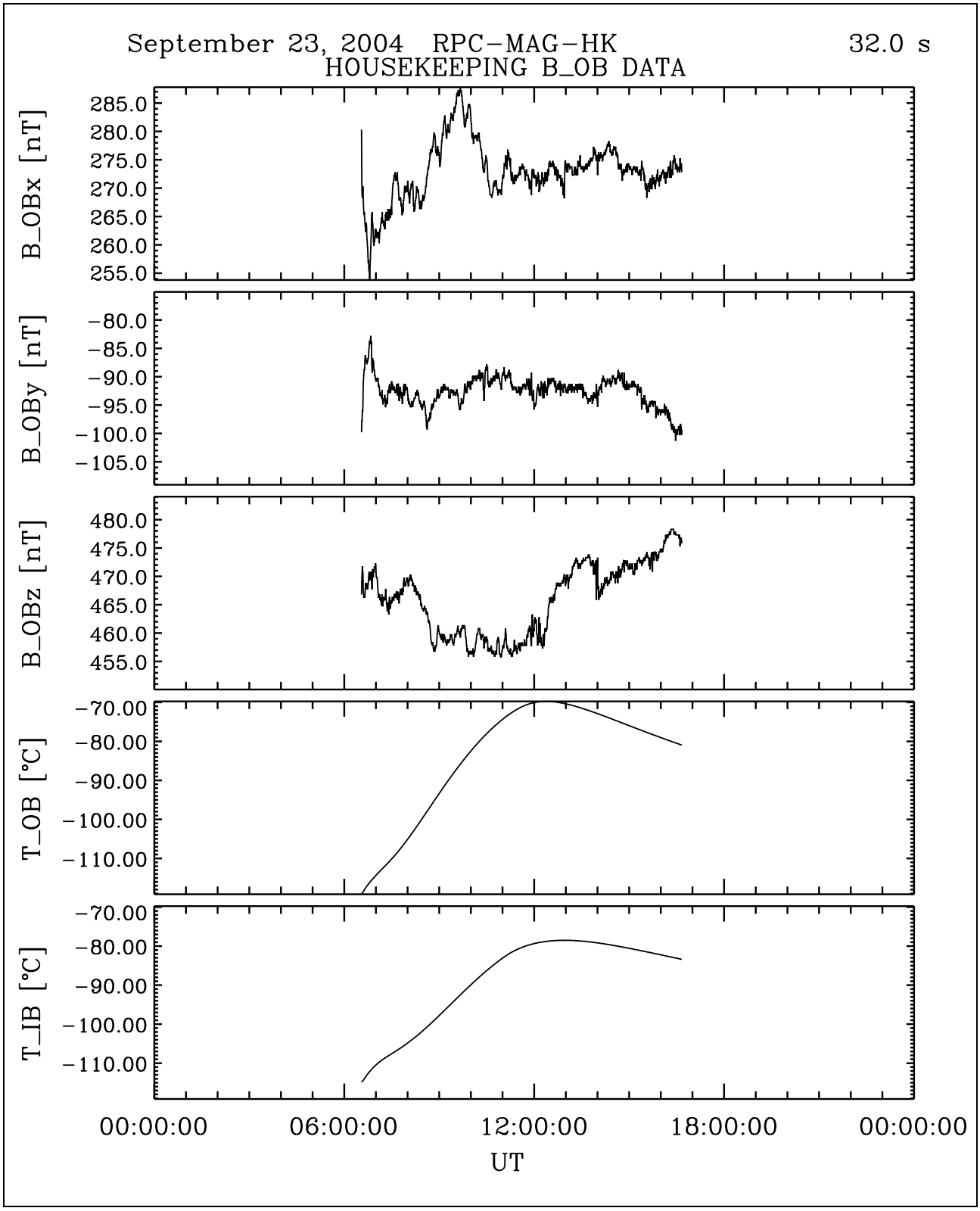

Figure 50: File: RPCMAG040923T0632_CLA_HK_B_P0000_2400

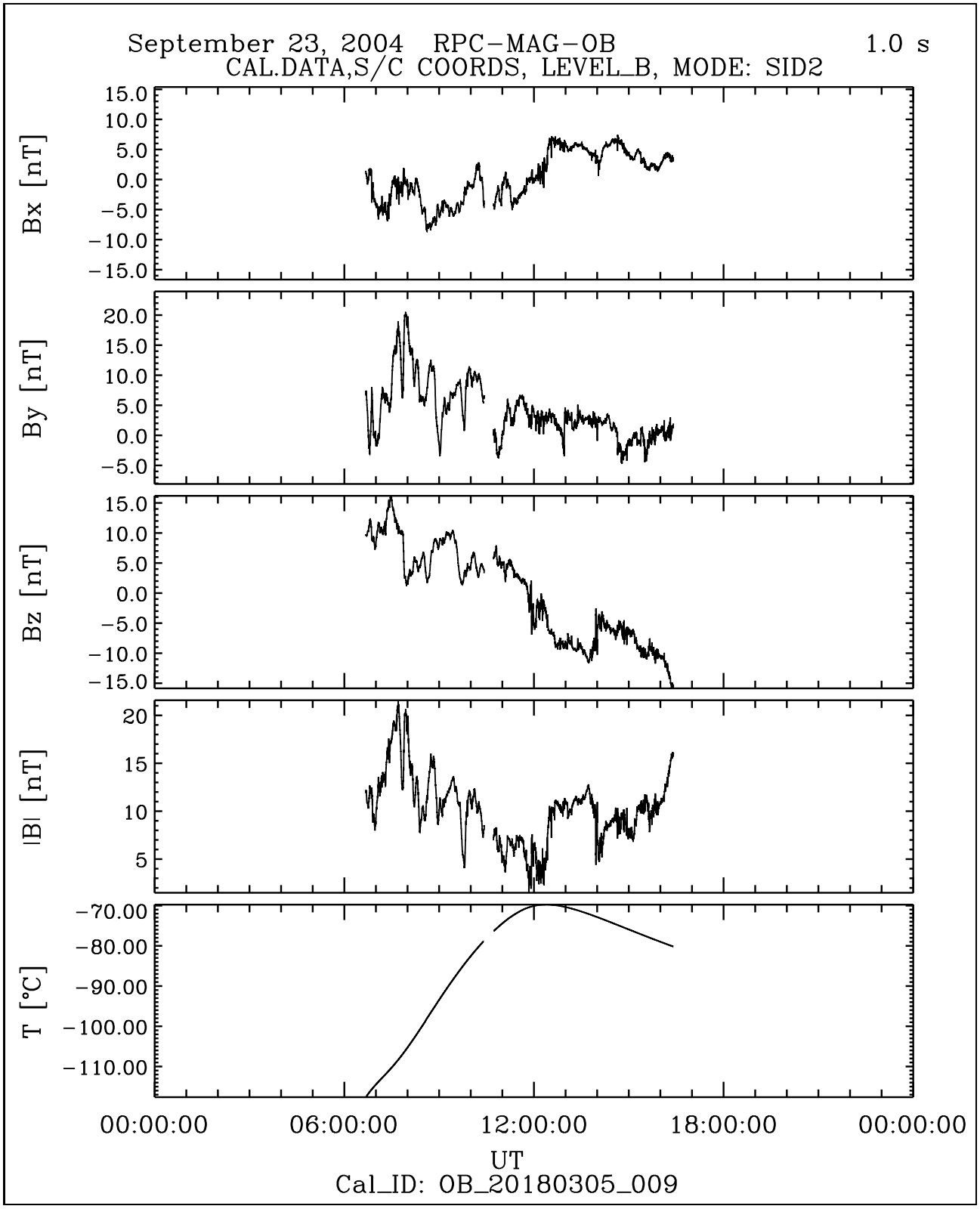

Figure 51: File: RPCMAG040923T0640_CLB_OB_M2_T0000_2400_009

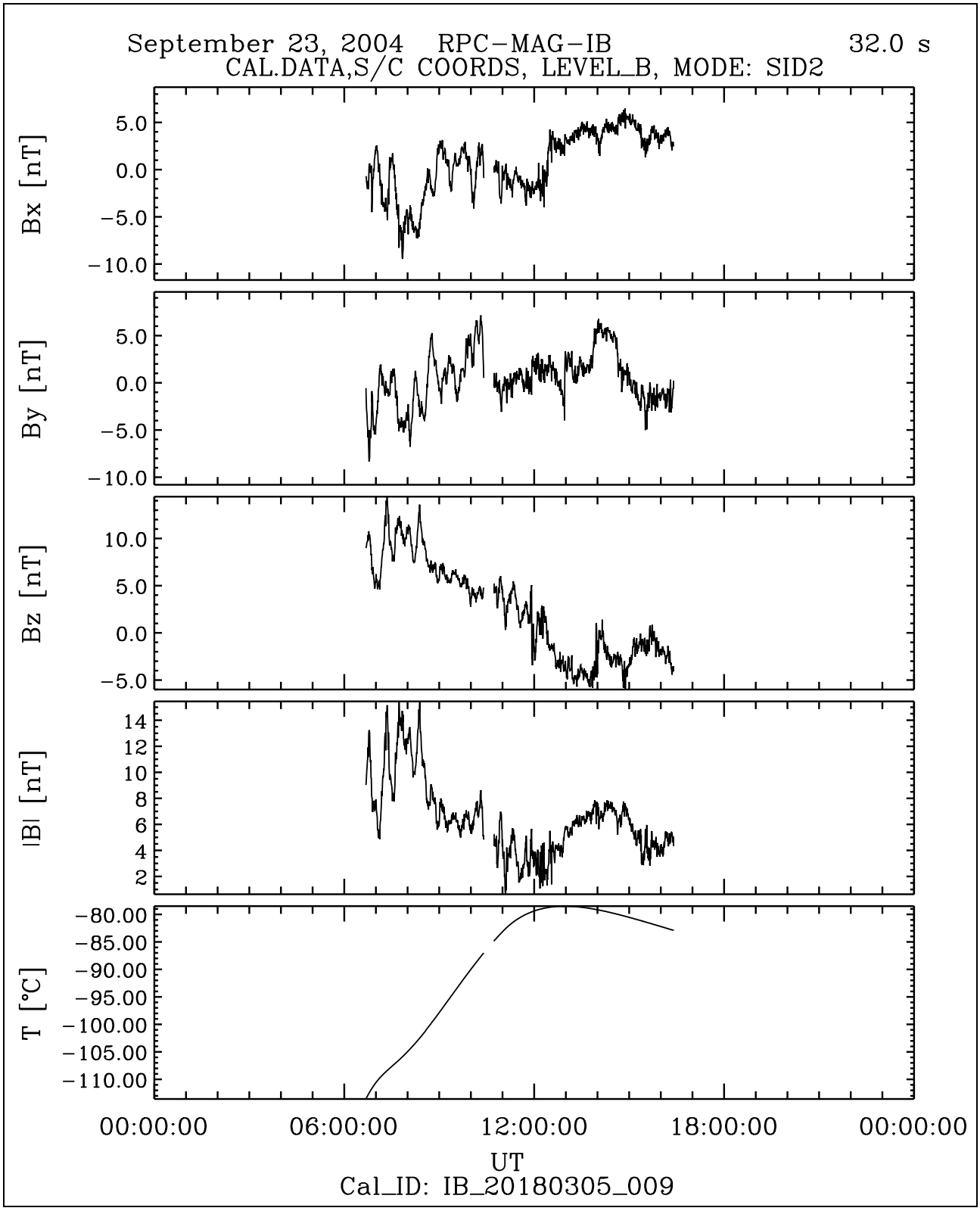

Figure 52: File: RPCMAG040923T0640_CLB_IB_M2_T0000_2400_009

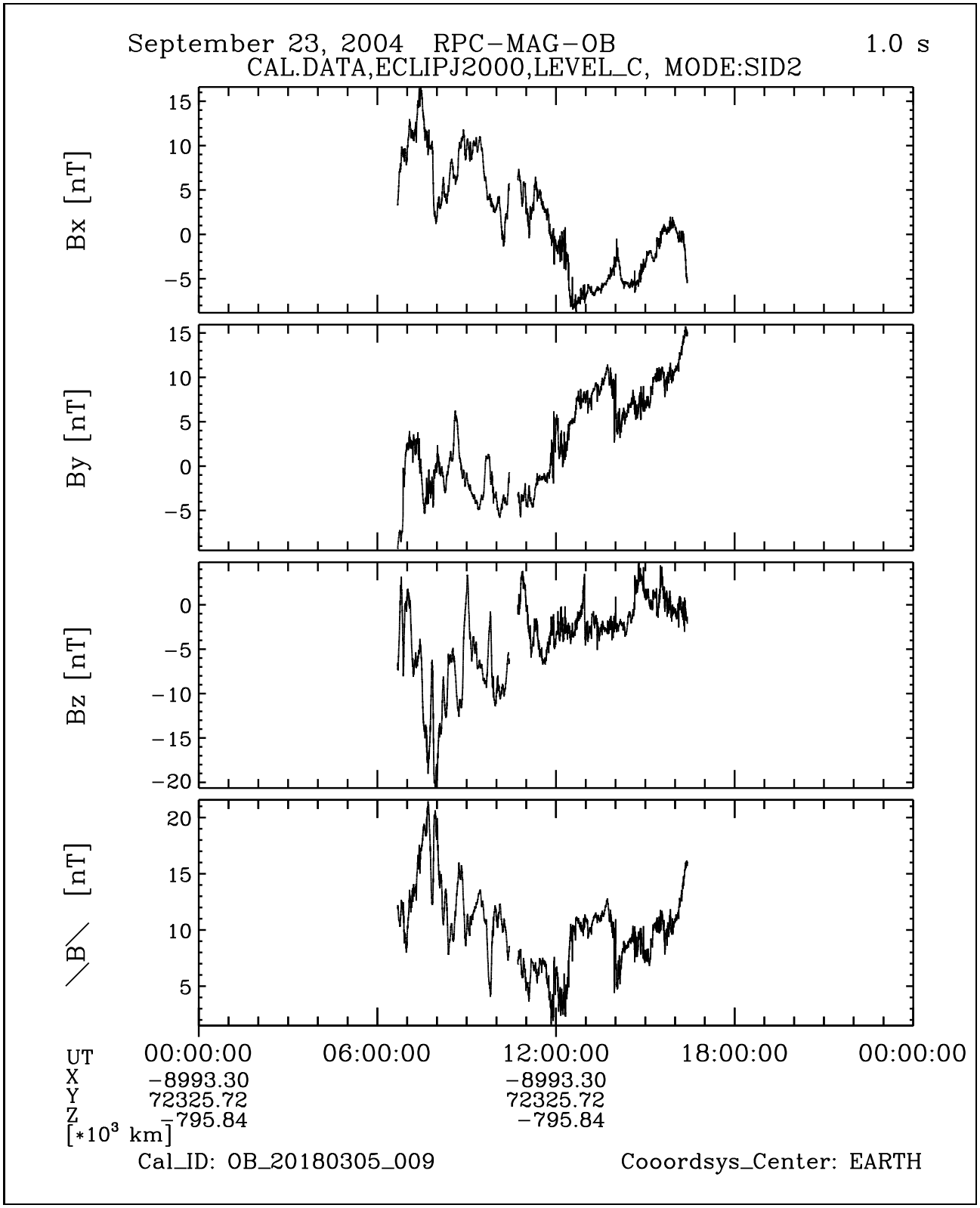

Figure 53: File: RPCMAG040923T0640_CLC_OB_M2_T0000_2400_009

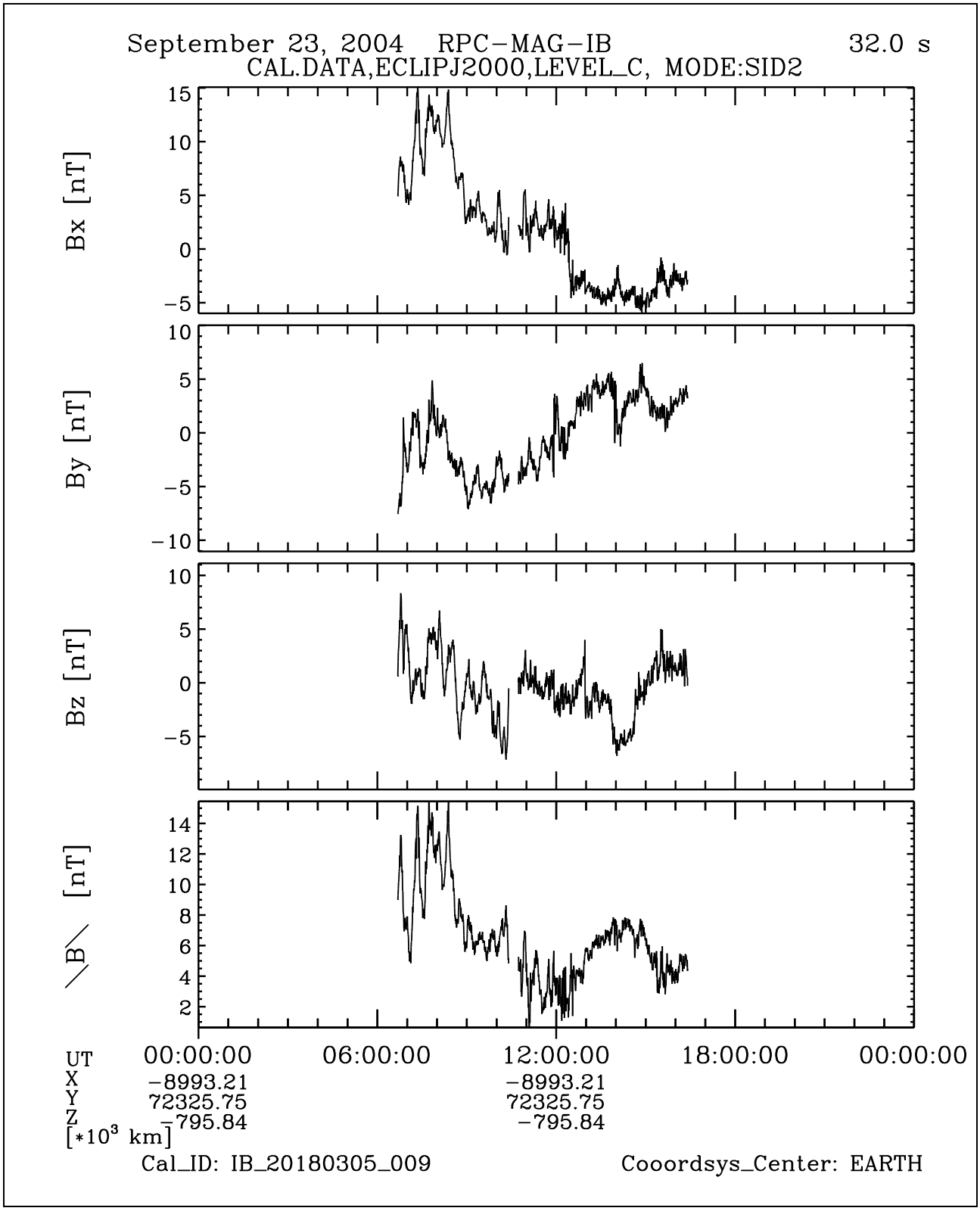

Figure 54: File: RPCMAG040923T0640_CLC_IB_M2_T0000_2400_009

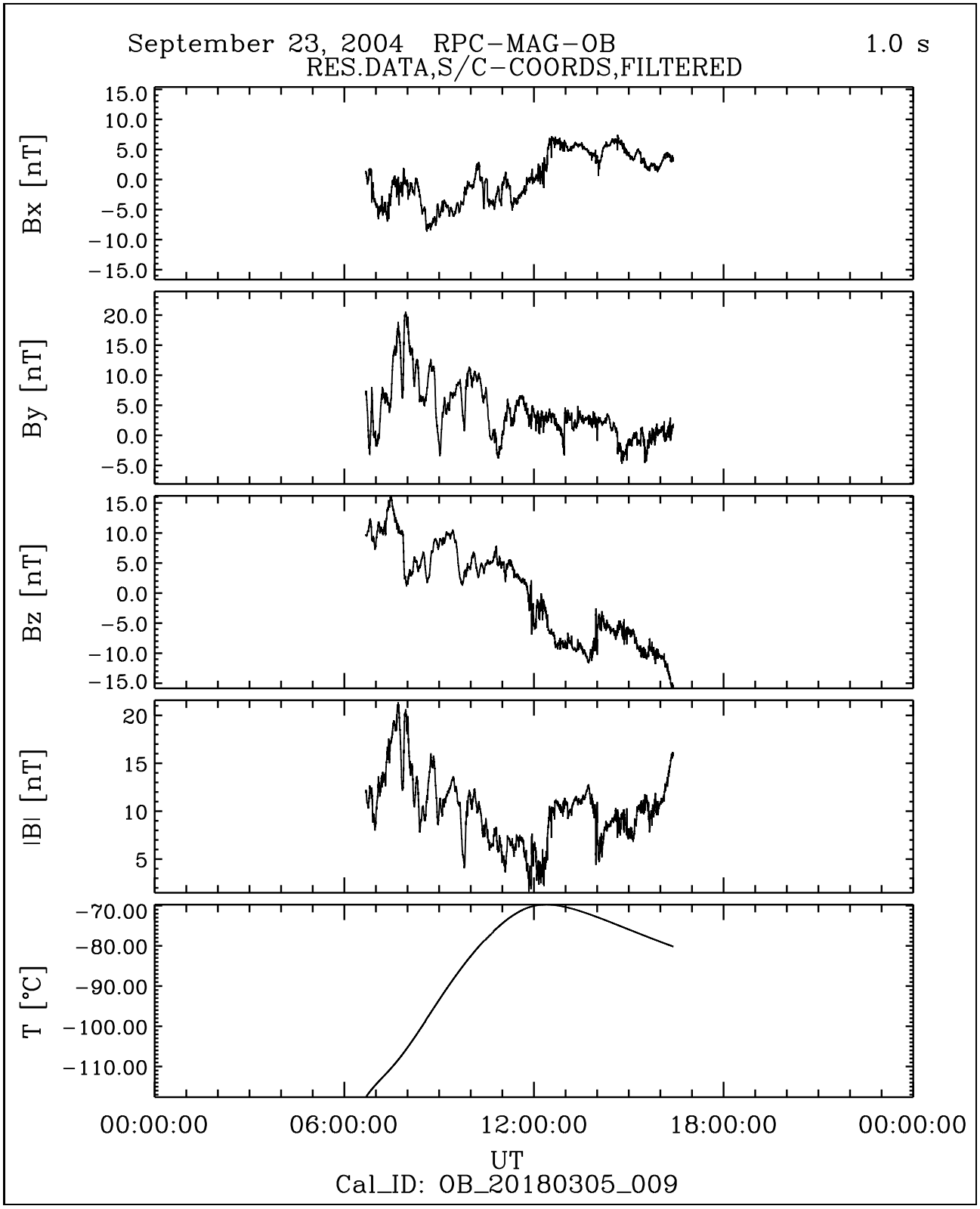

Figure 55: File: RPCMAG040923_CLF_OB_A1_T0000_2400_009

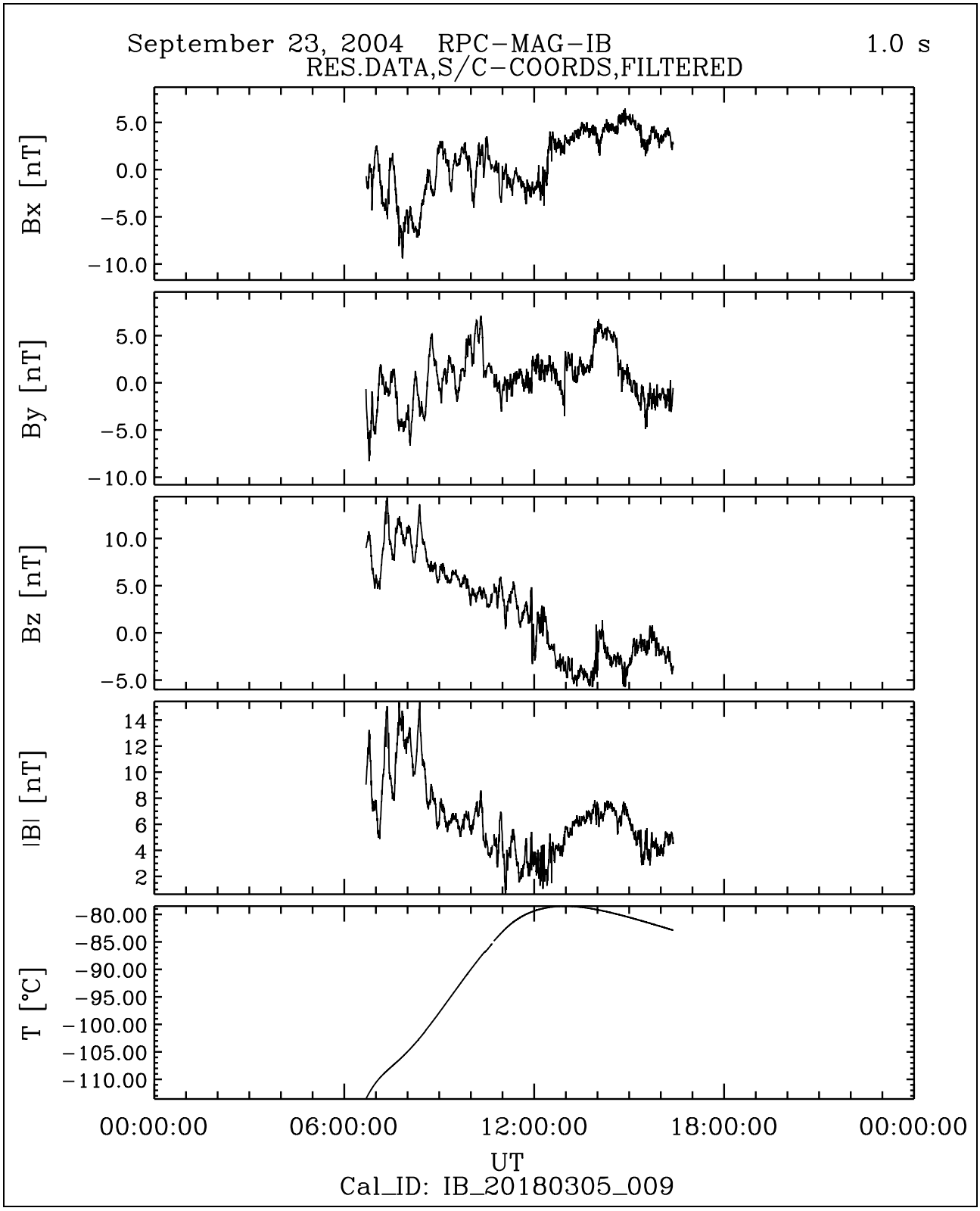

Figure 56: File: RPCMAG040923_CLF_IB_A1_T0000_2400_009

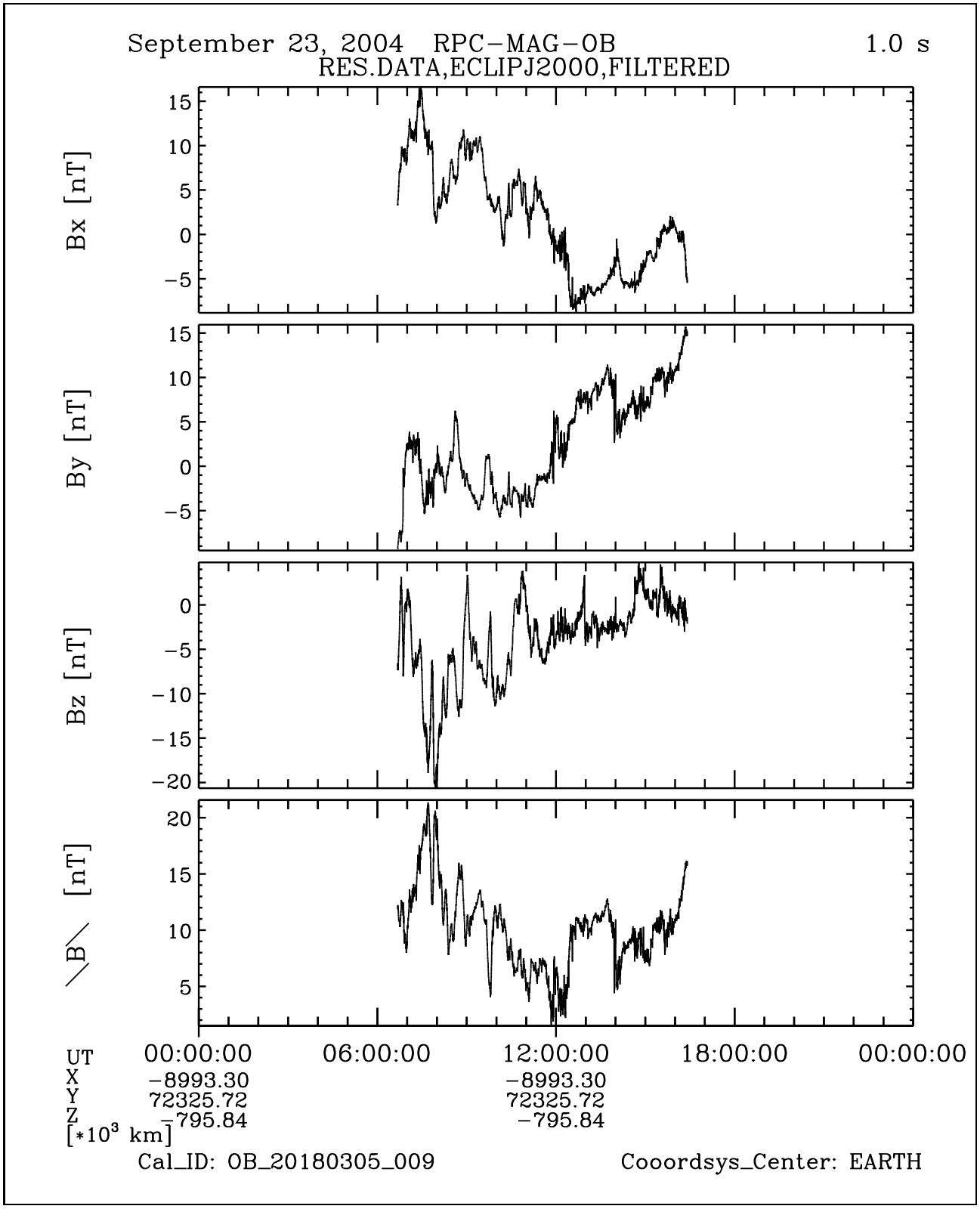

Figure 57: File: RPCMAG040923_CLG_OB_A1_T0000_2400_009

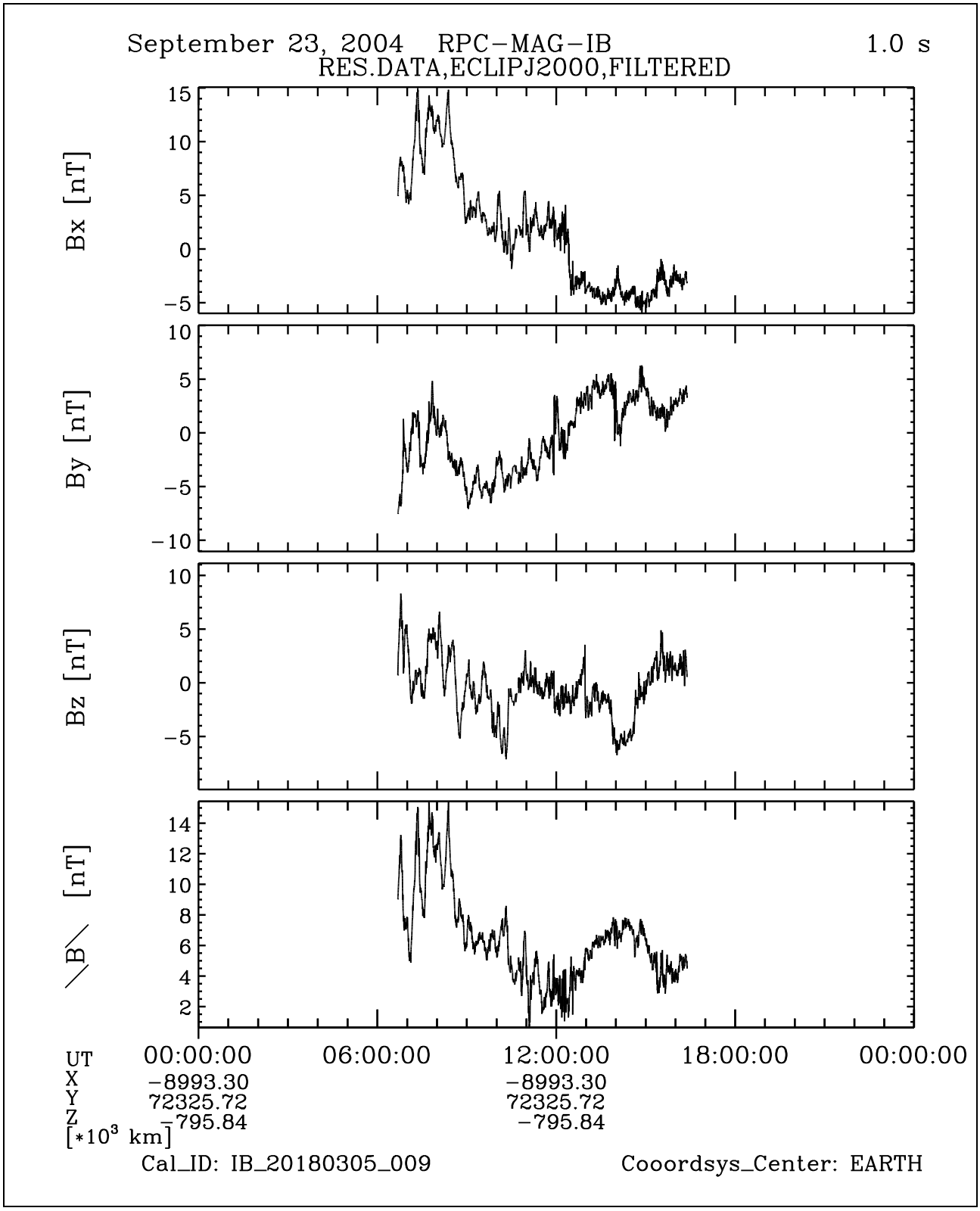

Figure 58: File: RPCMAG040923_CLG_IB_A1_T0000_2400_009

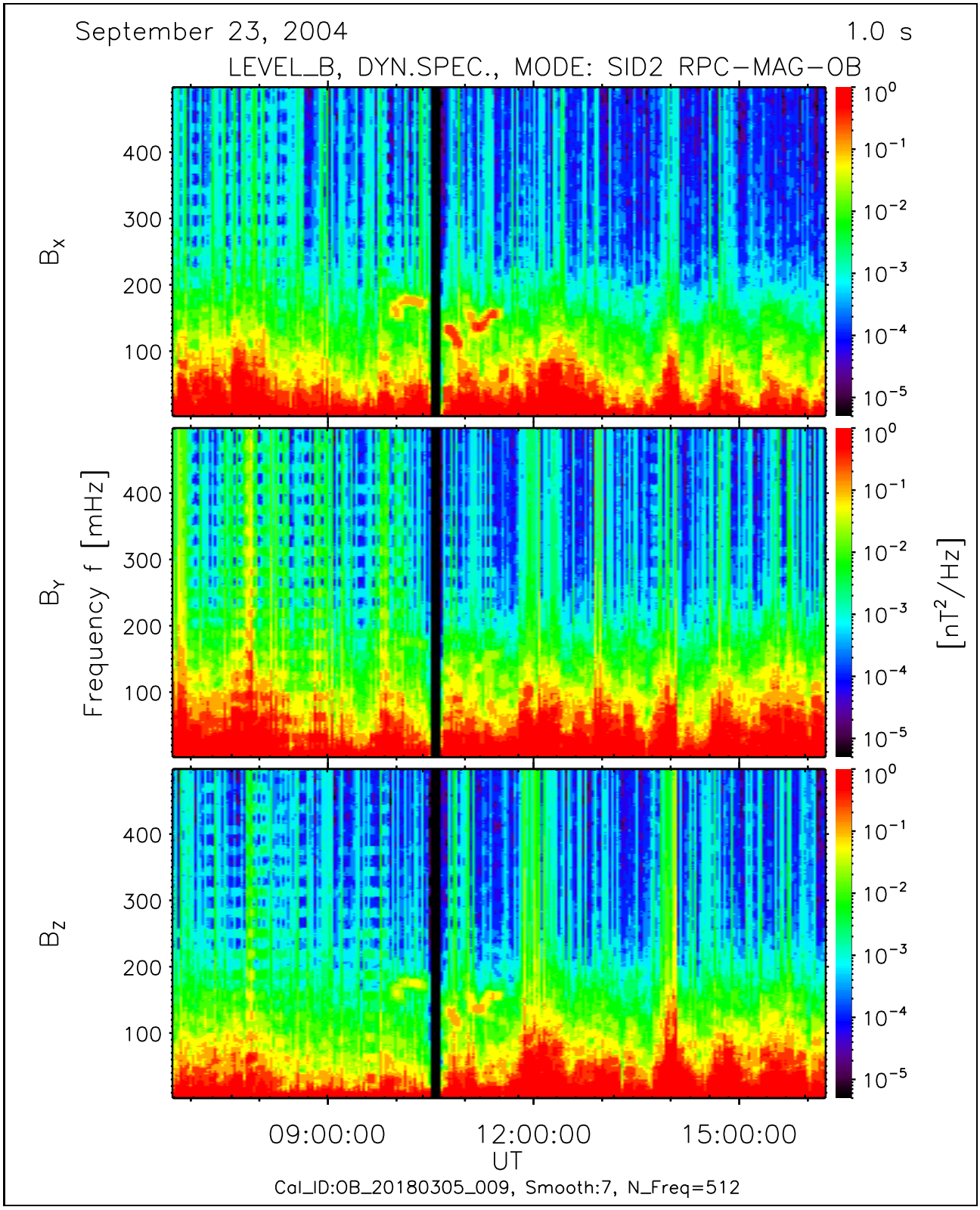

Figure 59: File: RPCMAG040923T0640_CLB_OB_M2_DS0_500_009

5.3 Plots of ROSETTA's Reaction Wheels Speeds

The following plots show the time series of the revolutions of the 4 reaction wheels. Two kinds of data are shown:

- The original reaction wheel data as they are stored in the DDS.
- The theoretical response of the wheels impact seen by an instrument sampling with different frequencies. Here the response at 1 Hz sampling frequency is plotted.

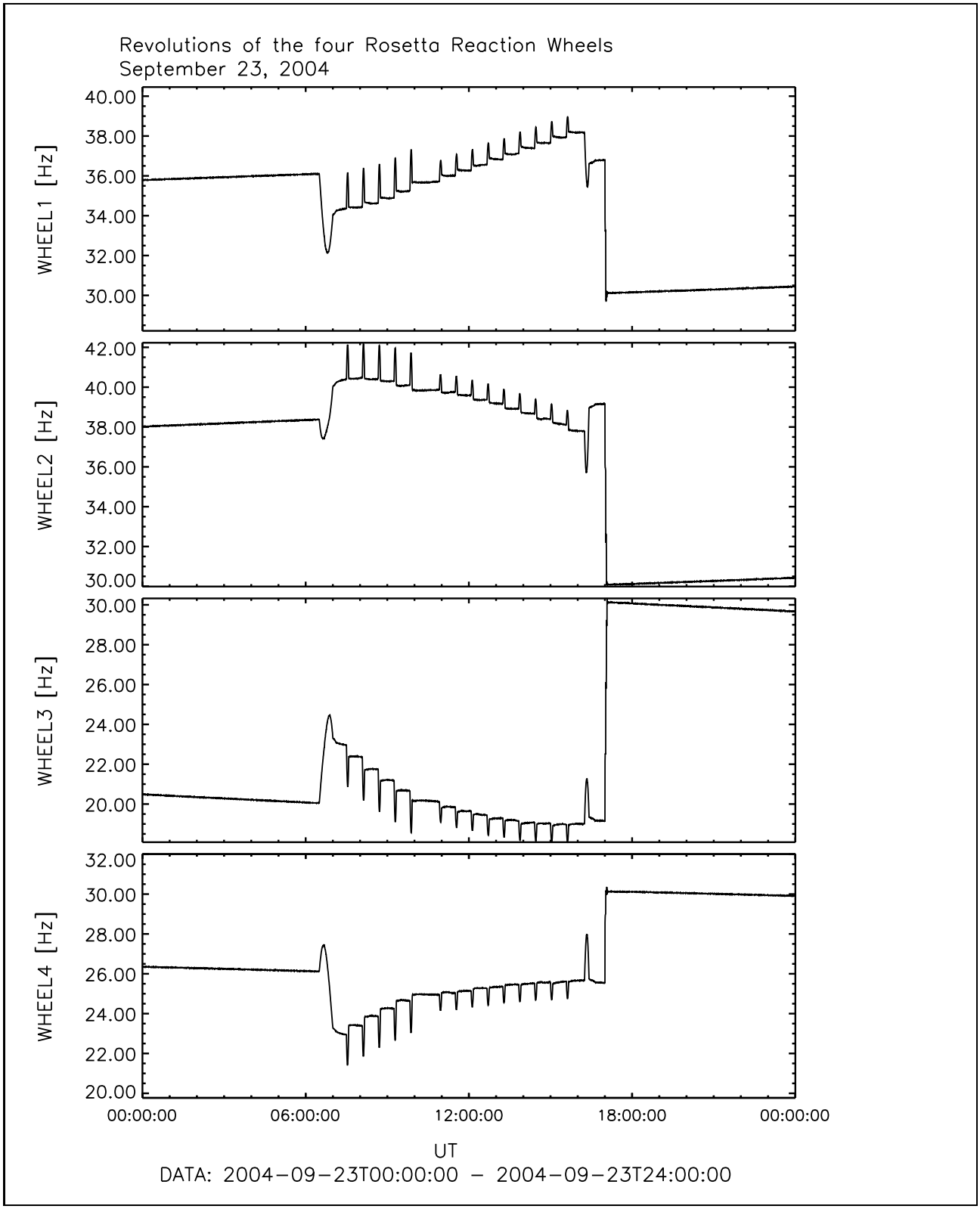

Figure 60: File: wheels_Hz2004-09-23T00-00

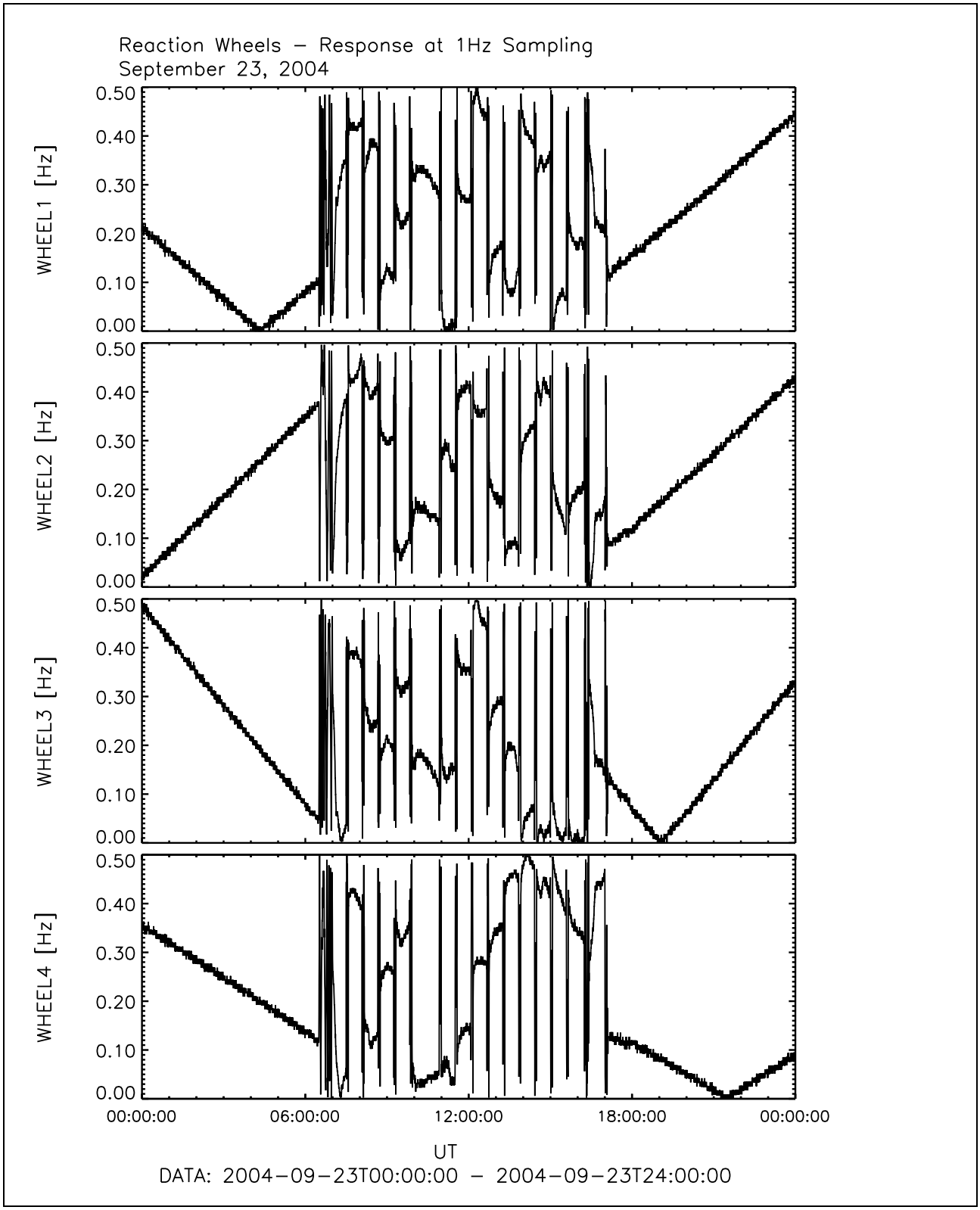

Figure 61: File: wheels_1Hz_Sampling2004-09-23T00-00

6 September 29, 2004:

6.1 Actions

The Instrument was switched on at 05:02 and switched off at 14:14.

Time	Stage A, Stage B,Filter cfg	Stage 1, Stage 2, Stage3	Mode
06:03 – 07:04	0 0 0	0 0 0	SID3
07:05 – 08:13	4 3 0	4 3 0	SID5
08:16 – 08:45	0 0 0	0 0 0	SID3
08:46 – 09:54	4 3 0	4 3 0	SID5
09:58 – 12:48	0 0 0	0 0 0	SID3
12:49 – 13:59	1 2 0	1 2 0	SID2

6.2 Plots of Calibrated Data using the new Temperature Model

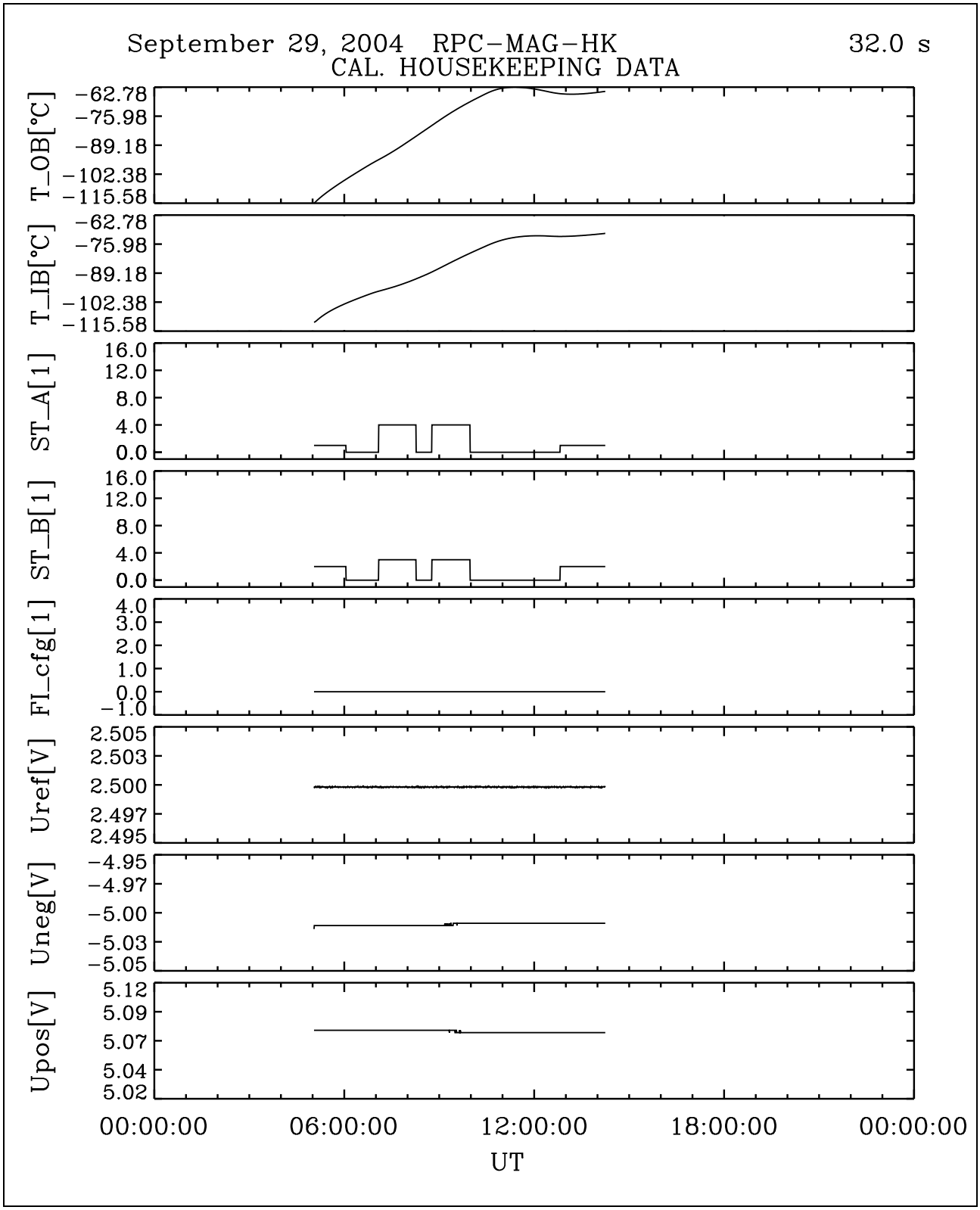

Figure 62: File: RPCMAG040929T0502_CLA_HK_P0000_2400

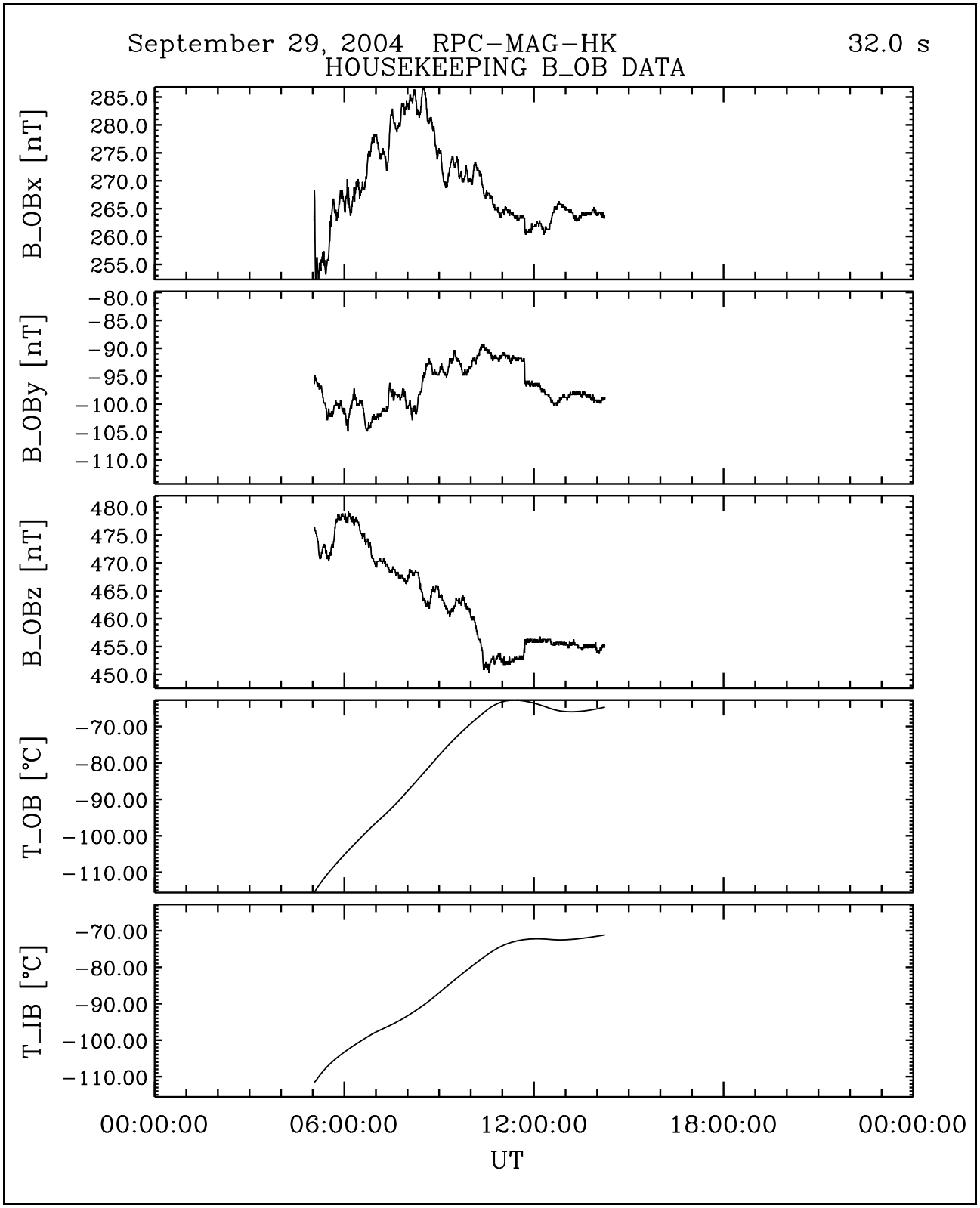

Figure 63: File: RPCMAG040929T0502_CLA_HK_B_P0000_2400

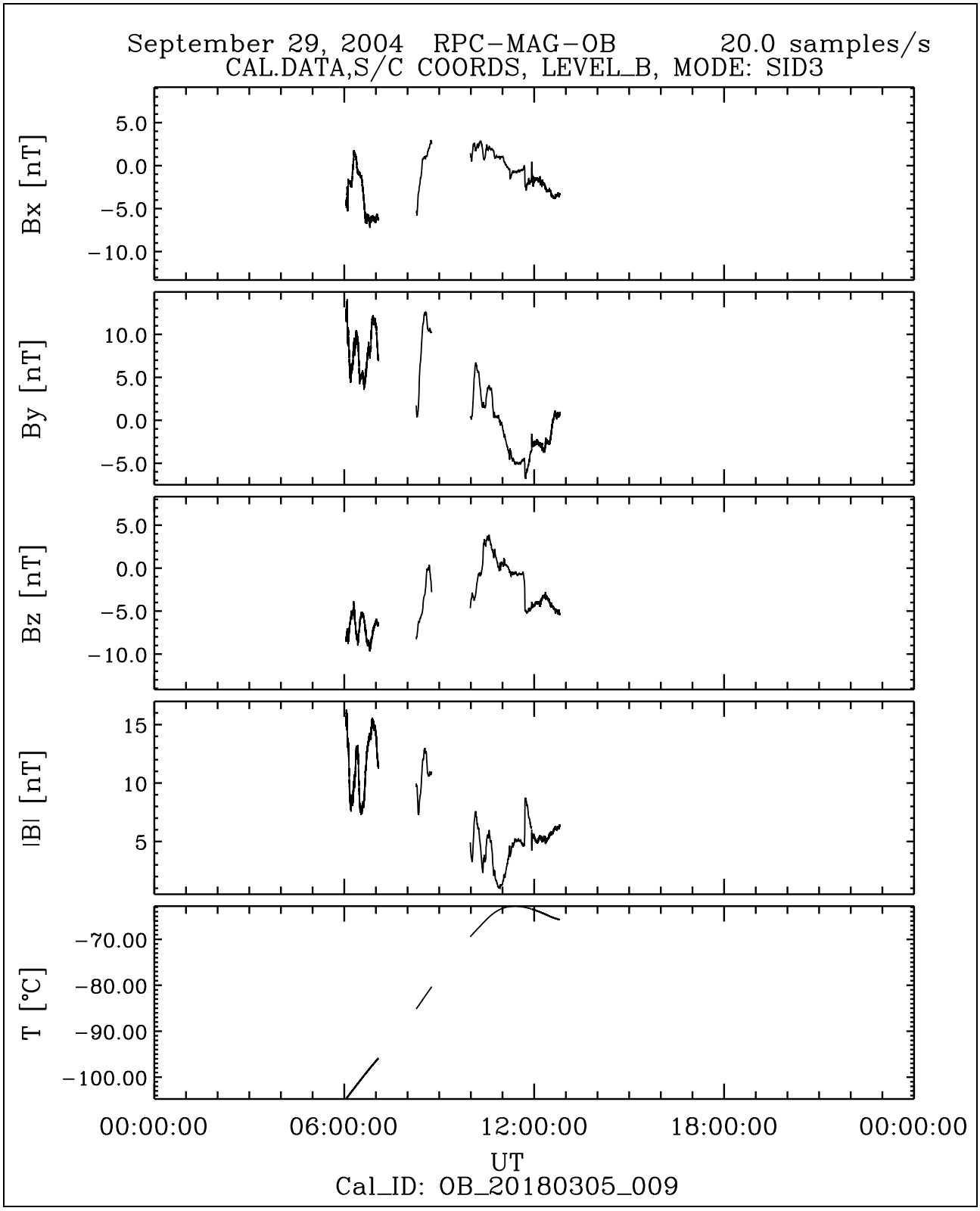

Figure 64: File: RPCMAG040929T0603_CLB_OB_M3_T0000_2400_009

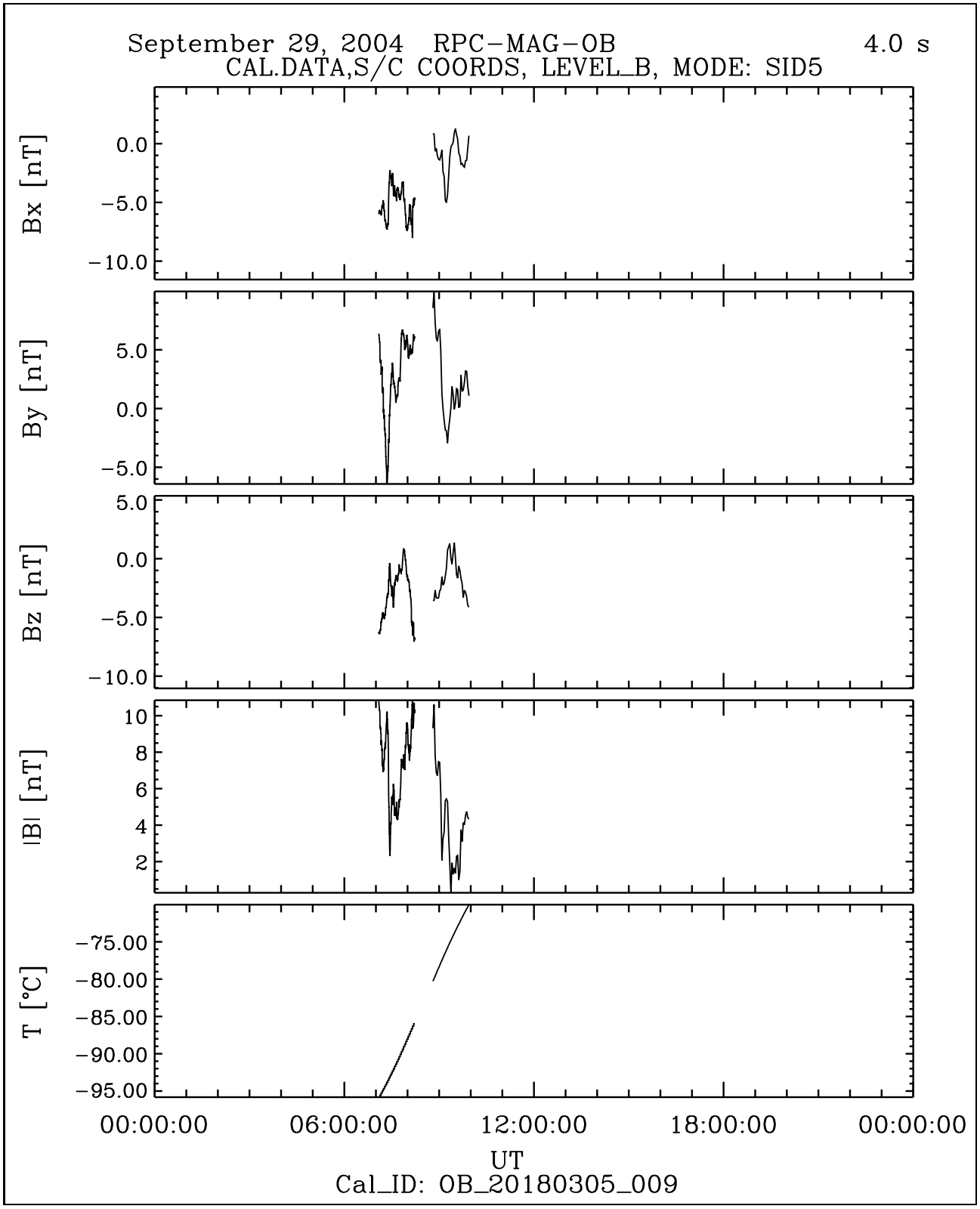

Figure 65: File: RPCMAG040929T0705_CLB_OB_M5_T0000_2400_009

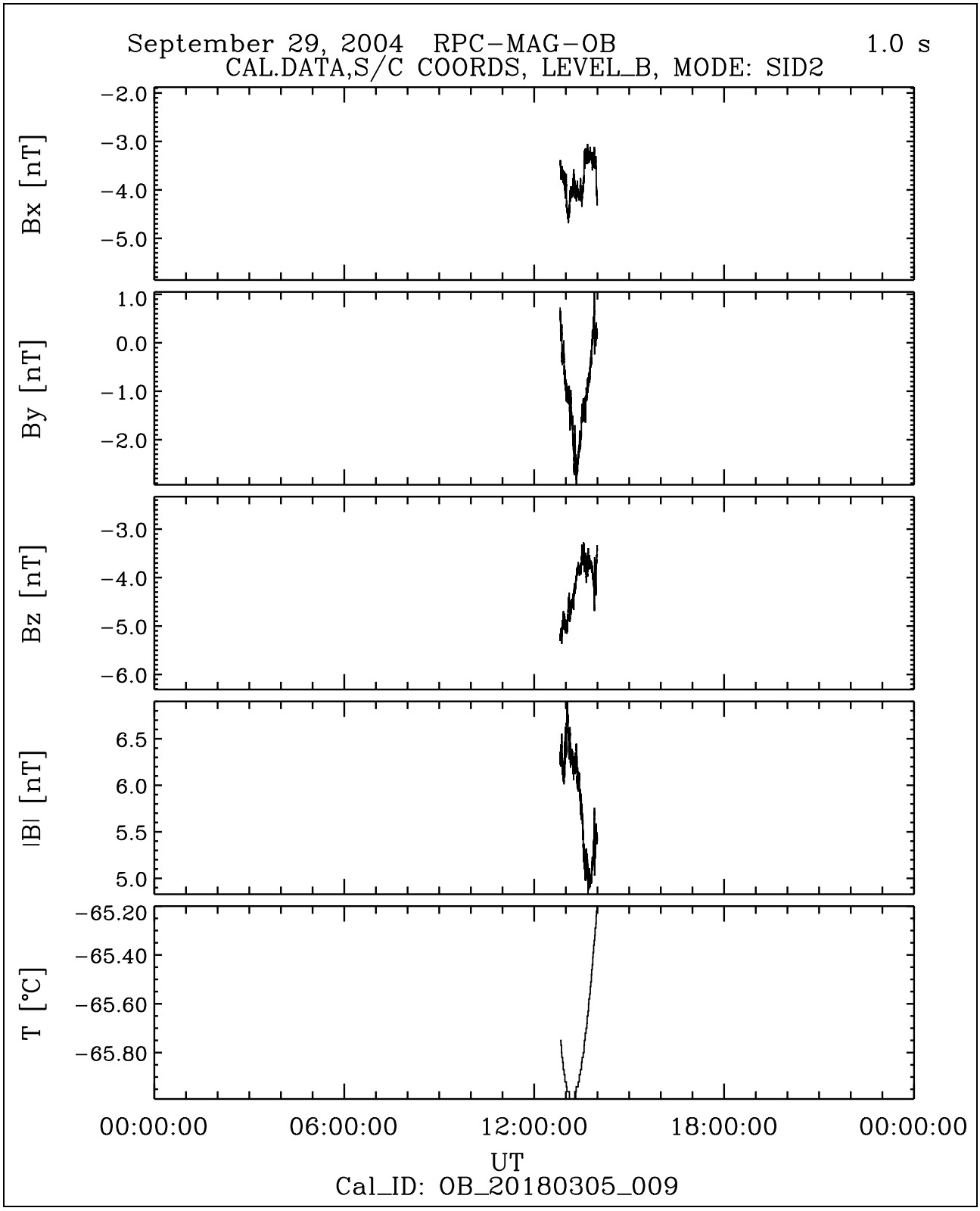

Figure 66: File: RPCMAG040929T1249_CLB_OB_M2_T0000_2400_009

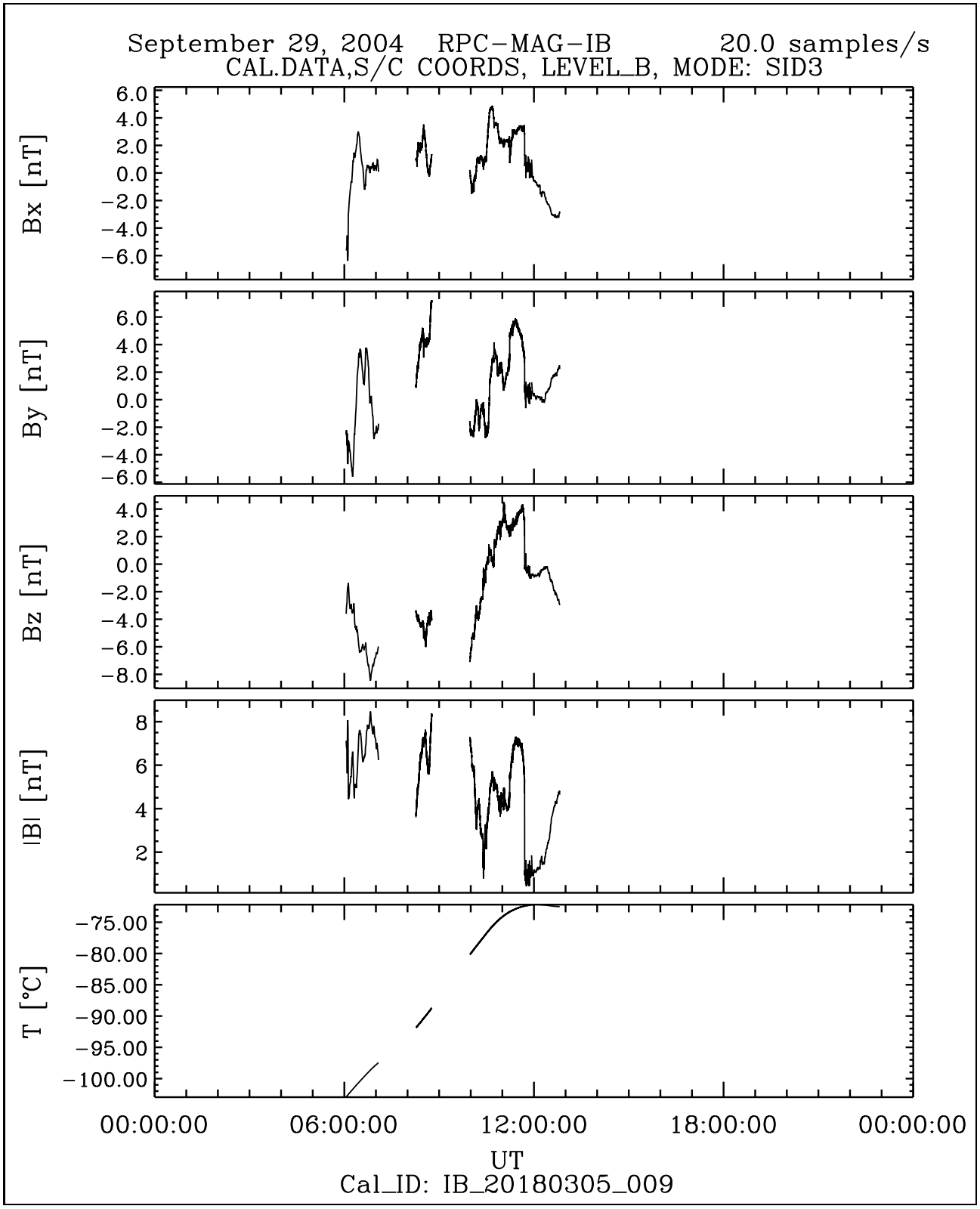

Figure 67: File: RPCMAG040929T0603_CLB_IB_M3_T0000_2400_009

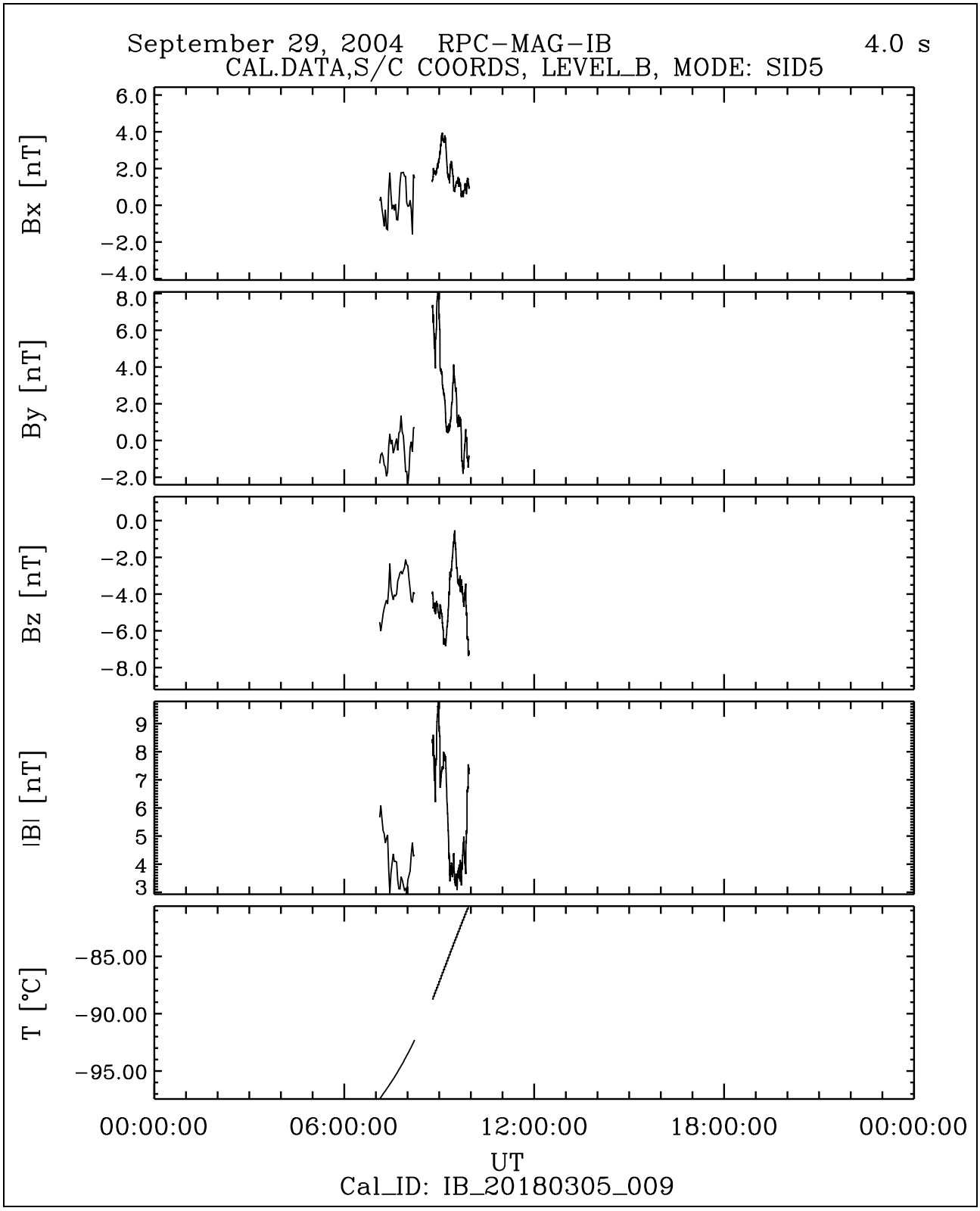

Figure 68: File: RPCMAG040929T0705_CLB_IB_M5_T0000_2400_009

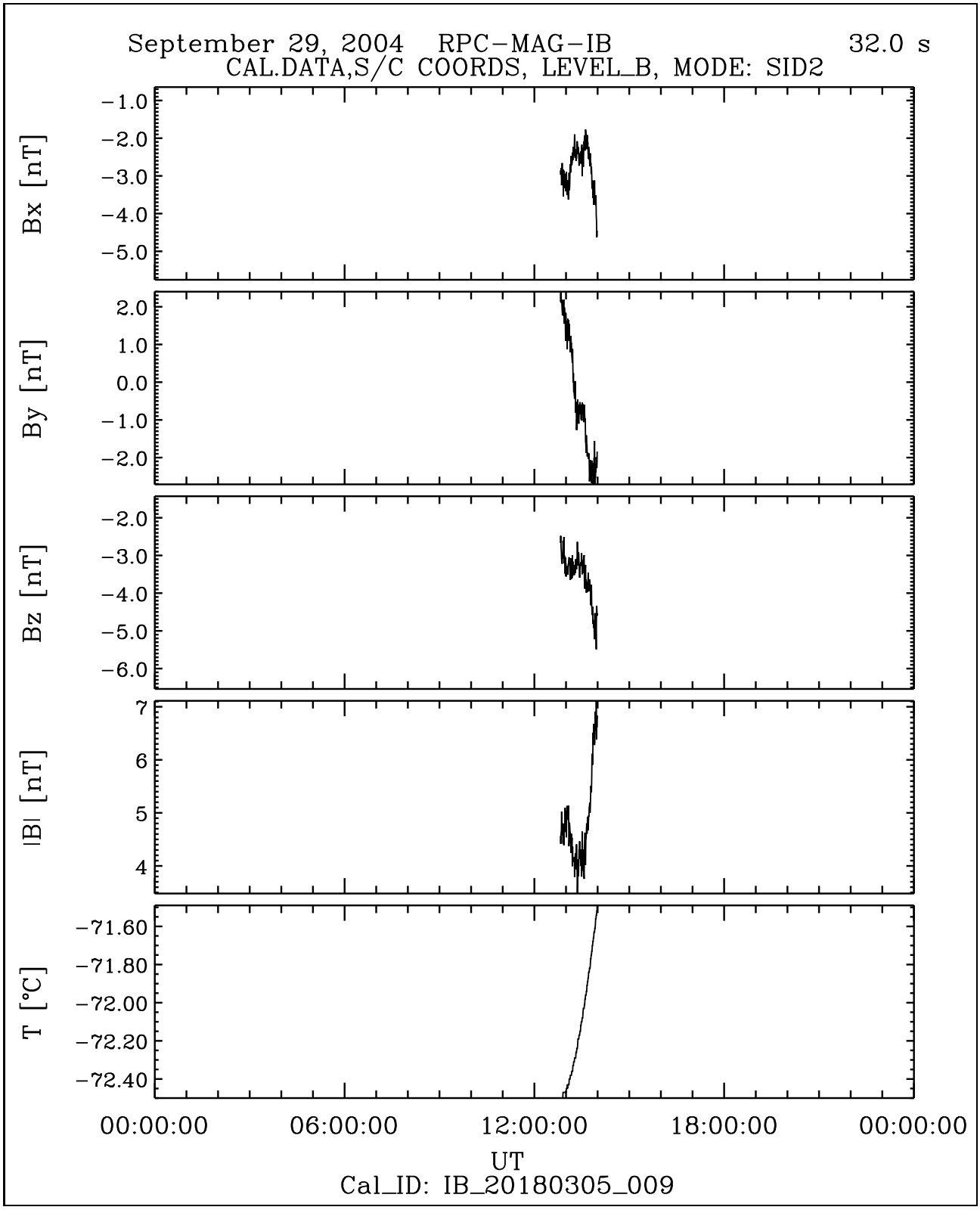

Figure 69: File: RPCMAG040929T1249_CLB_IB_M2_T0000_2400_009

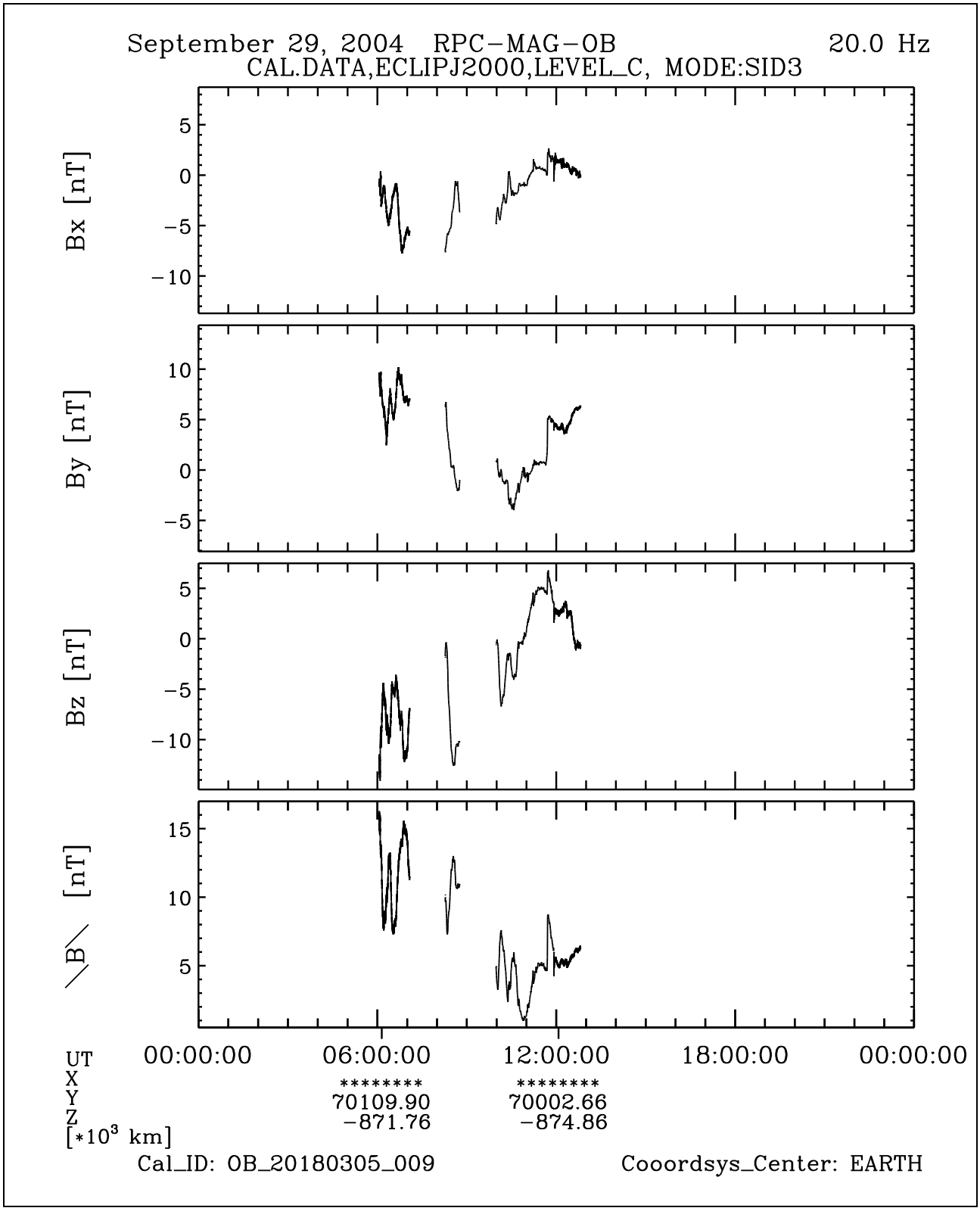

Figure 70: File: RPCMAG040929T0603_CLC_OB_M3_T0000_2400_009

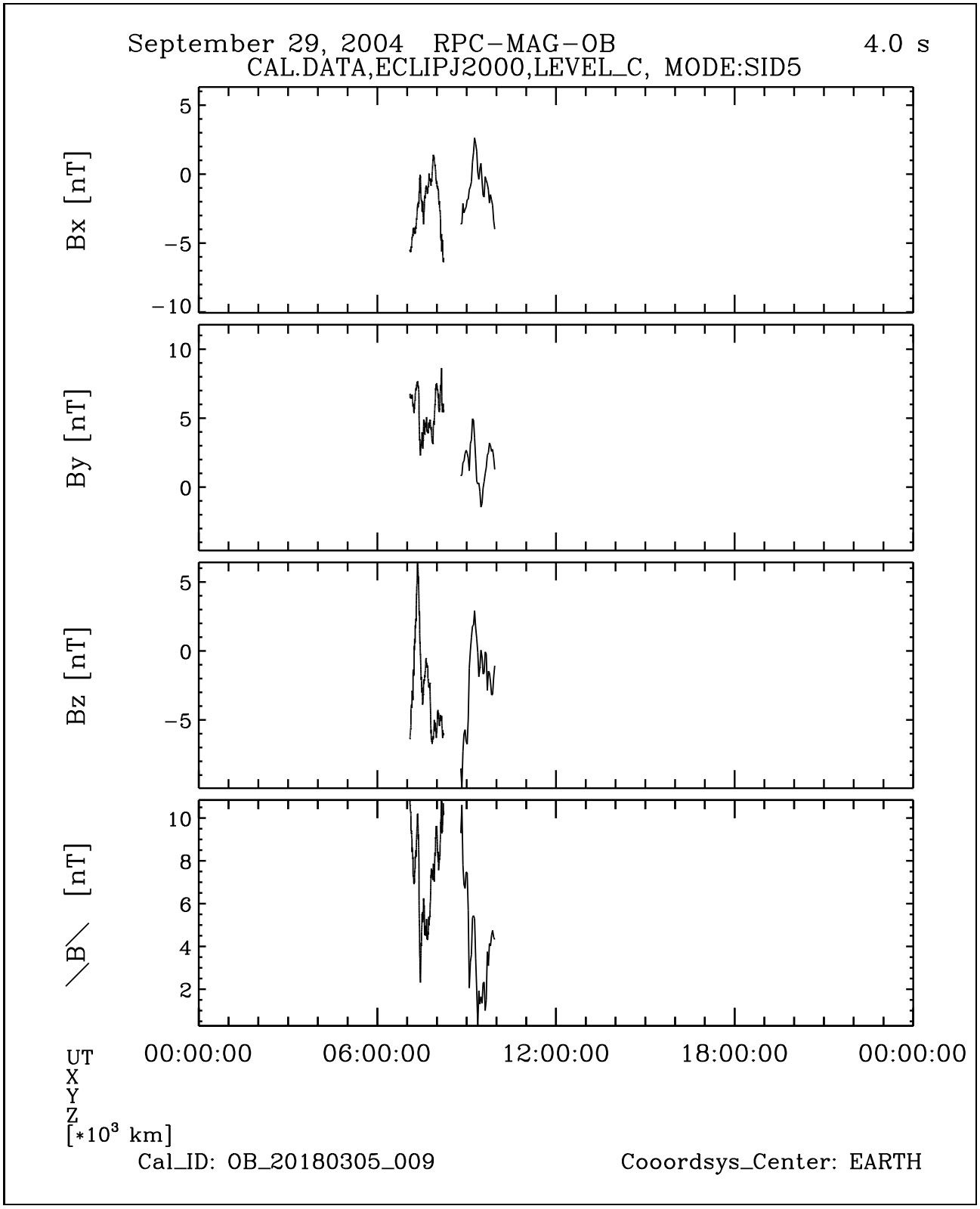

Figure 71: File: RPCMAG040929T0705_CLC_OB_M5_T0000_2400_009

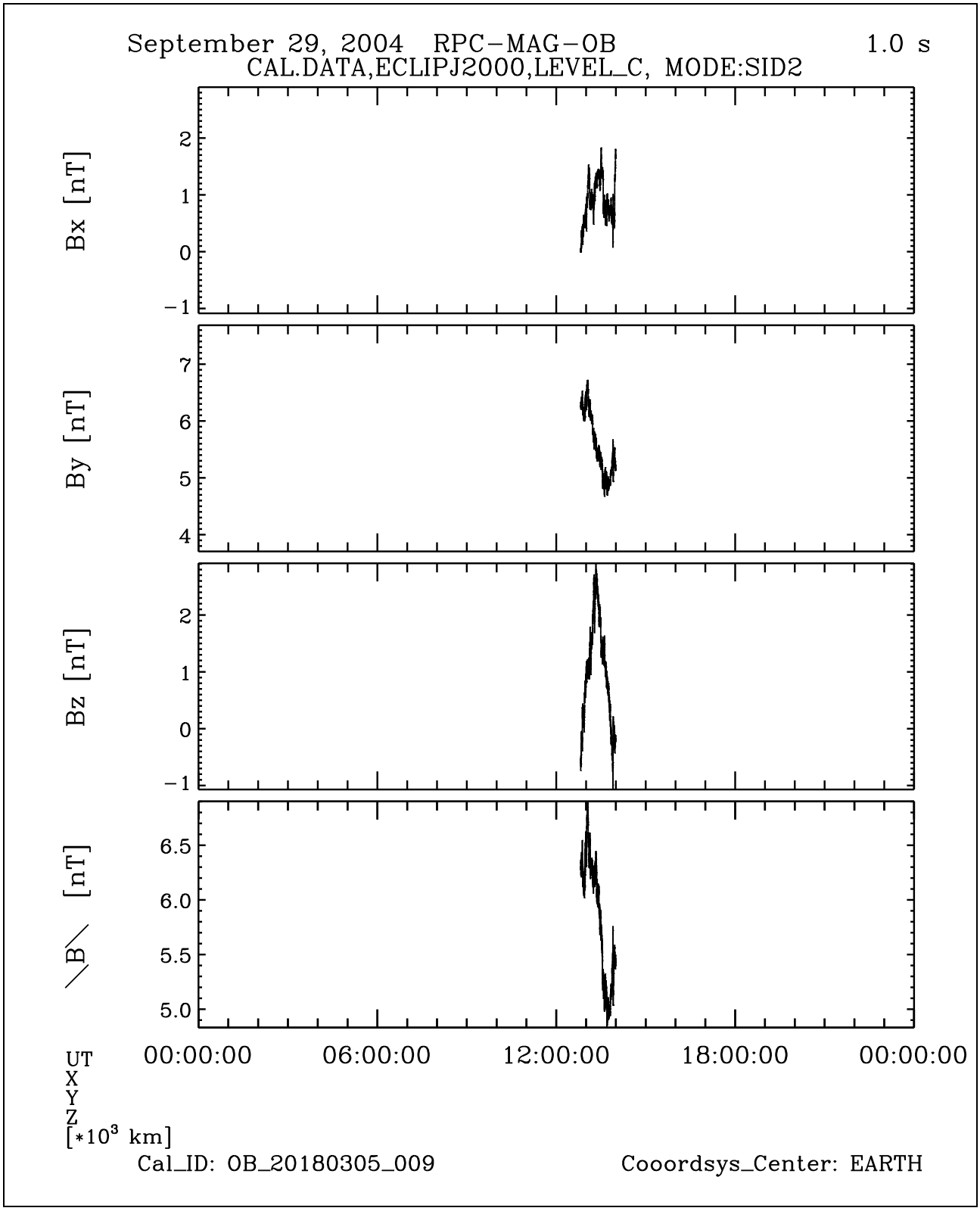

Figure 72: File: RPCMAG040929T1249_CLC_OB_M2_T0000_2400_009

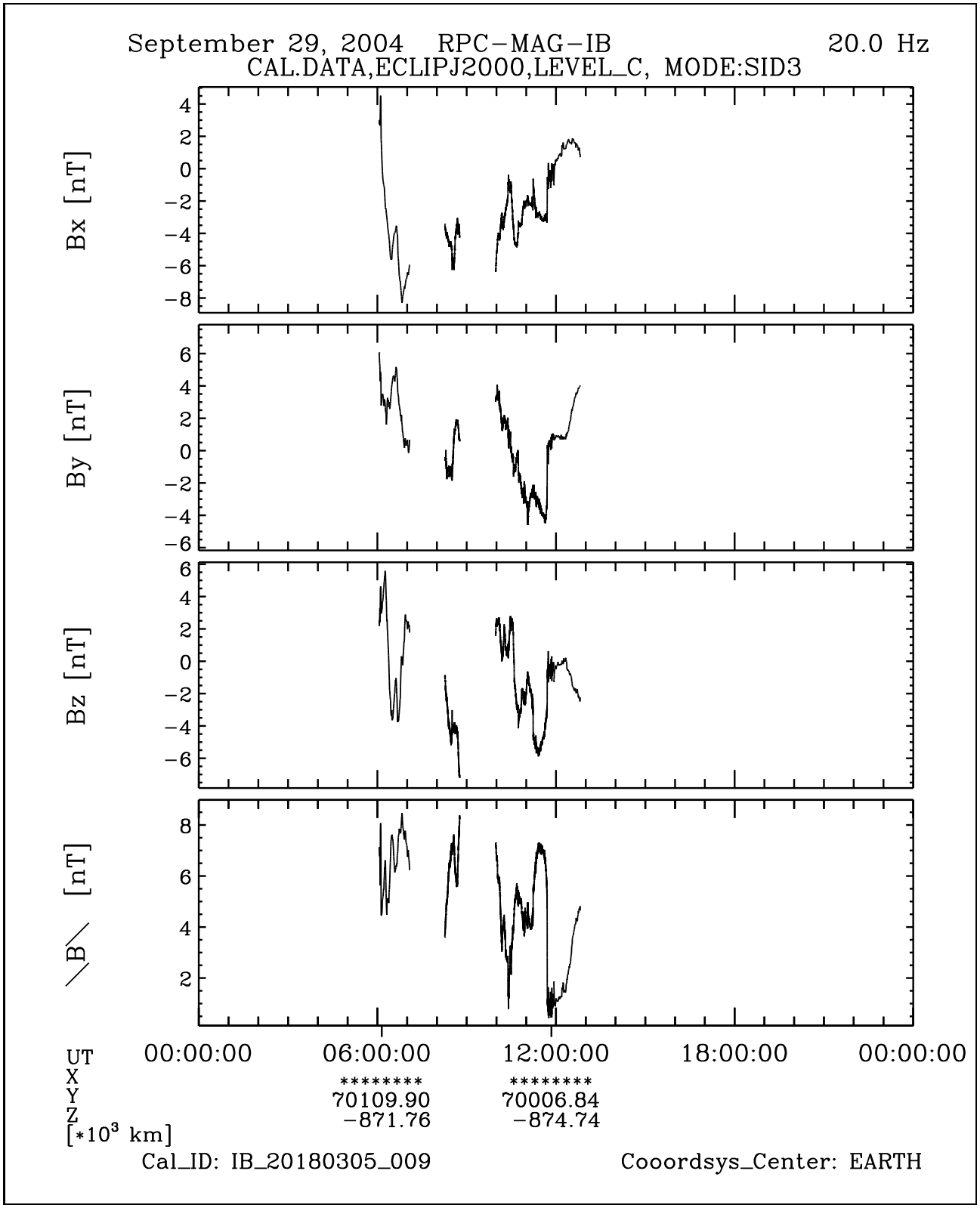

Figure 73: File: RPCMAG040929T0603_CLC_IB_M3_T0000_2400_009

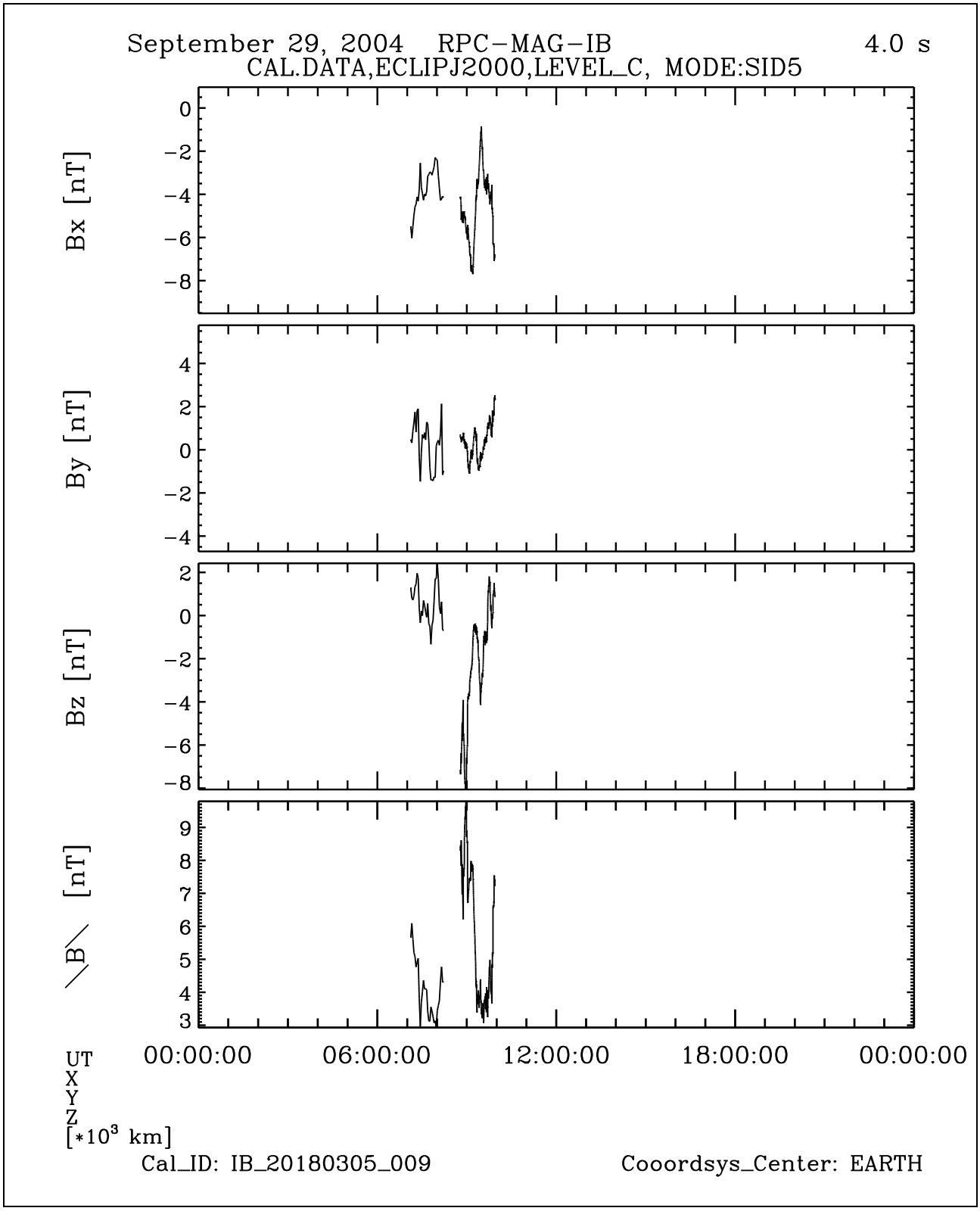

Figure 74: File: RPCMAG040929T0705_CLC_IB_M5_T0000_2400_009

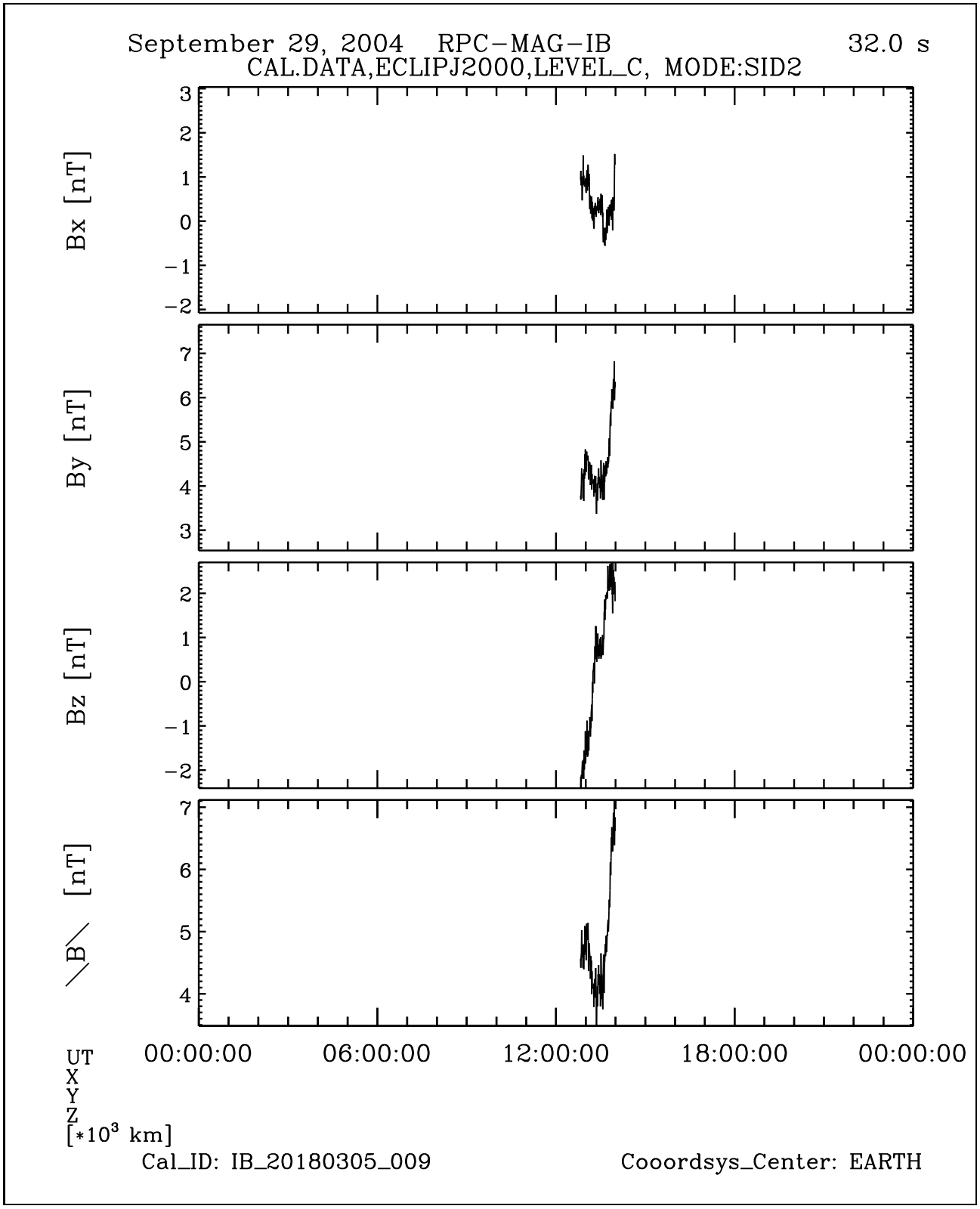

Figure 75: File: RPCMAG040929T1249_CLC_IB_M2_T0000_2400_009

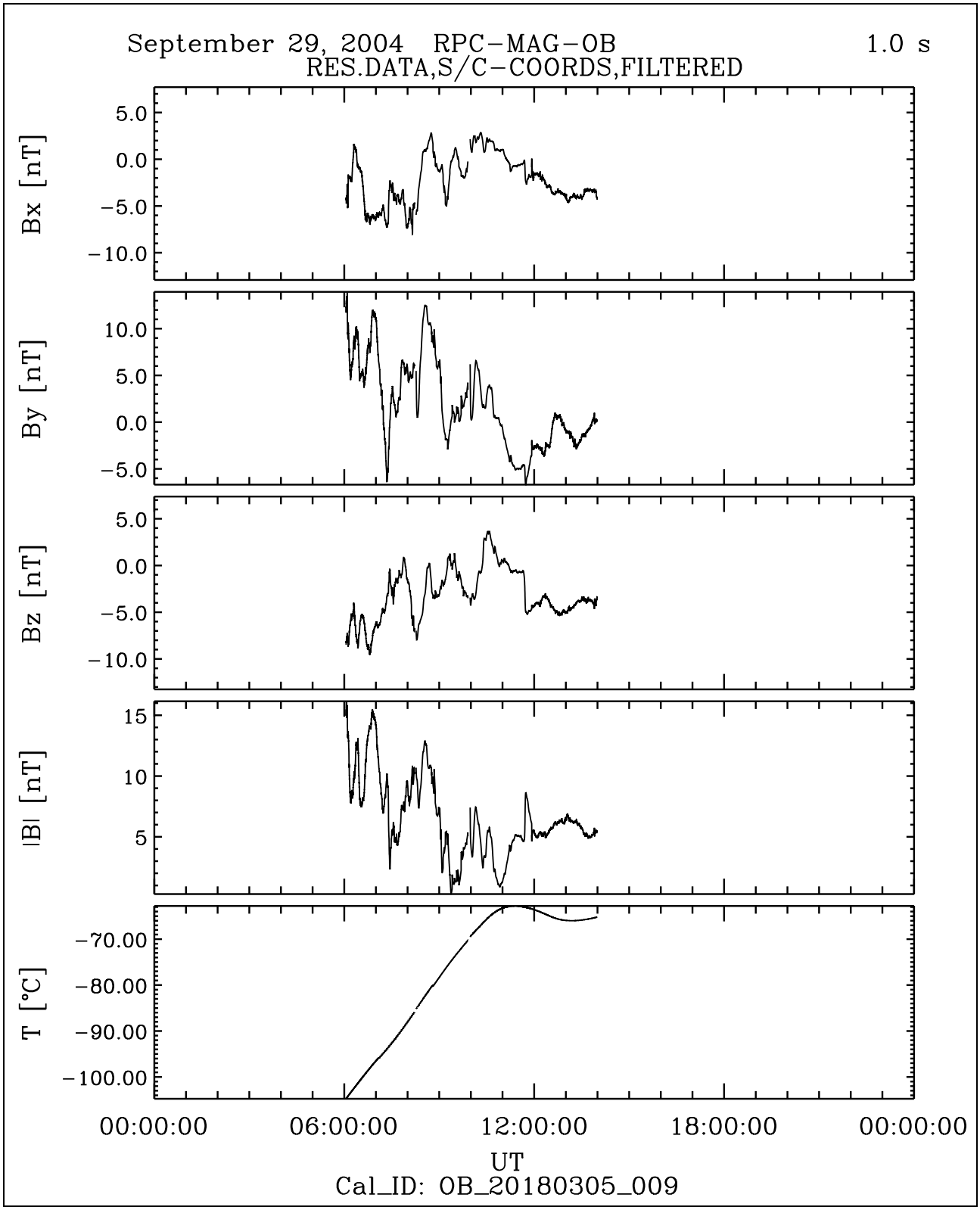

Figure 76: File: RPCMAG040929_CLF_OB_A1_T0000_2400_009

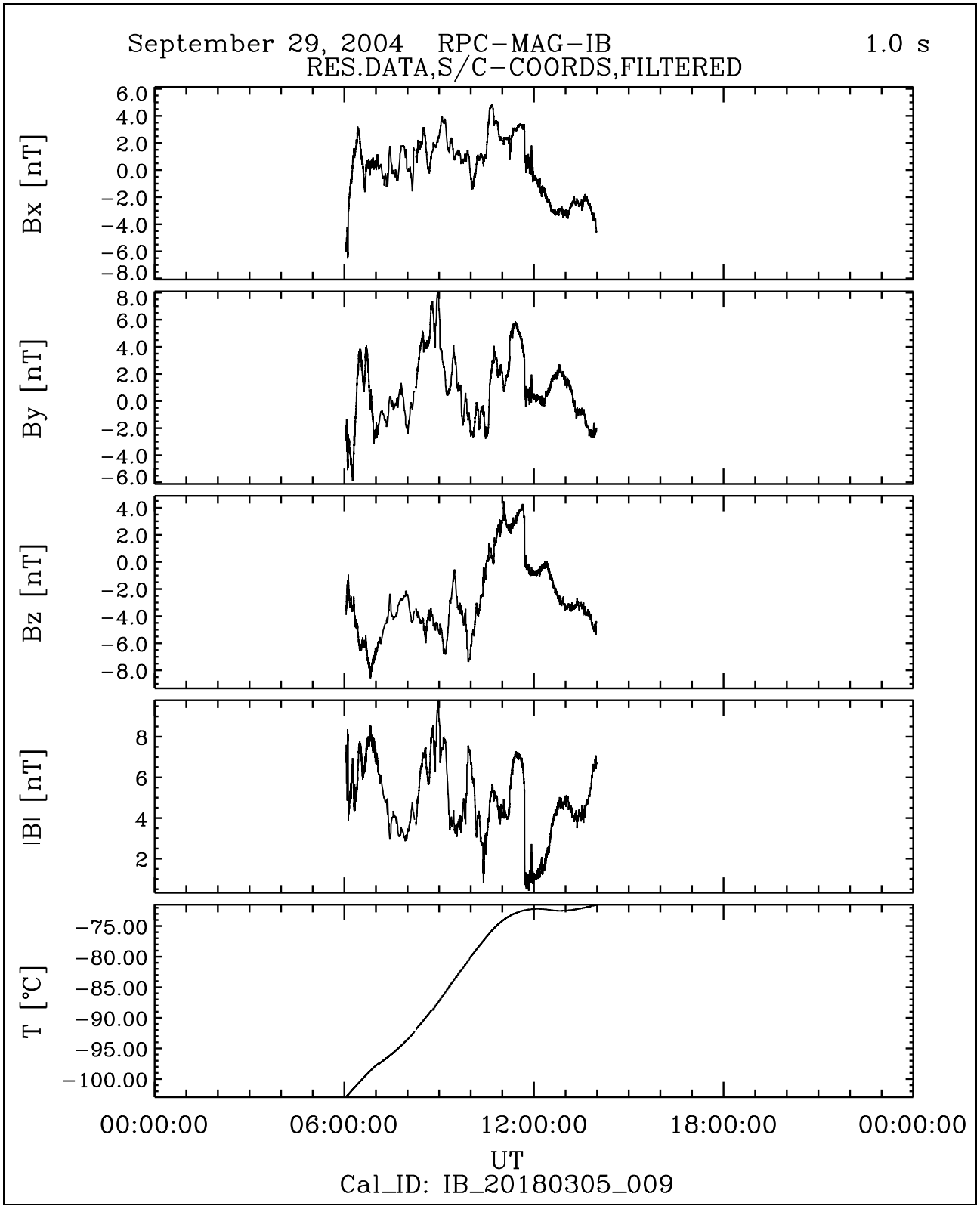

Figure 77: File: RPCMAG040929_CLF_IB_A1_T0000_2400_009

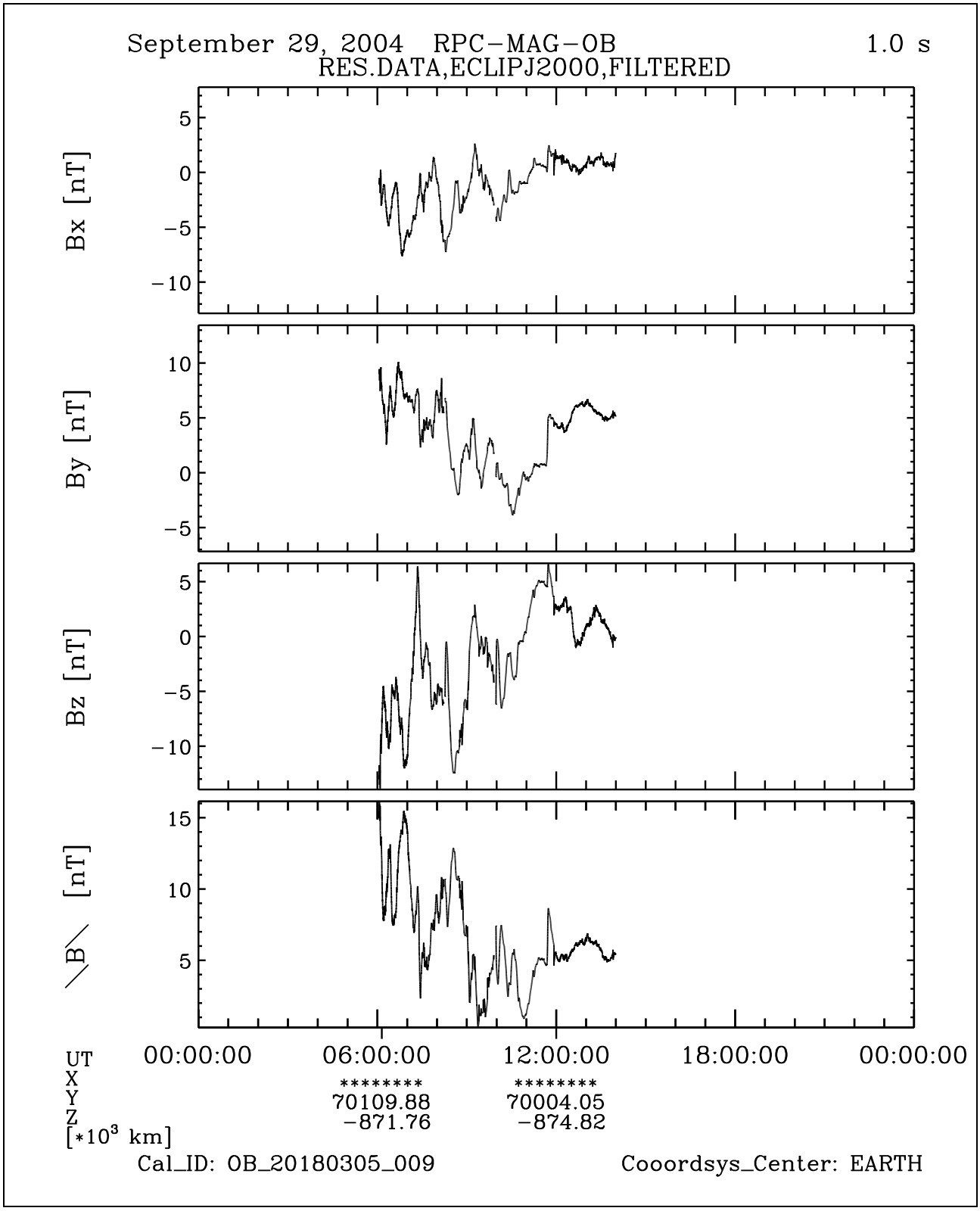

Figure 78: File: RPCMAG040929_CLG_OB_A1_T0000_2400_009

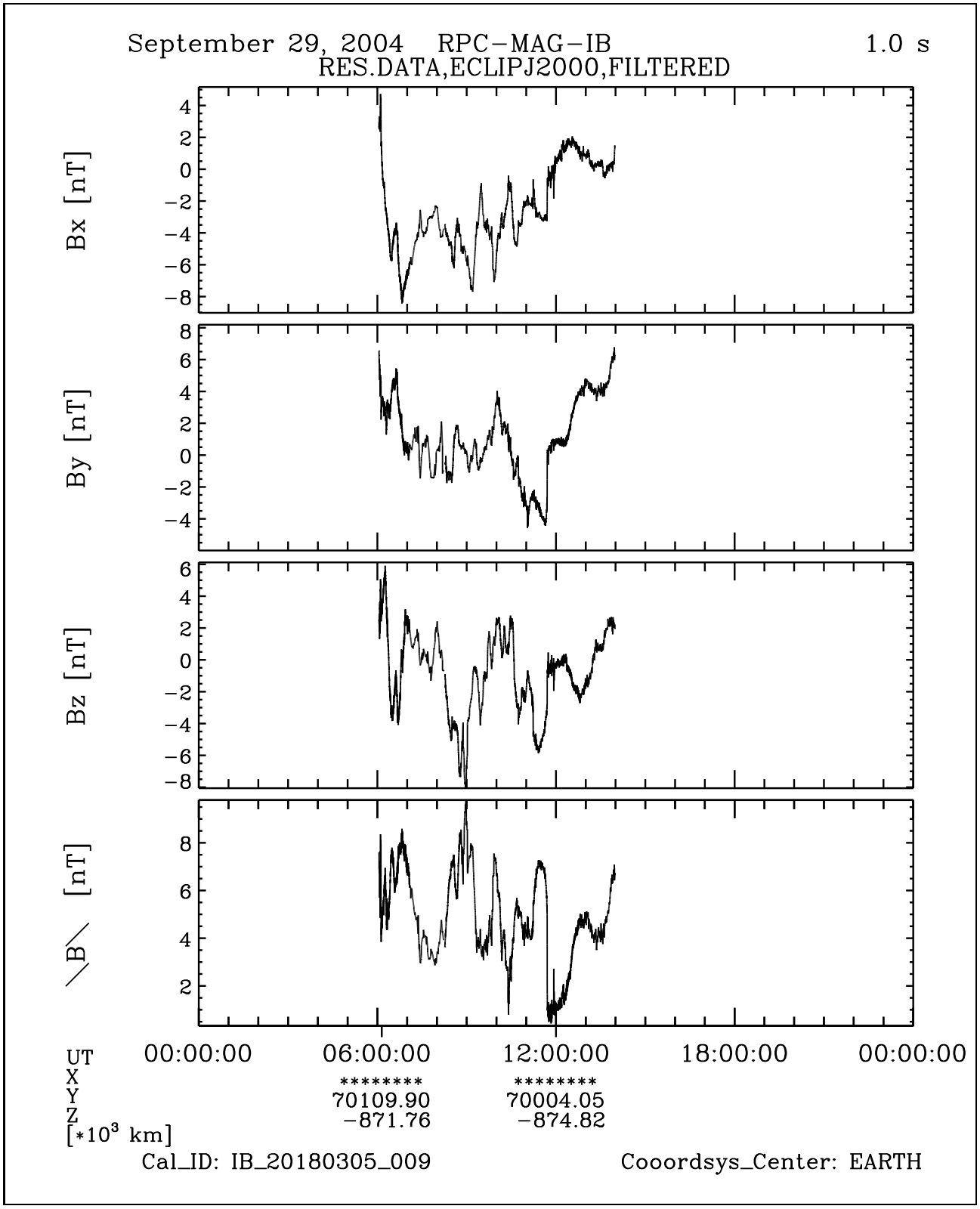

Figure 79: File: RPCMAG040929_CLG_IB_A1_T0000_2400_009

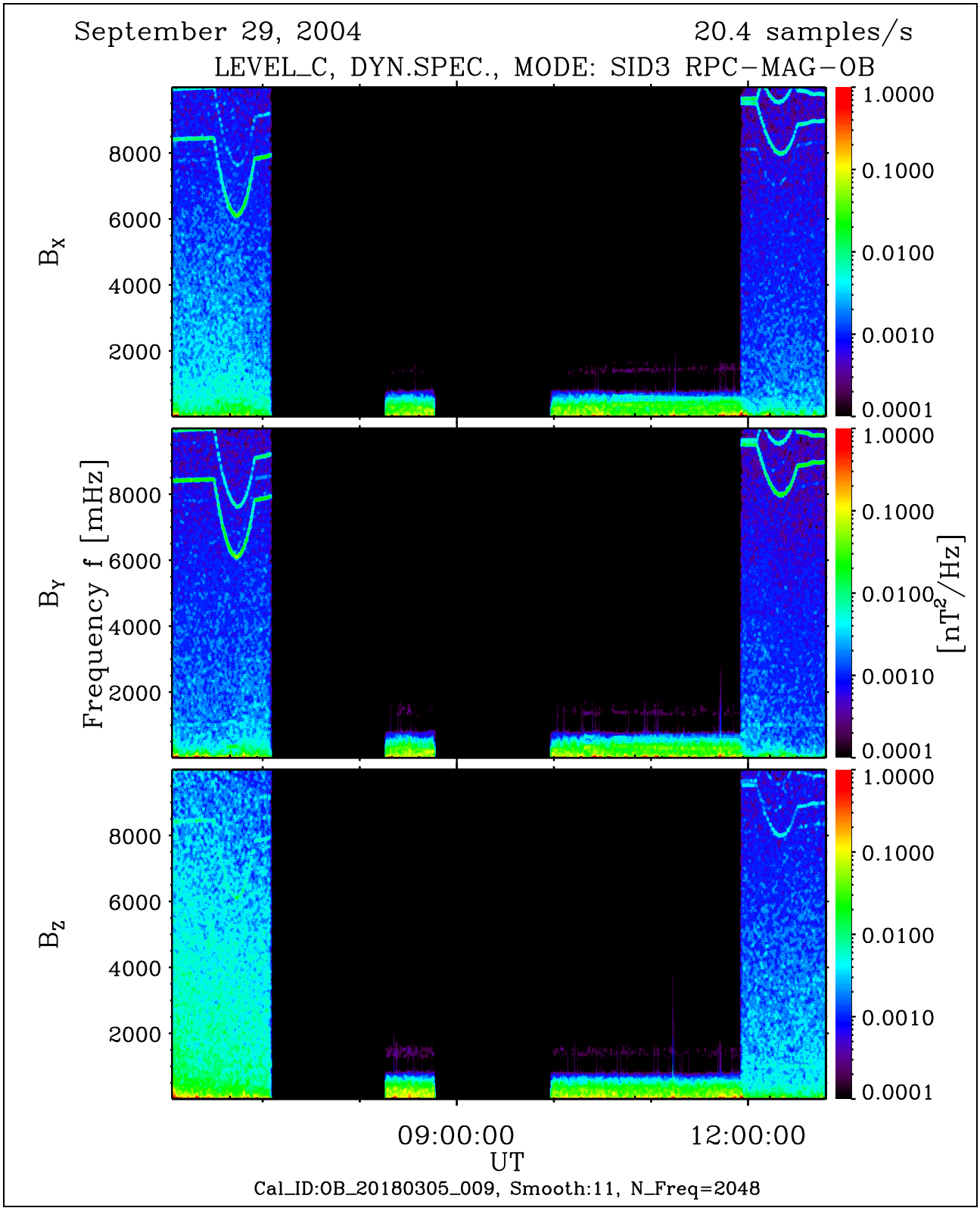

Figure 80: File: RPCMAG040929T0603_CLC_OB_M3_DS0_10000_009

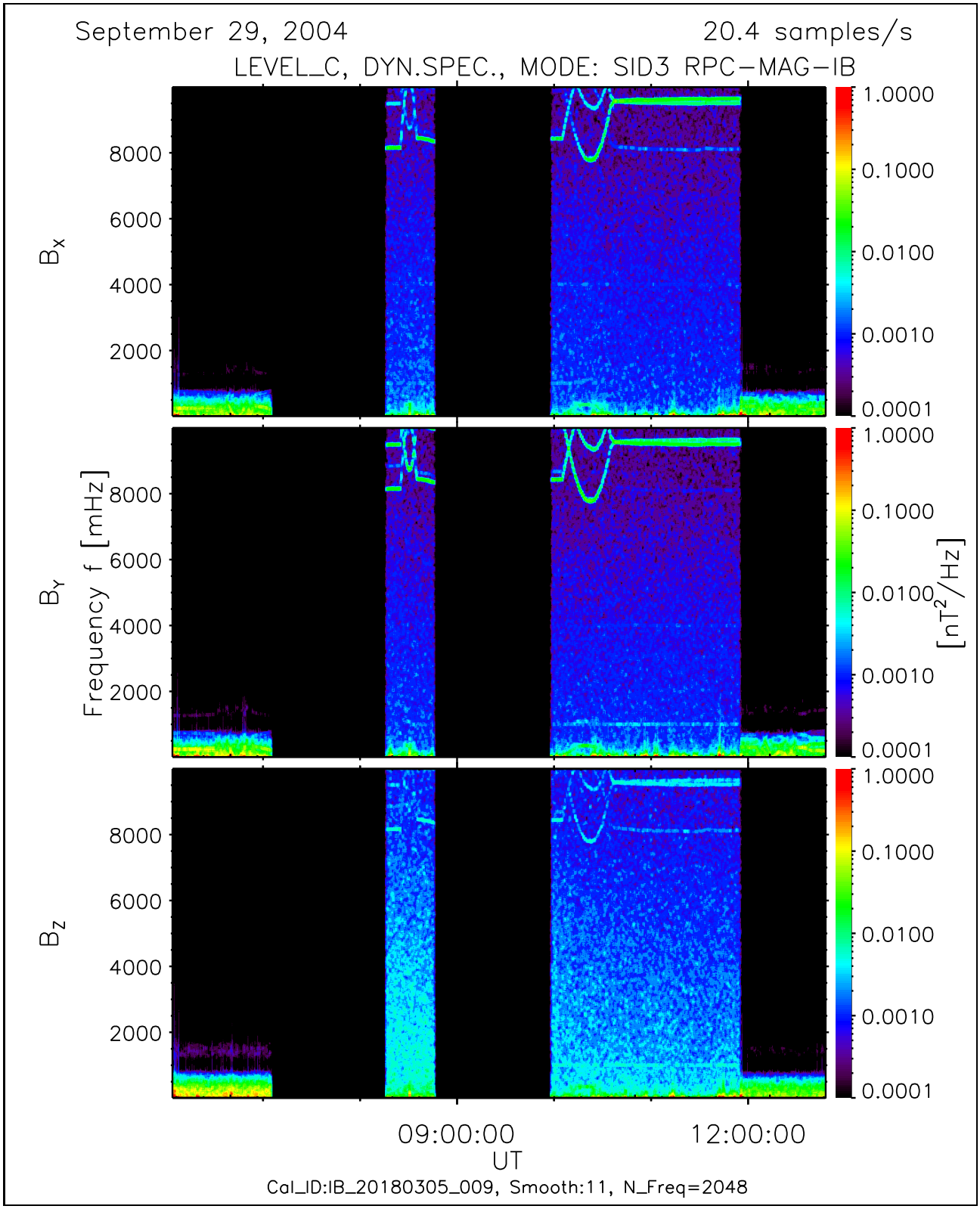

Figure 81: File: RPCMAG040929T0603_CLC_IB_M3_DS0_10000_009

6.3 Plots of ROSETTA's Reaction Wheels Speeds

The following plots show the time series of the revolutions of the 4 reaction wheels. Two kinds of data are shown:

- The original reaction wheel data as they are stored in the DDS.
- The theoretical response of the wheels impact seen by an instrument sampling with different frequencies. Here the response at 1 Hz sampling frequency is plotted.

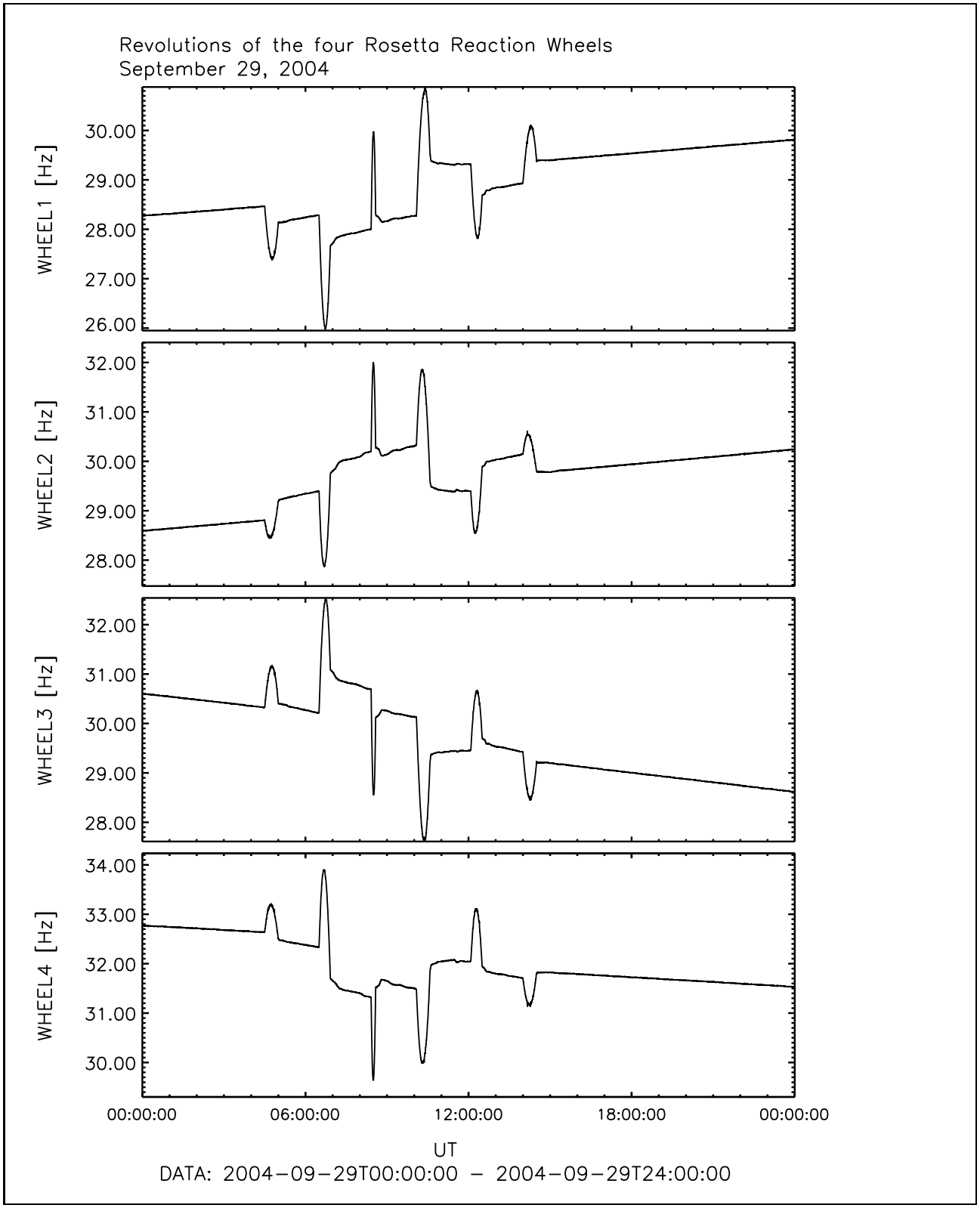

Figure 82: File: wheels_Hz2004-09-29T00-00

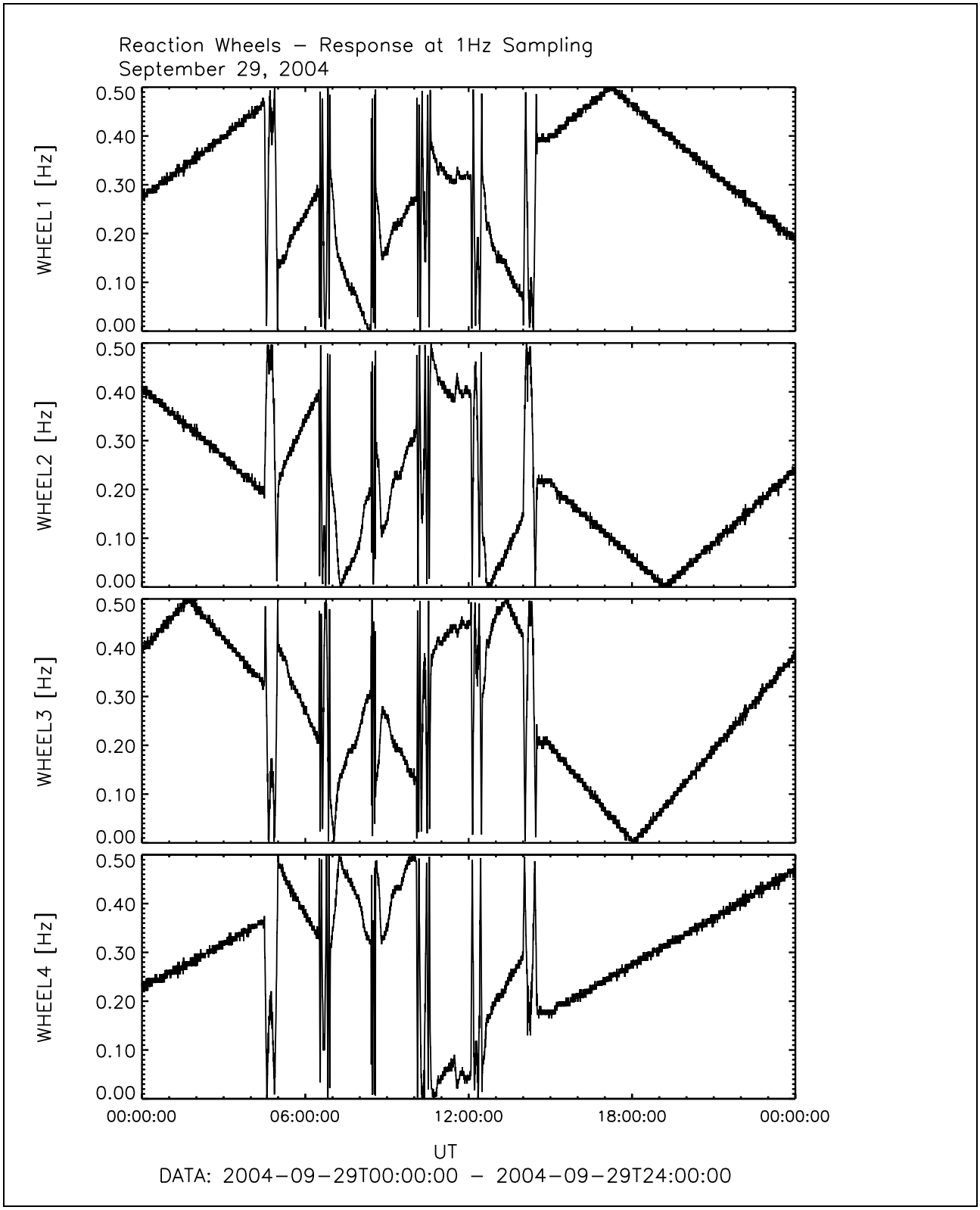

Figure 83: File: wheels_1Hz_Sampling2004-09-29T00-00

6.4 Plots of Reaction Wheel and LAP Disturbance corrected Data

The following plots show the dynamic spectra of the LEVEL_H data. These data have been purged from ROSETTAs reaction wheel disturbance and also from the disturbance of the LAP instrument. Plots are only shown for the primary sensor.

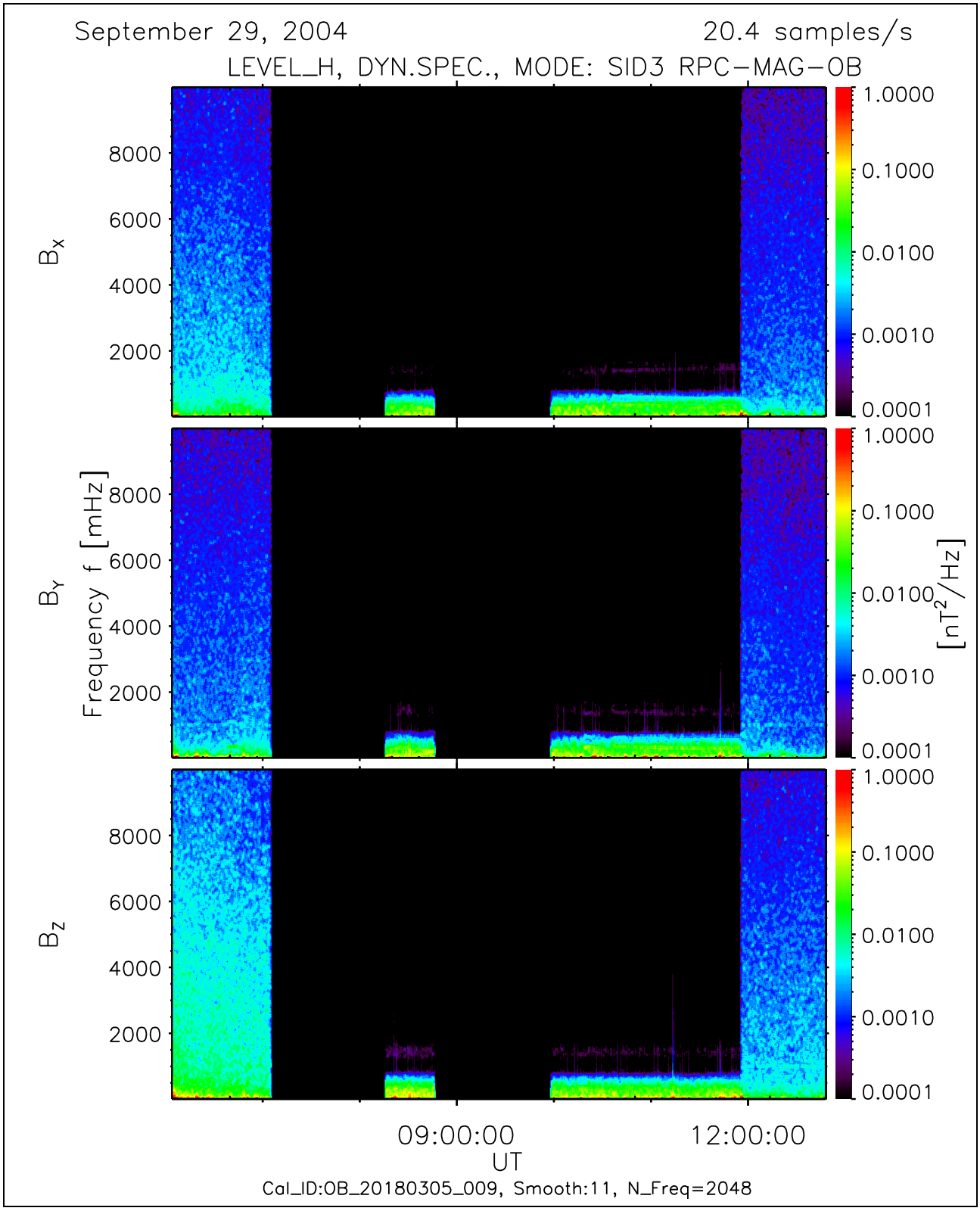

Figure 84: File: RPCMAG040929T0603_CLH_OB_M3_DS0_10000_009

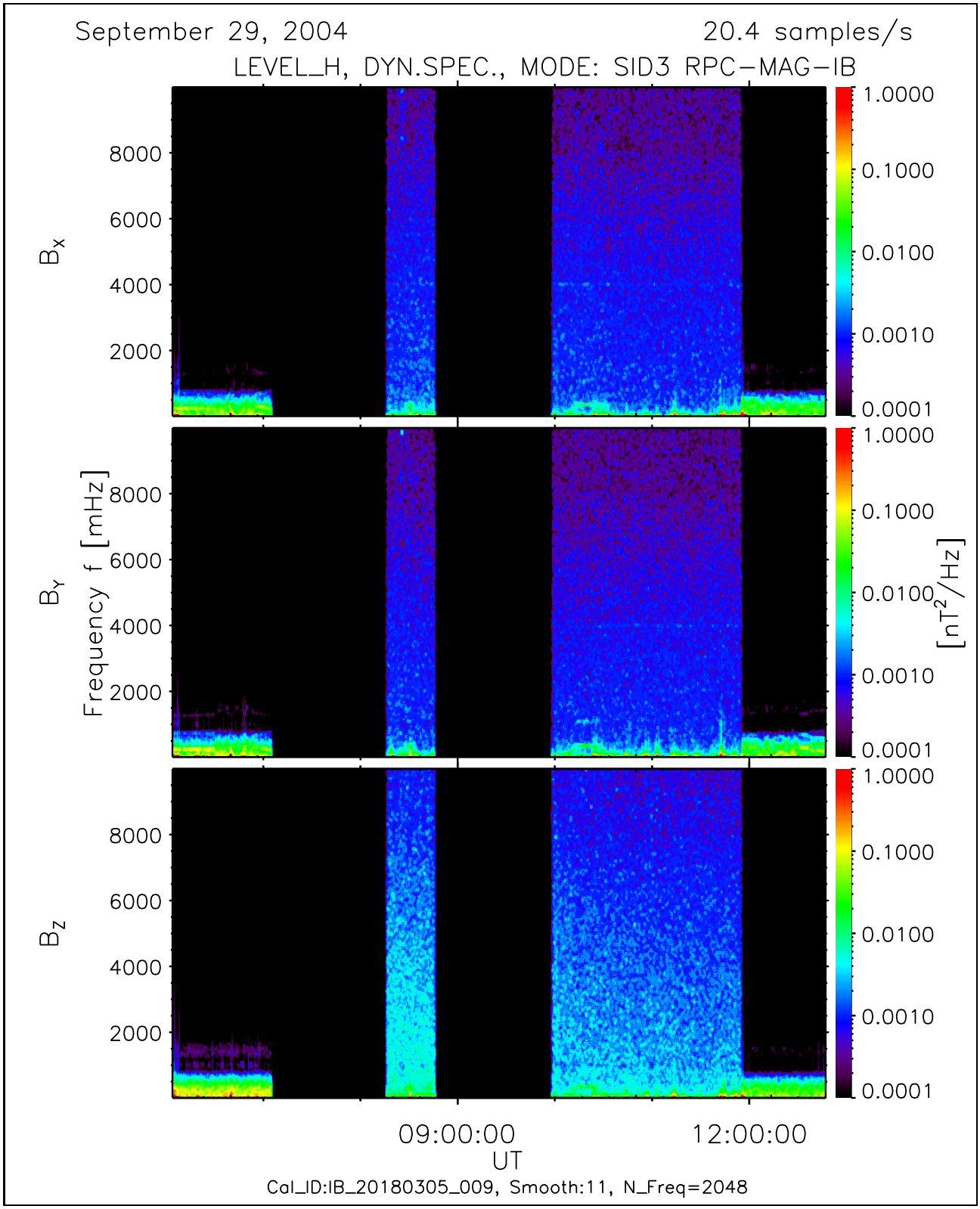

Figure 85: File: RPCMAG040929T0603_CLH_IB_M3_DS0_10000_009

7 September 30, 2004:

7.1 Actions

The Instrument was switched on at 04:32 and switched off at 15:54.

Time	Stage A, Stage B,Filter cfg	Stage 1, Stage 2, Stage3	Mode
04:40 – 10:25	1 2 0	1 2 0	SID2
10:25 – 12:22	4 3 0	4 3 0	SID5
12:23 – 13:10	0 0 0	0 0 0	SID3
13:10 – 13:22	4 3 0	4 3 0	SID5
13:23 – 15:40	0 0 0	0 0 0	SID3

7.2 Plots of Calibrated Data using the new Temperature Model

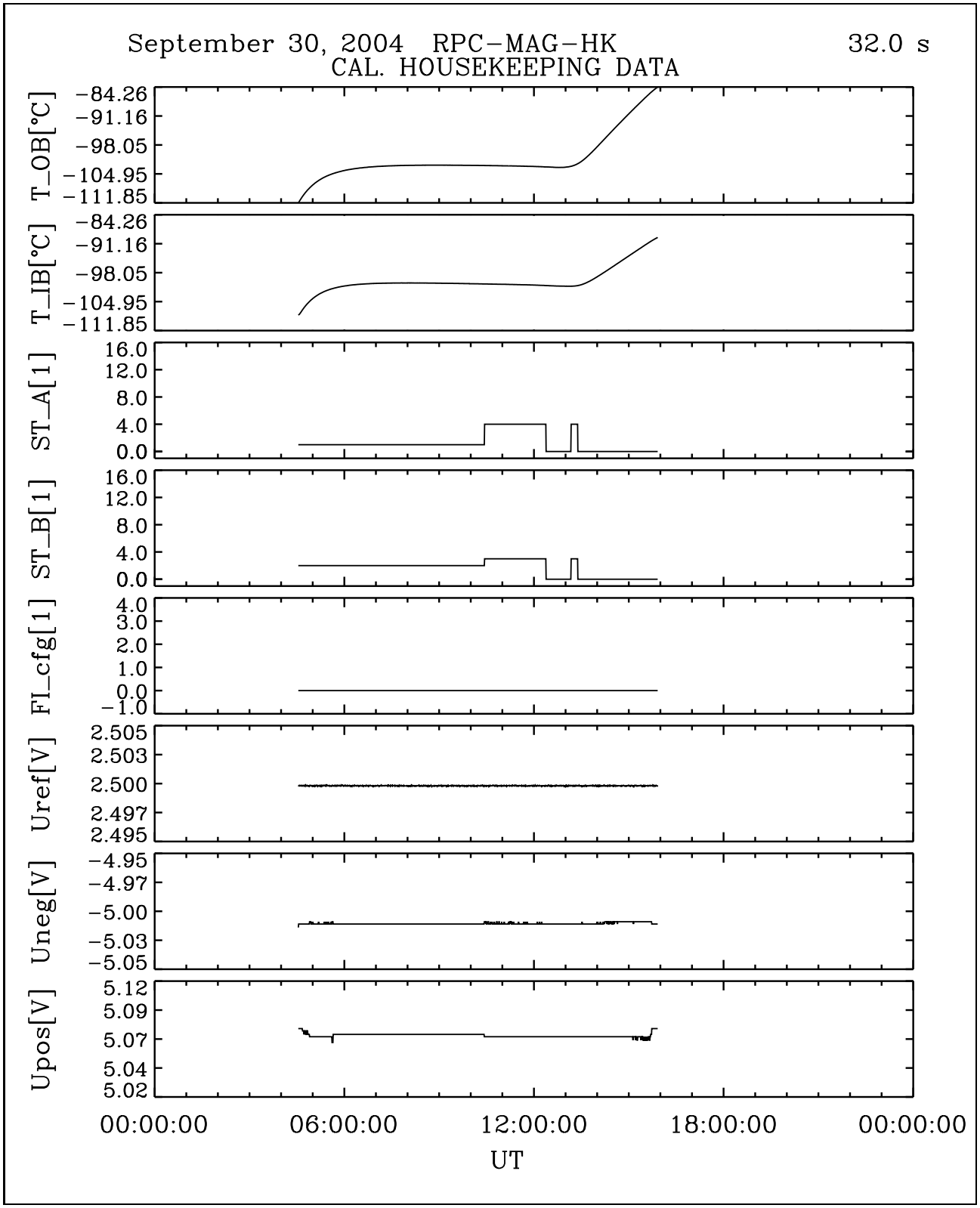

Figure 86: File: RPCMAG040930T0432_CLA_HK_P0000_2400

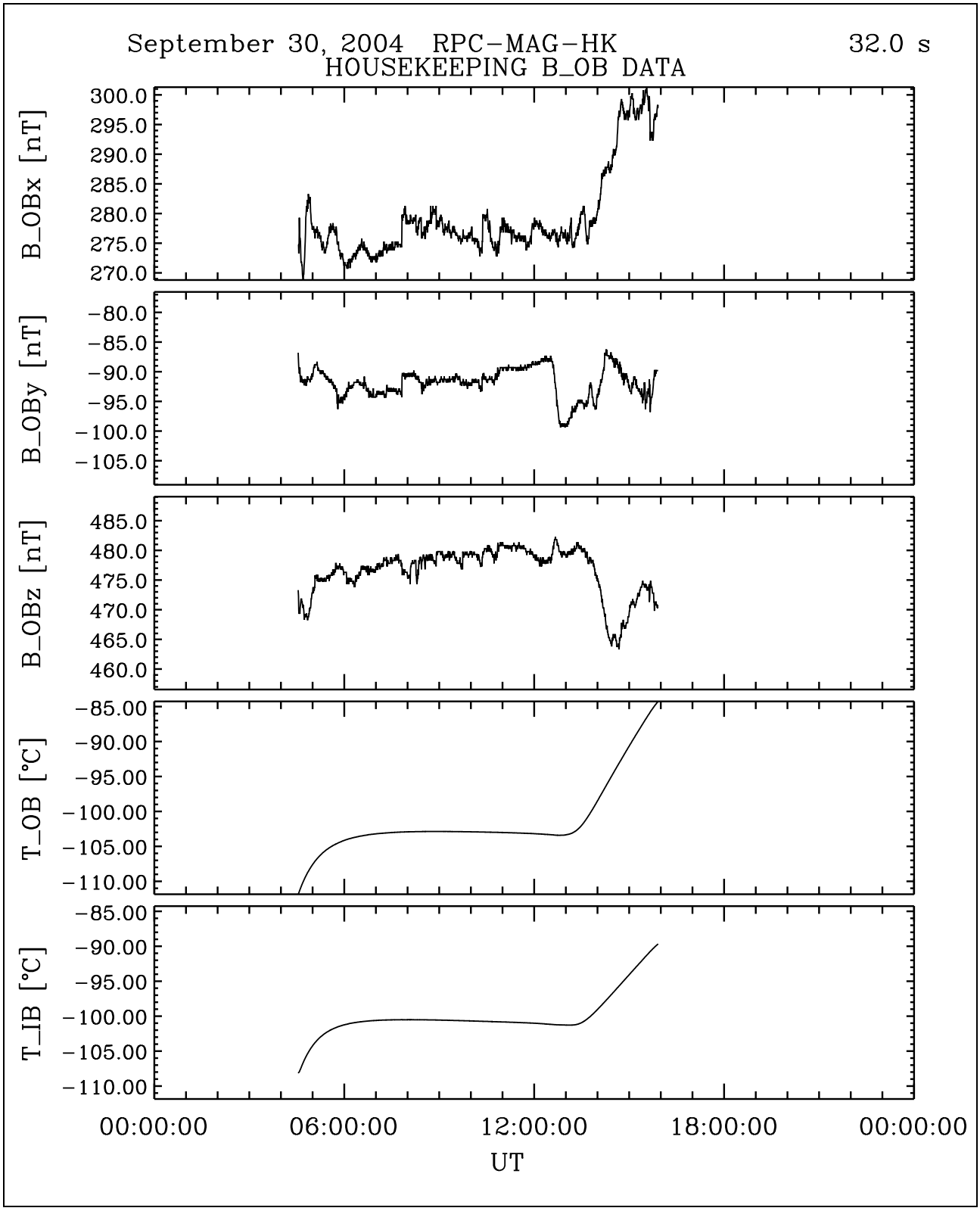

Figure 87: File: RPCMAG040930T0432_CLA_HK_B_P0000_2400

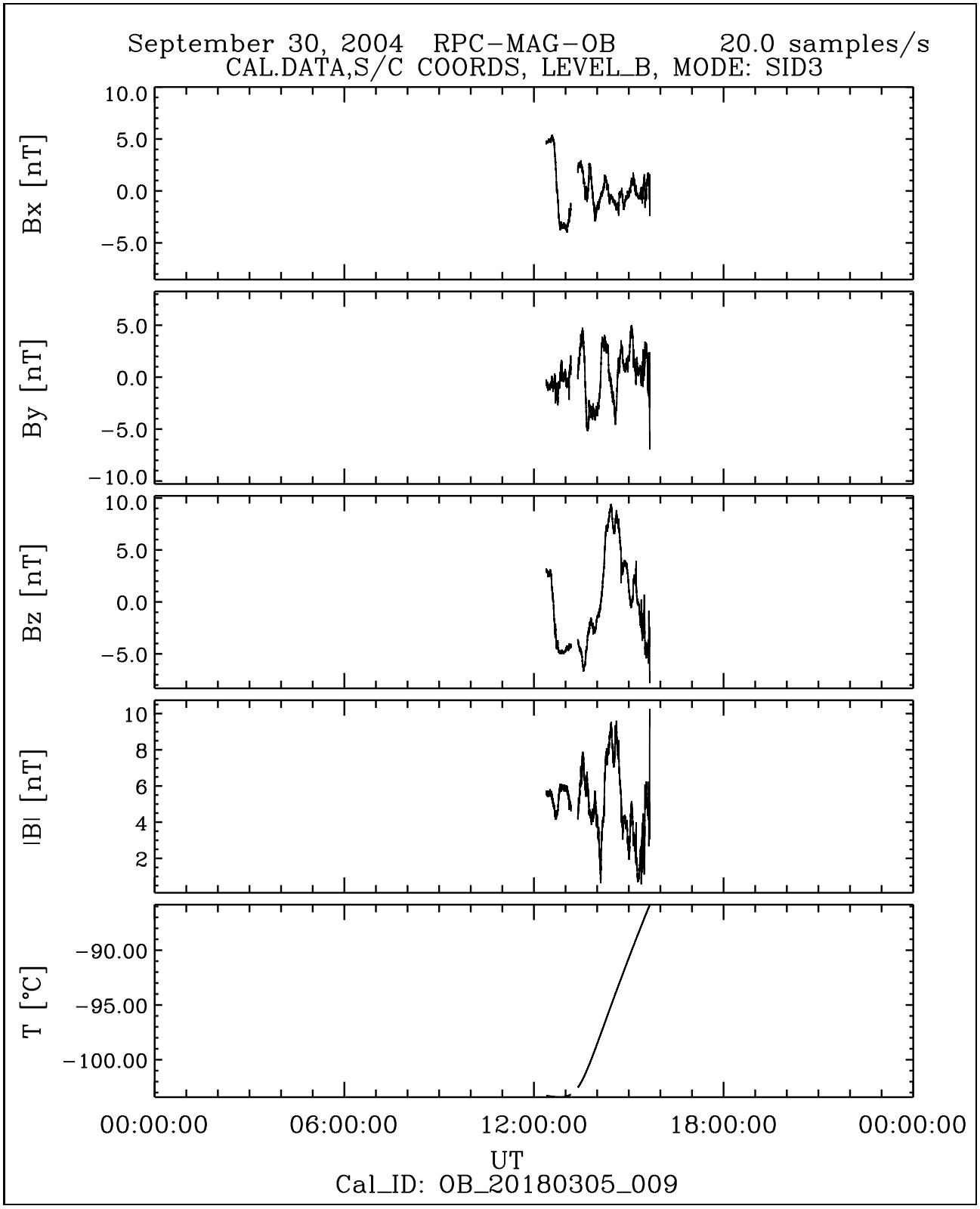

Figure 88: File: RPCMAG040930T1223_CLB_OB_M3_T0000_2400_009

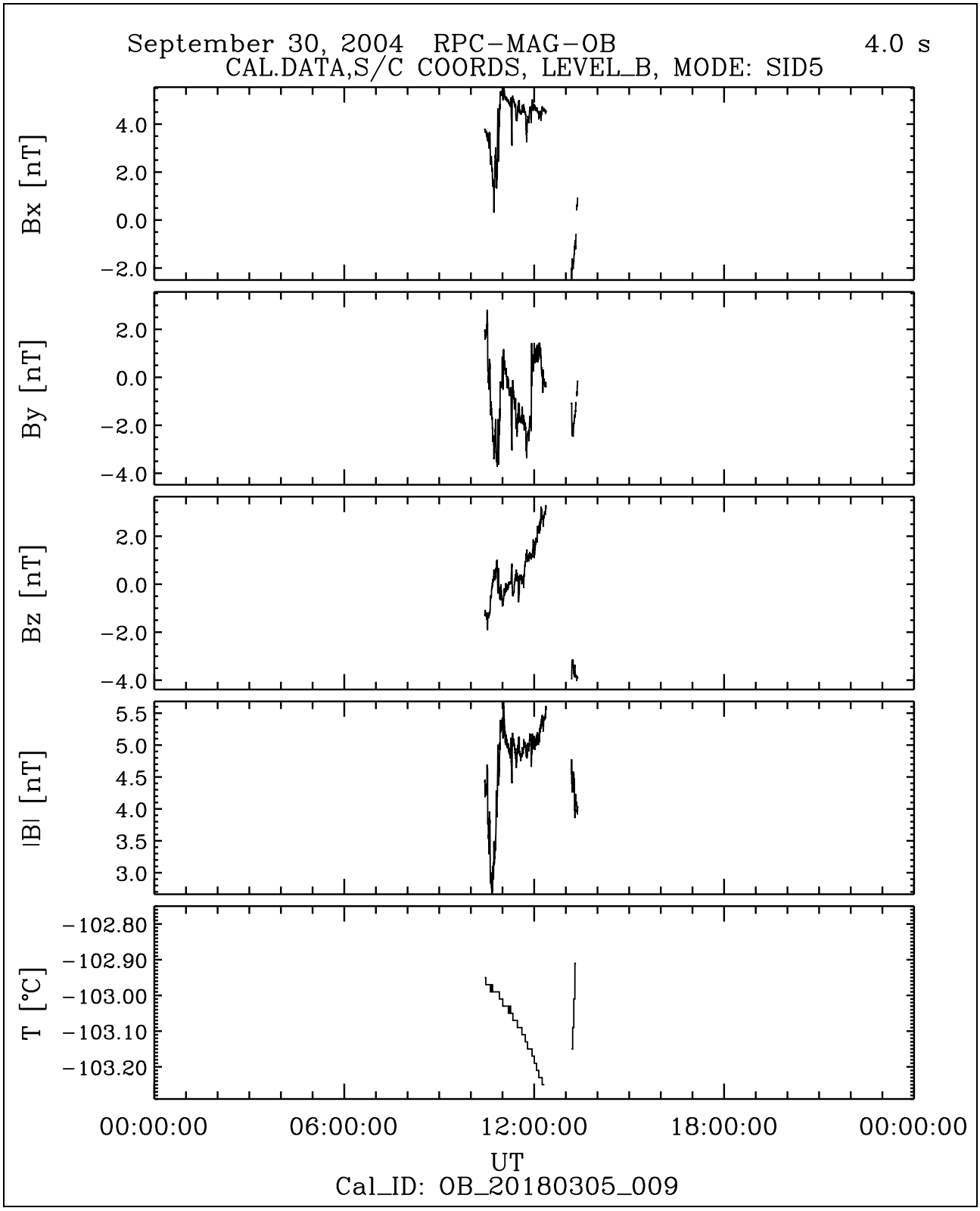

Figure 89: File: RPCMAG040930T1025_CLB_OB_M5_T0000_2400_009

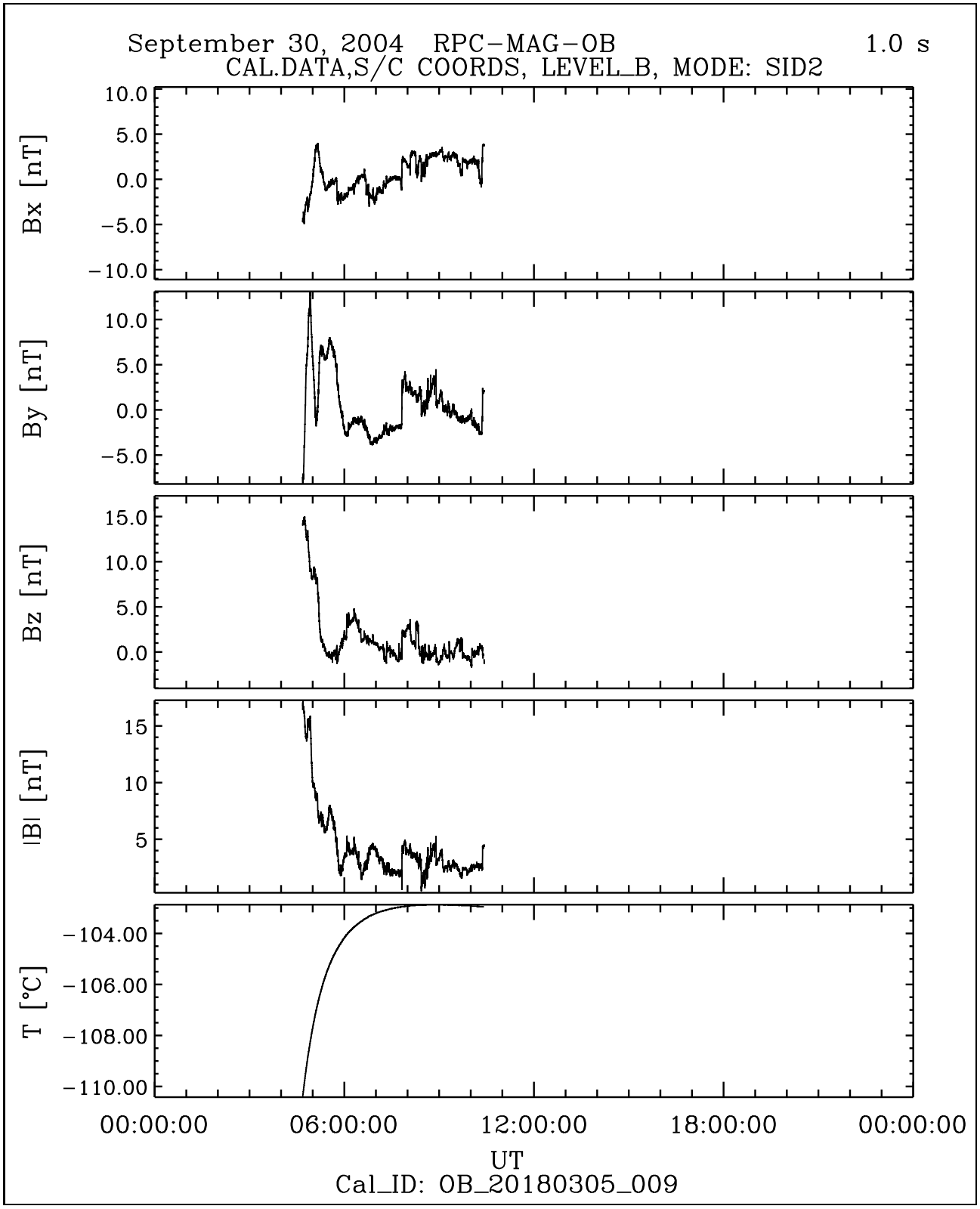

Figure 90: File: RPCMAG040930T0440_CLB_OB_M2_T0000_2400_009

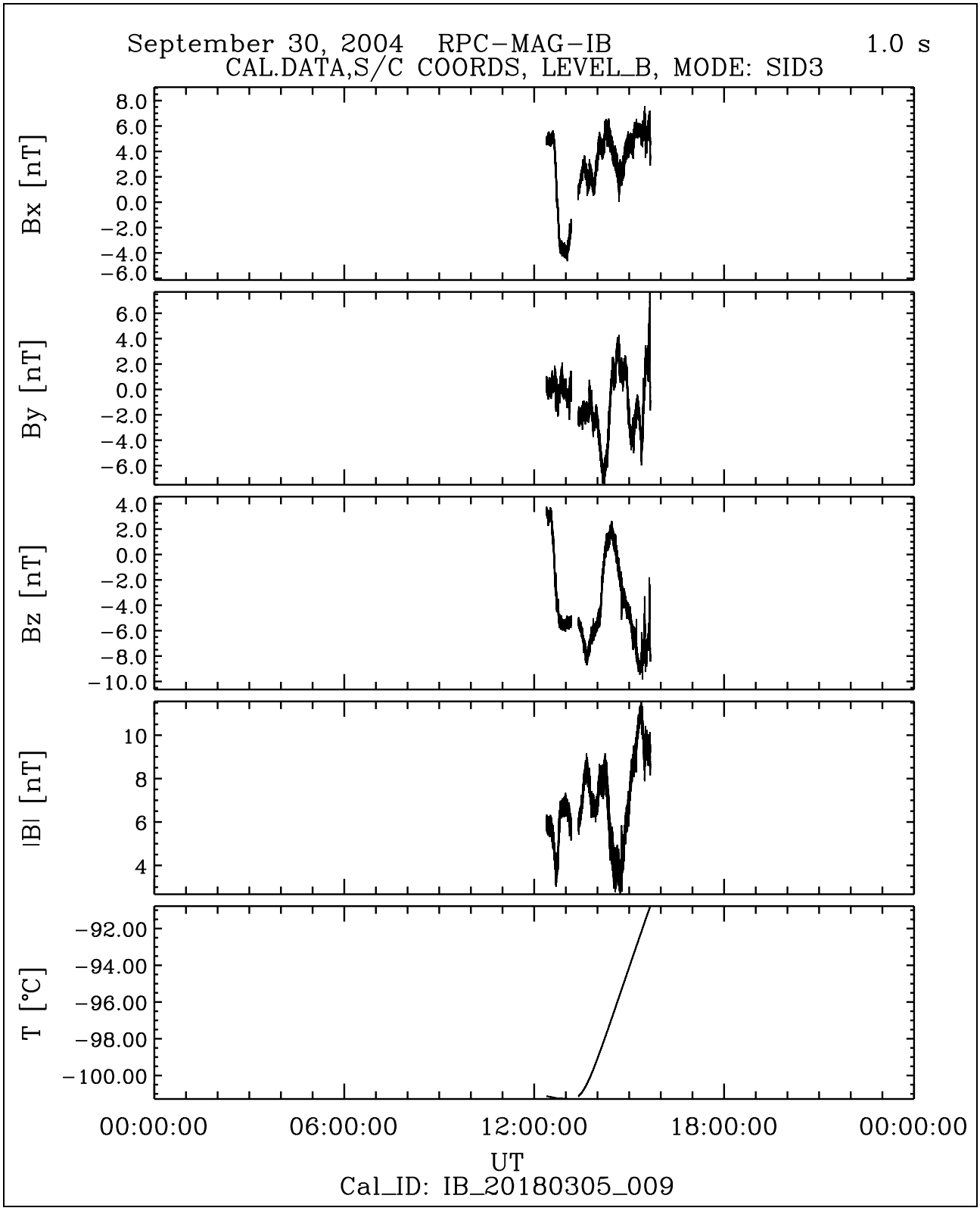

Figure 91: File: RPCMAG040930T1223_CLB_IB_M3_T0000_2400_009

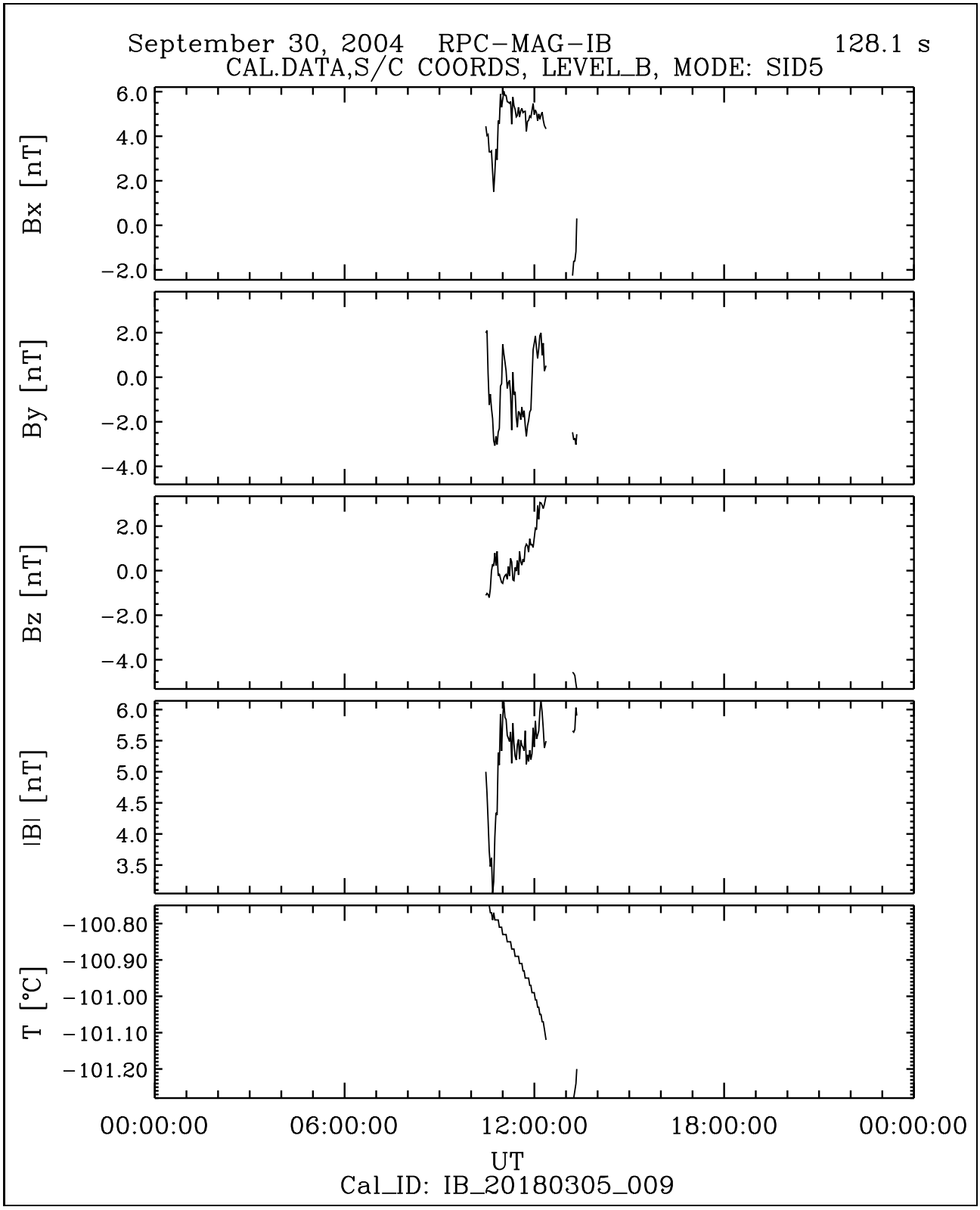

Figure 92: File: RPCMAG040930T1025_CLB_IB_M5_T0000_2400_009

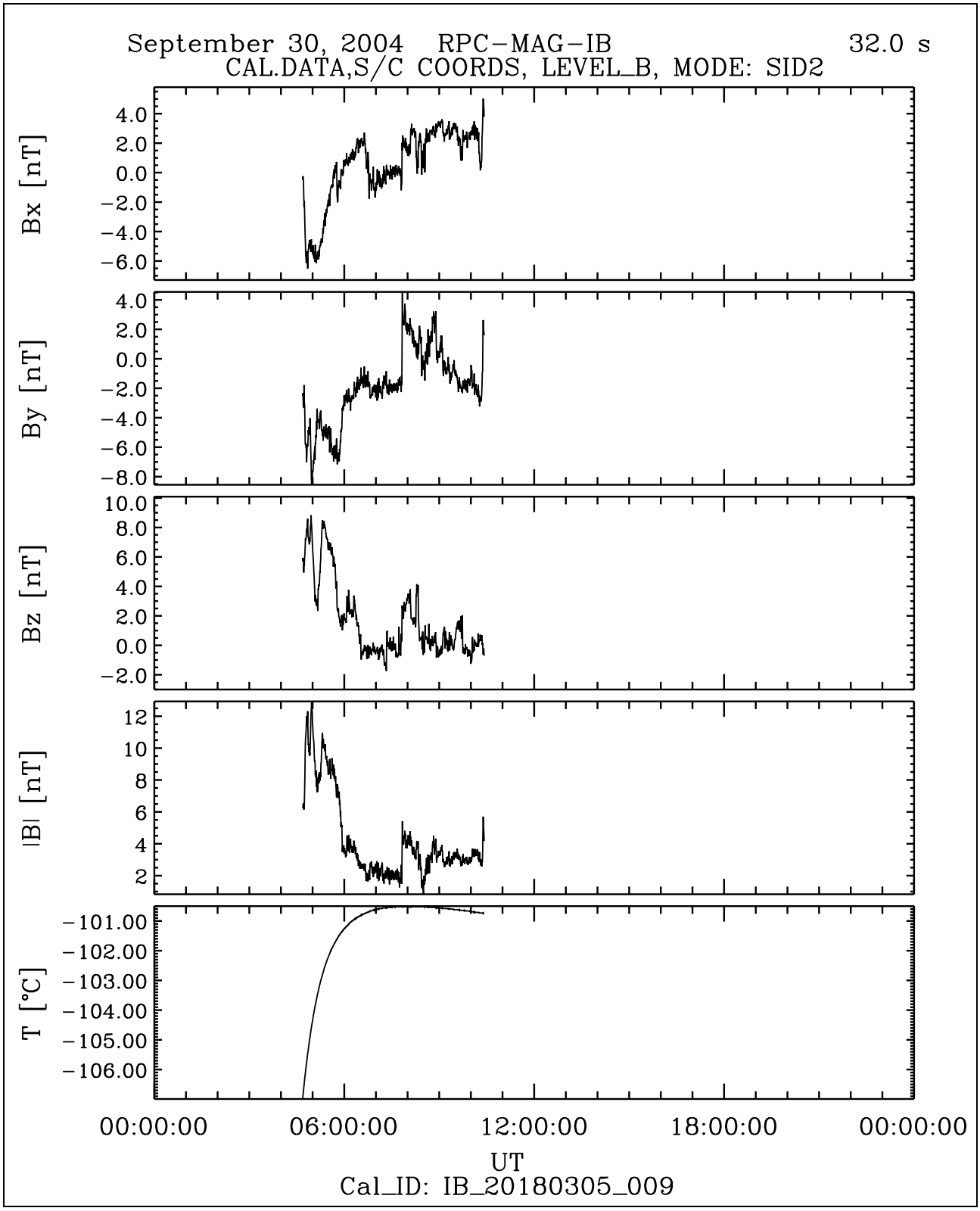

Figure 93: File: RPCMAG040930T0440_CLB_IB_M2_T0000_2400_009

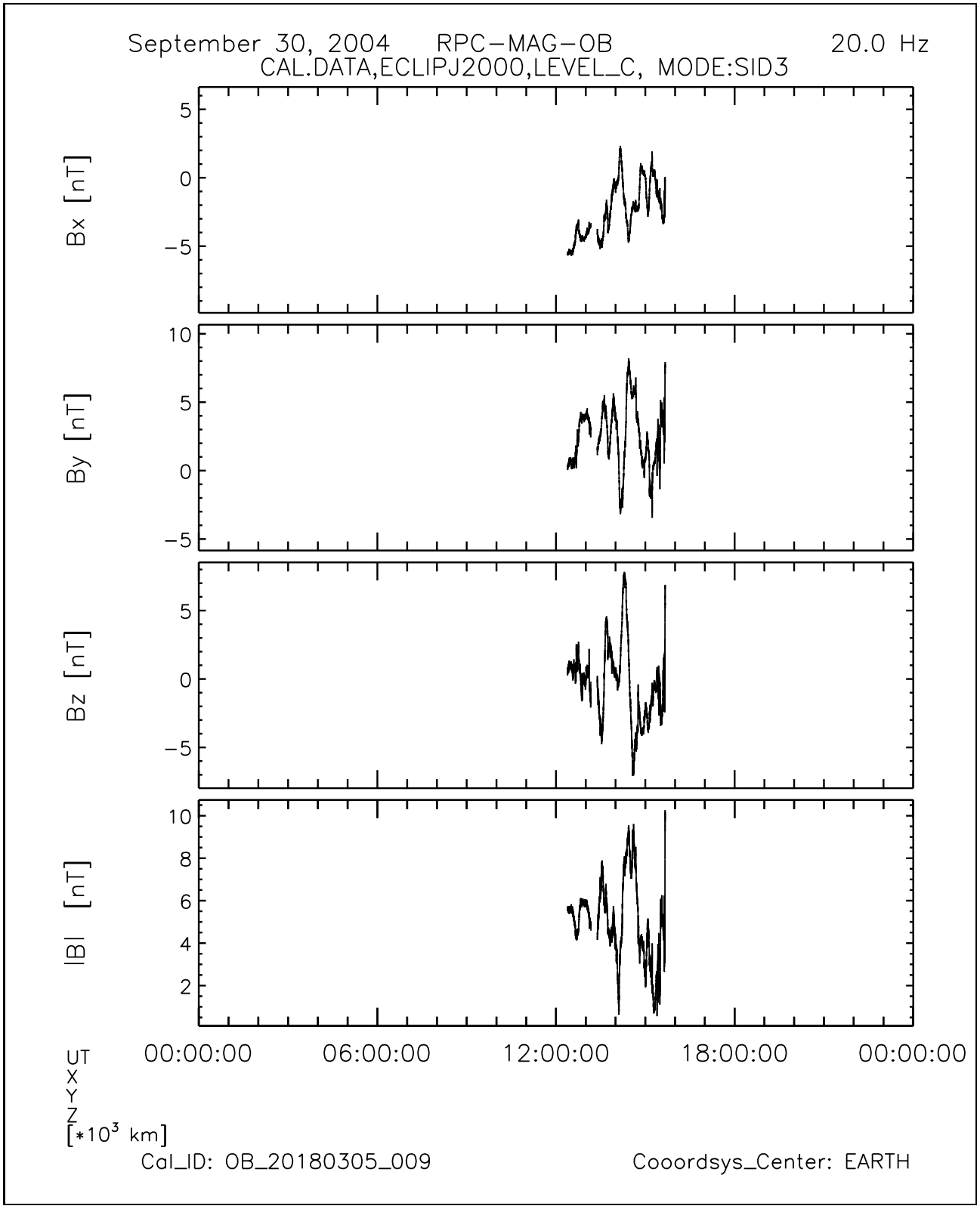

Figure 94: File: RPCMAG040930T1223_CLC_OB_M3_T0000_2400_009

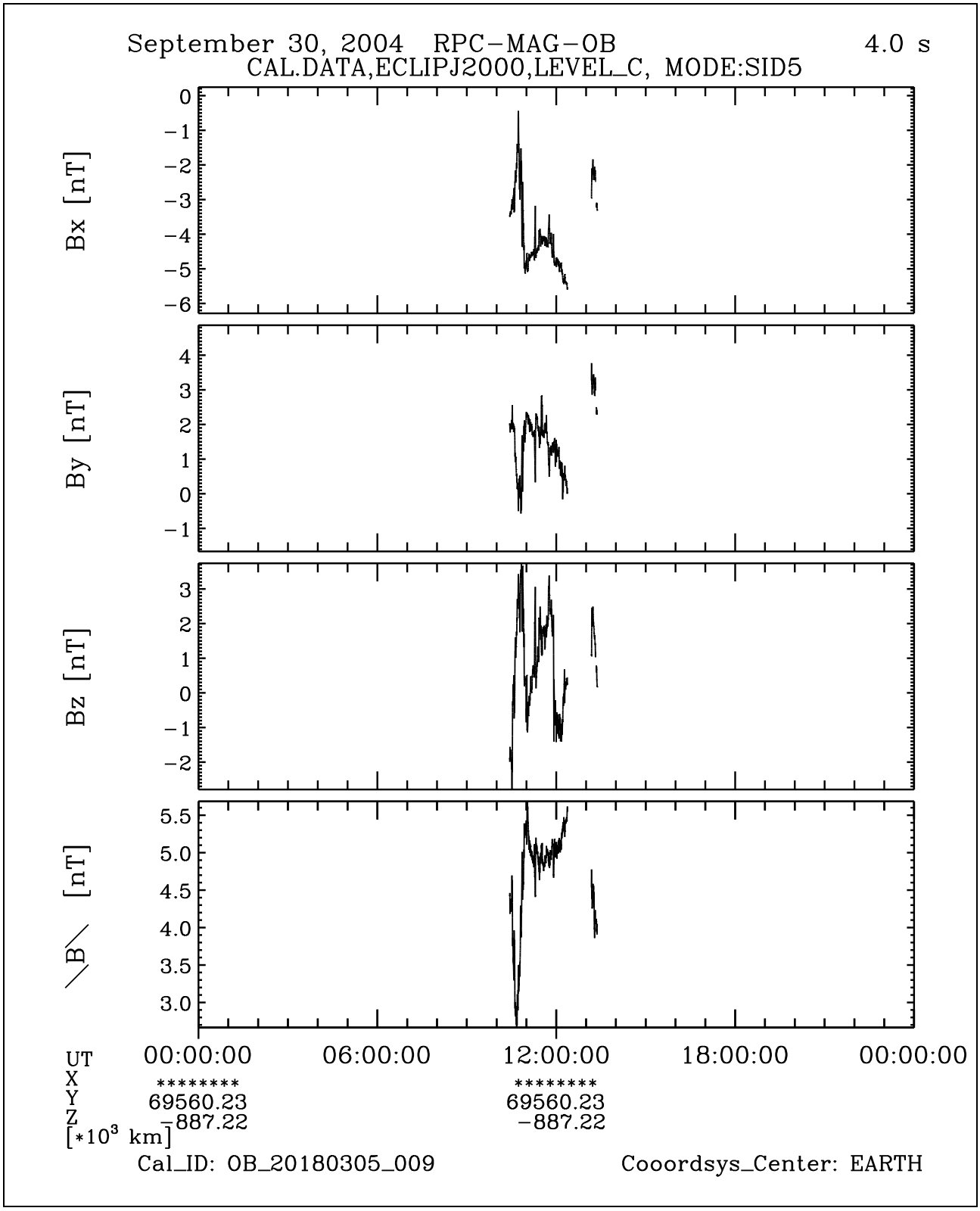

Figure 95: File: RPCMAG040930T1025_CLC_OB_M5_T0000_2400_009

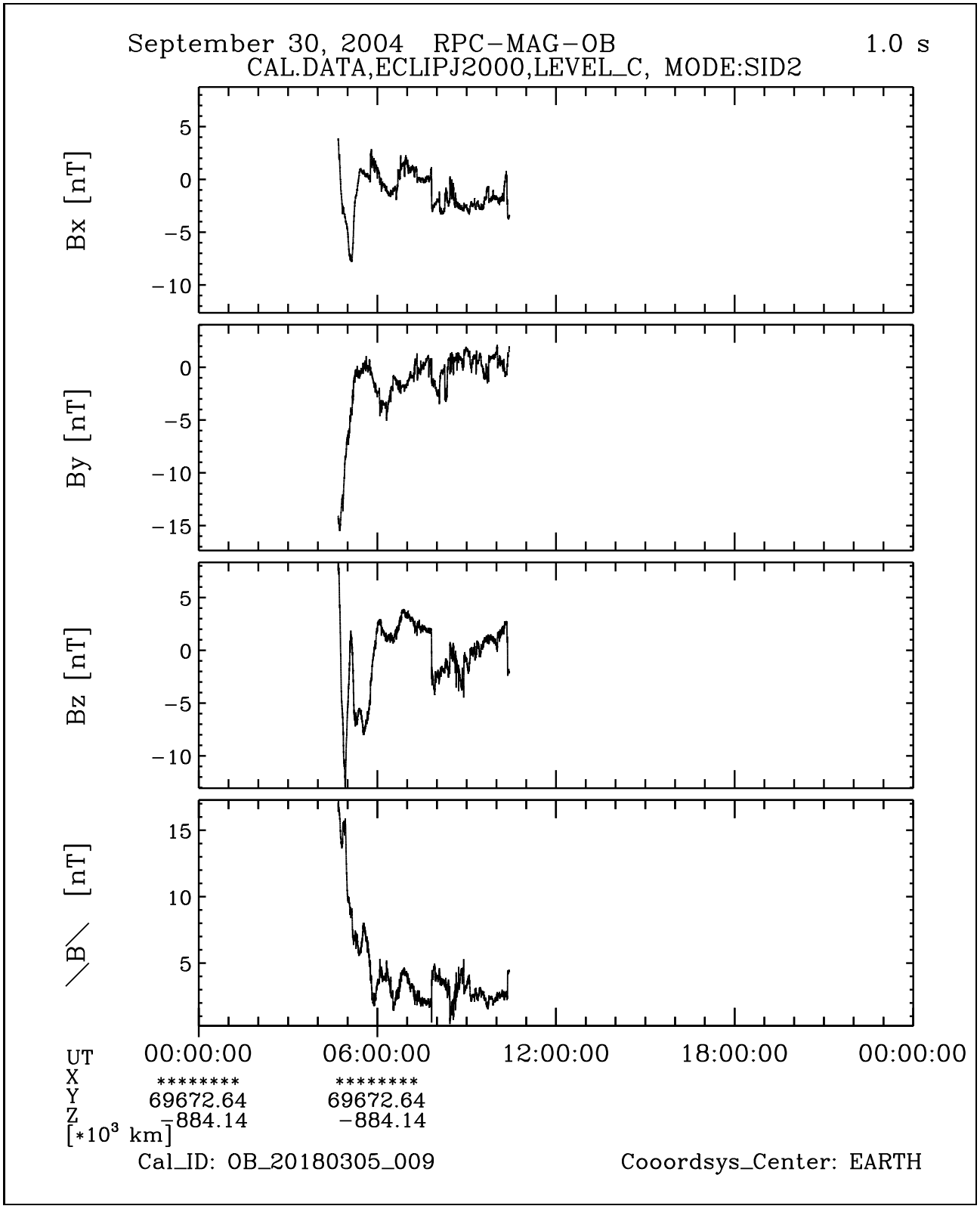

Figure 96: File: RPCMAG040930T0440_CLC_OB_M2_T0000_2400_009

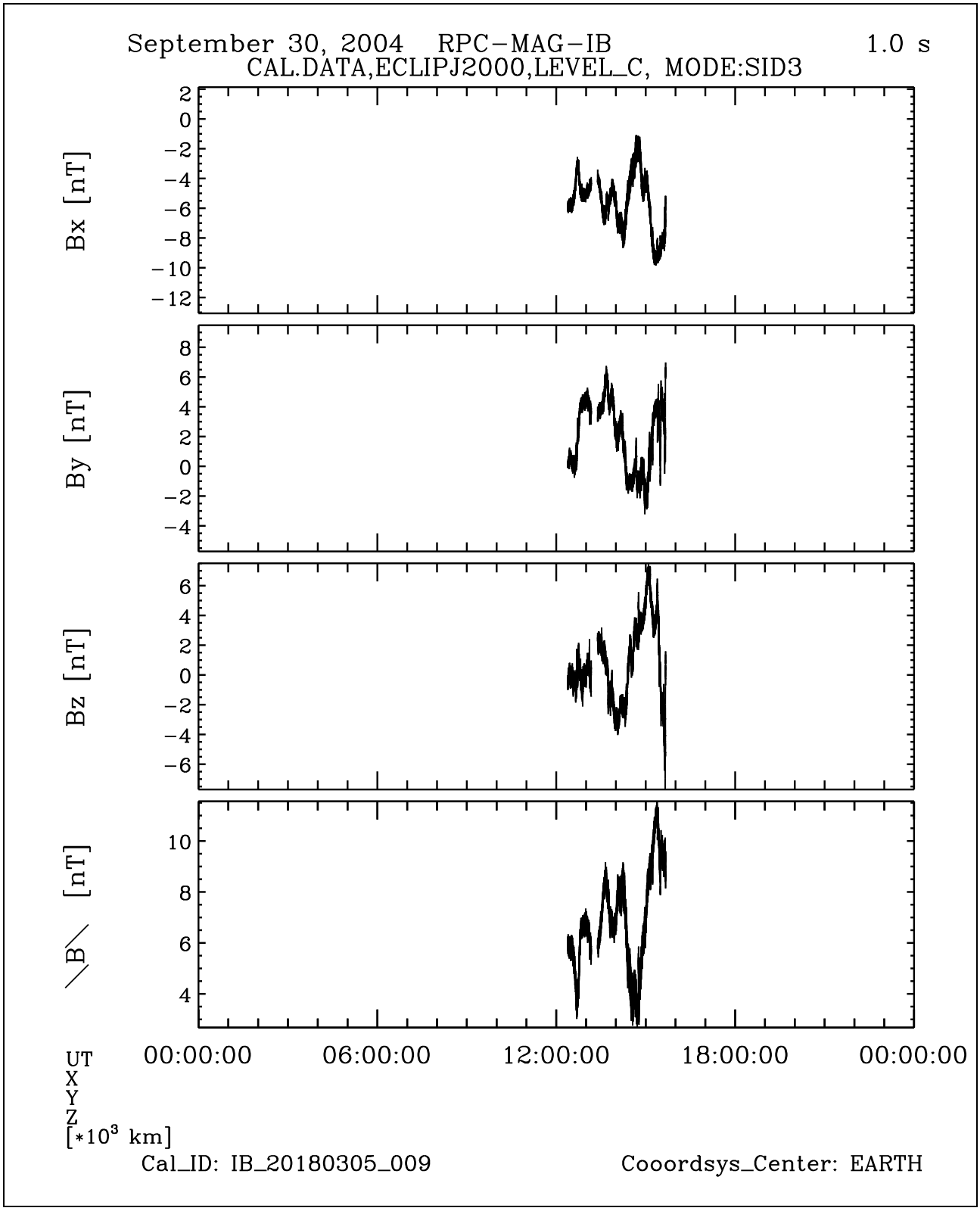

Figure 97: File: RPCMAG040930T1223_CLC_IB_M3_T0000_2400_009

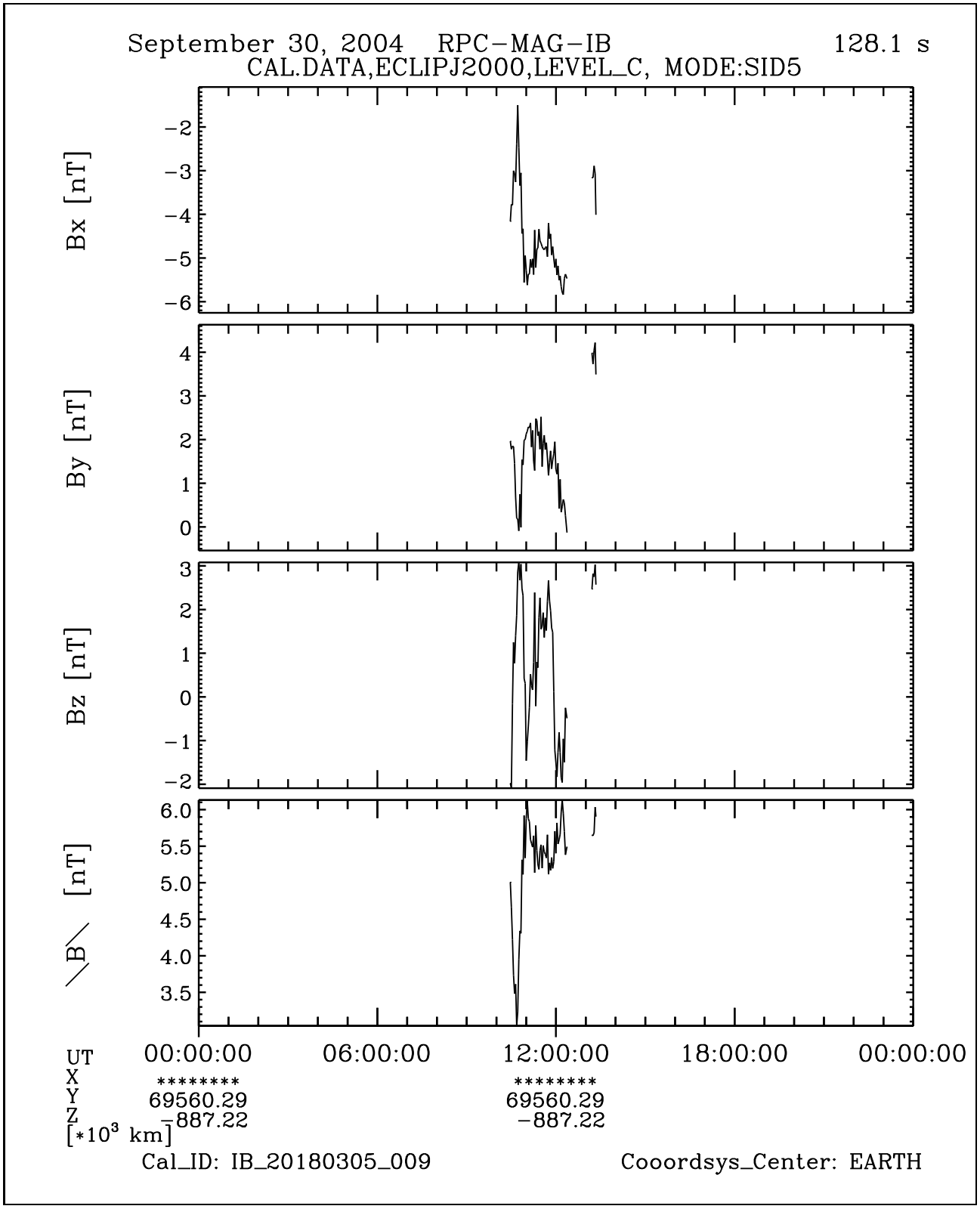

Figure 98: File: RPCMAG040930T1025_CLC_IB_M5_T0000_2400_009

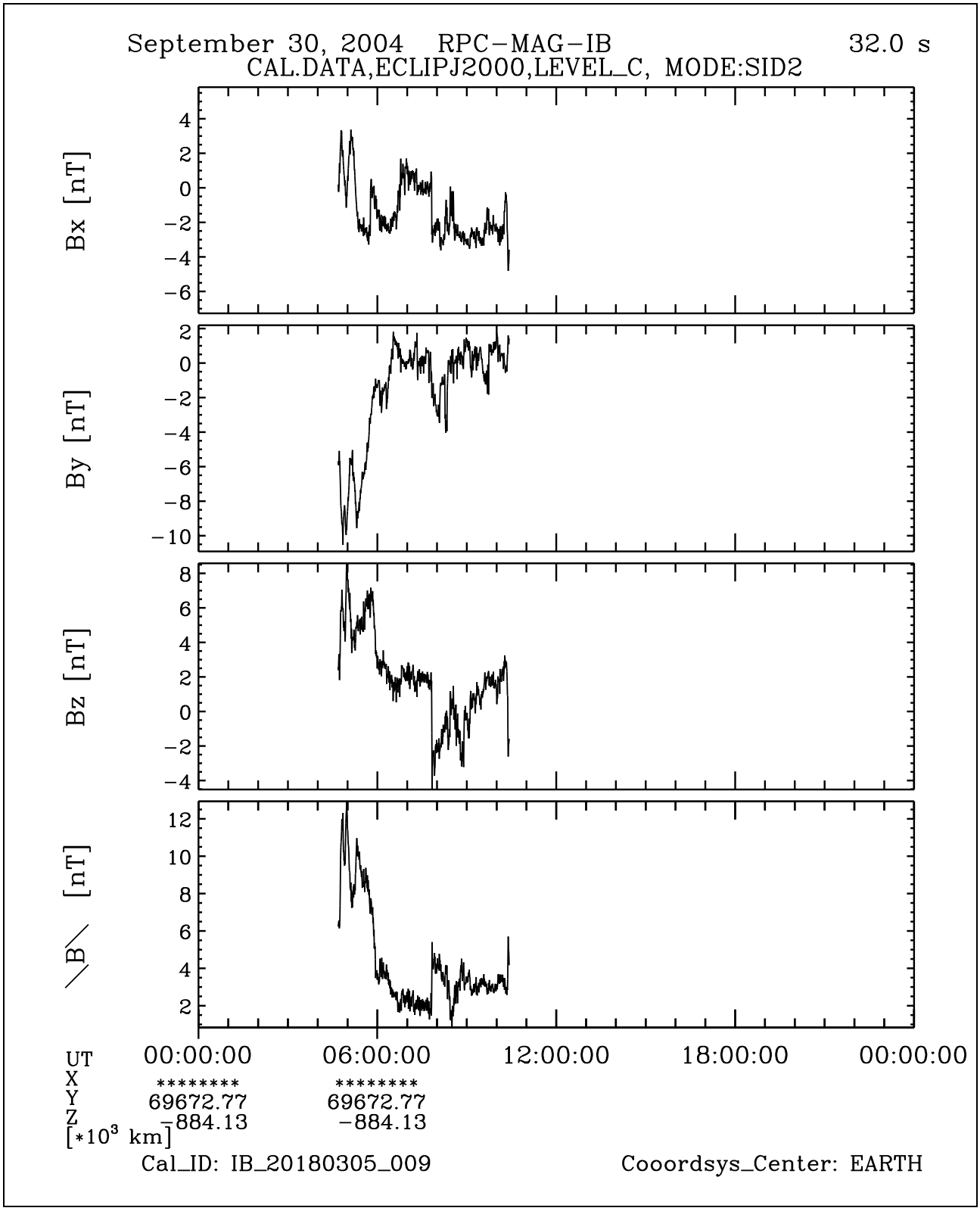

Figure 99: File: RPCMAG040930T0440_CLC_IB_M2_T0000_2400_009

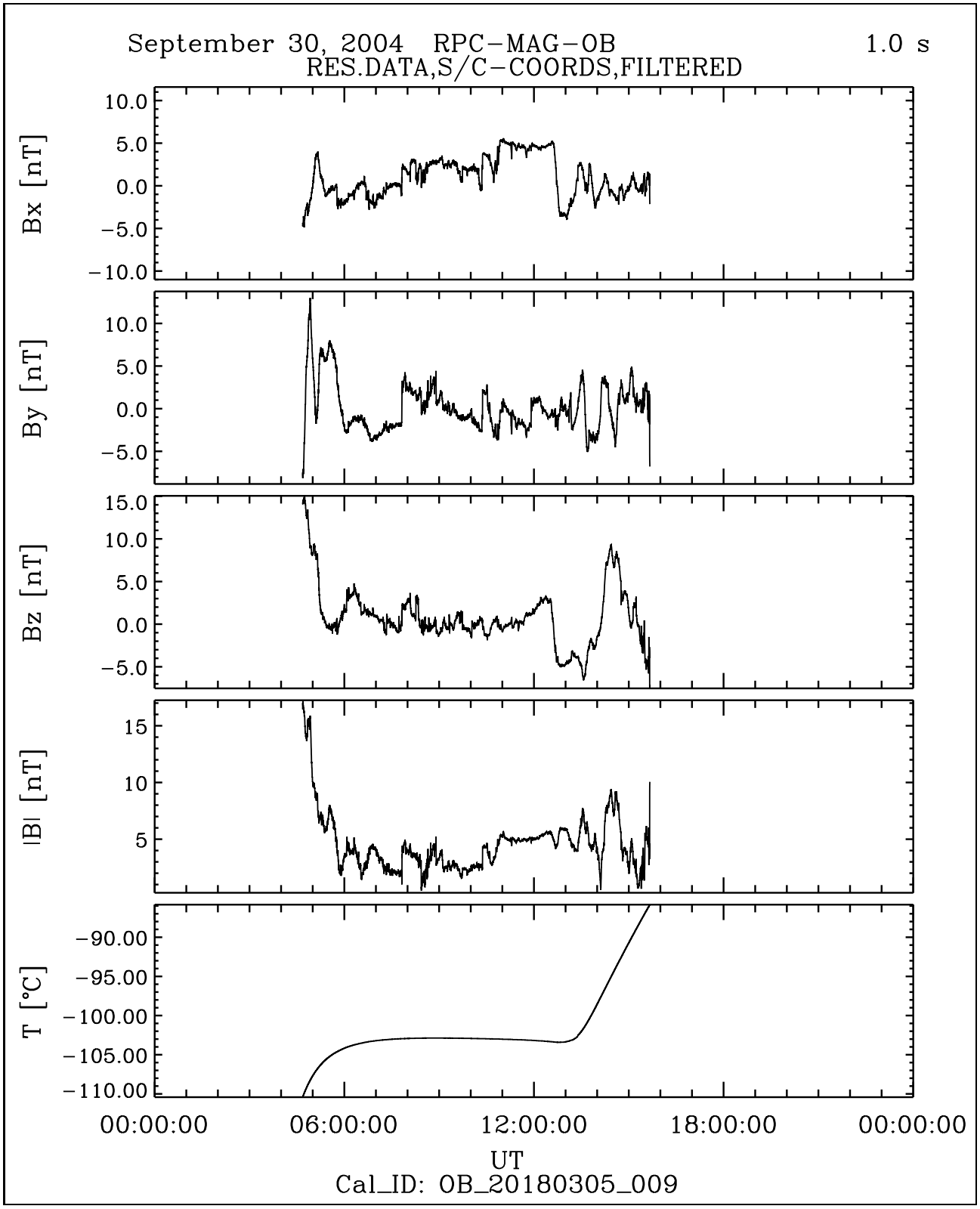

Figure 100: File: RPCMAG040930_CLF_OB_A1_T0000_2400_009

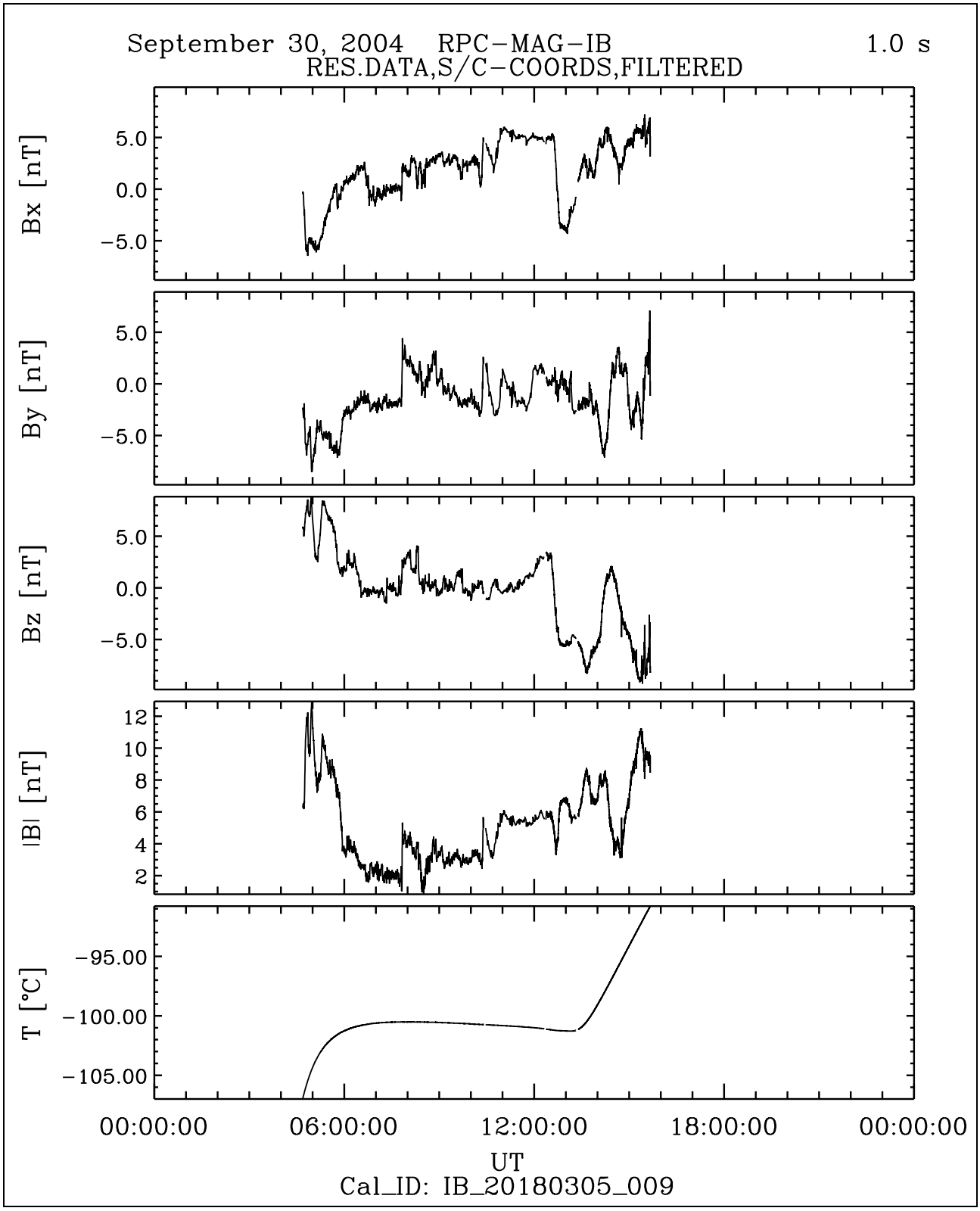

Figure 101: File: RPCMAG040930_CLF_IB_A1_T0000_2400_009

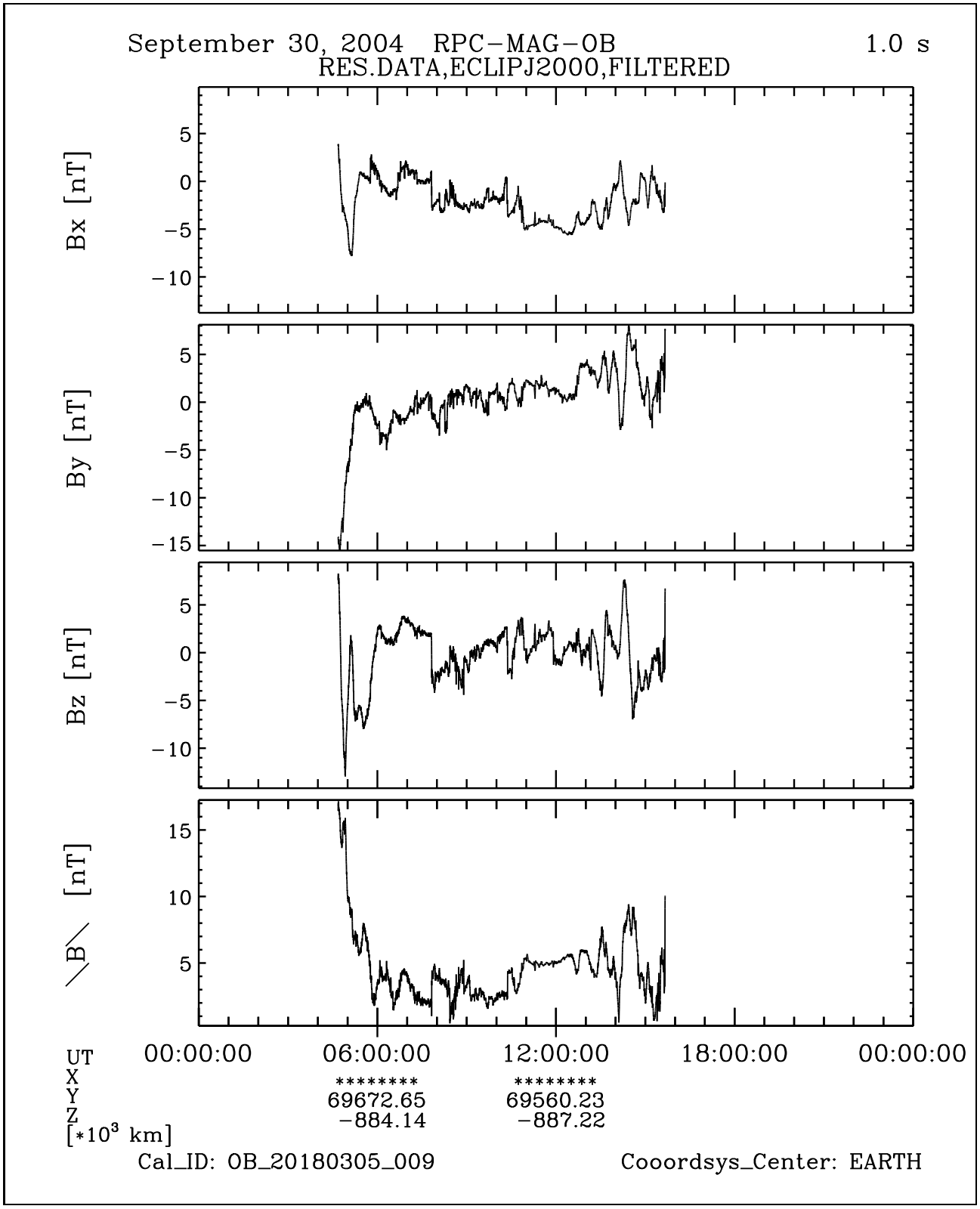

Figure 102: File: RPCMAG040930_CLG_OB_A1_T0000_2400_009

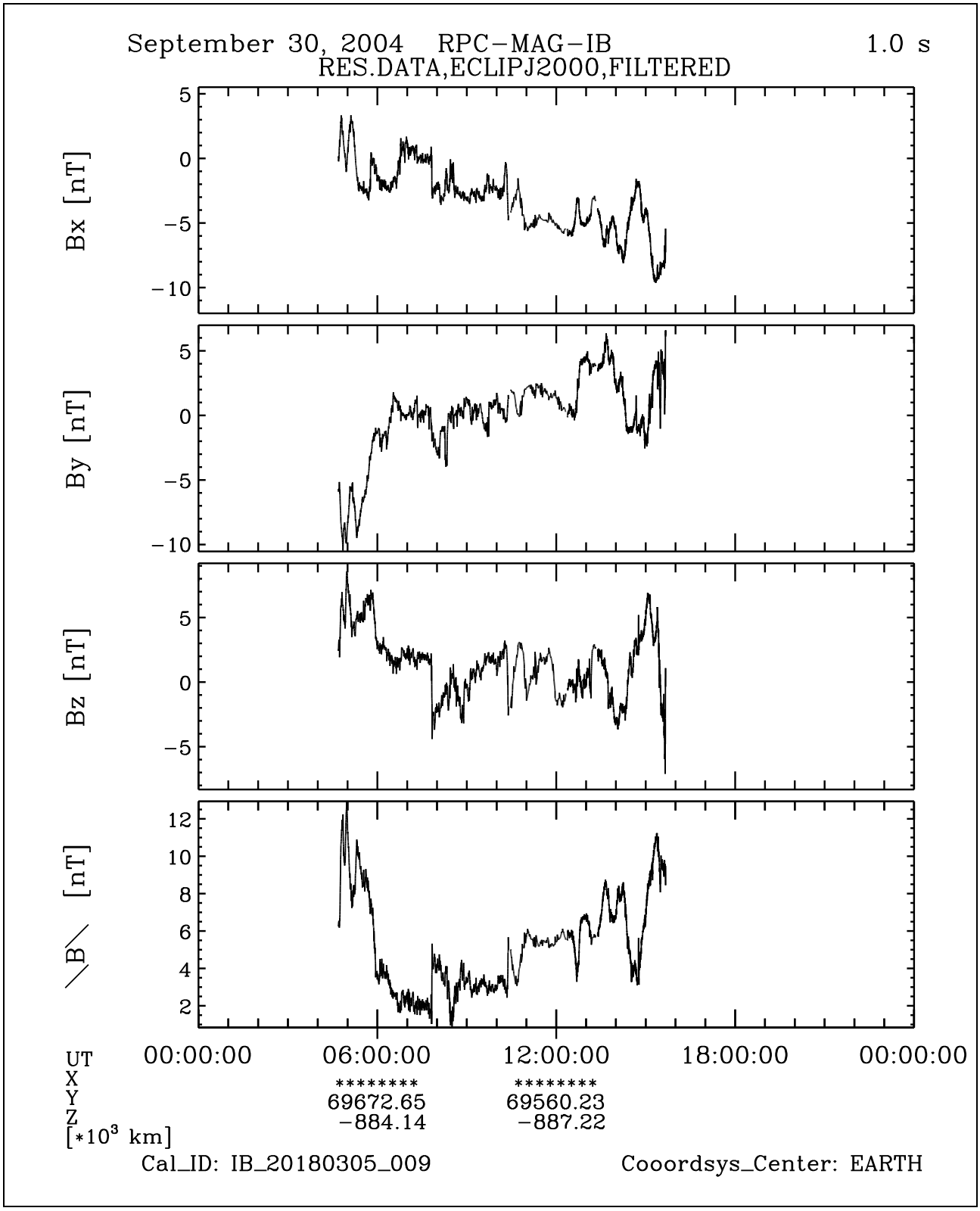

Figure 103: File: RPCMAG040930_CLG_IB_A1_T0000_2400_009

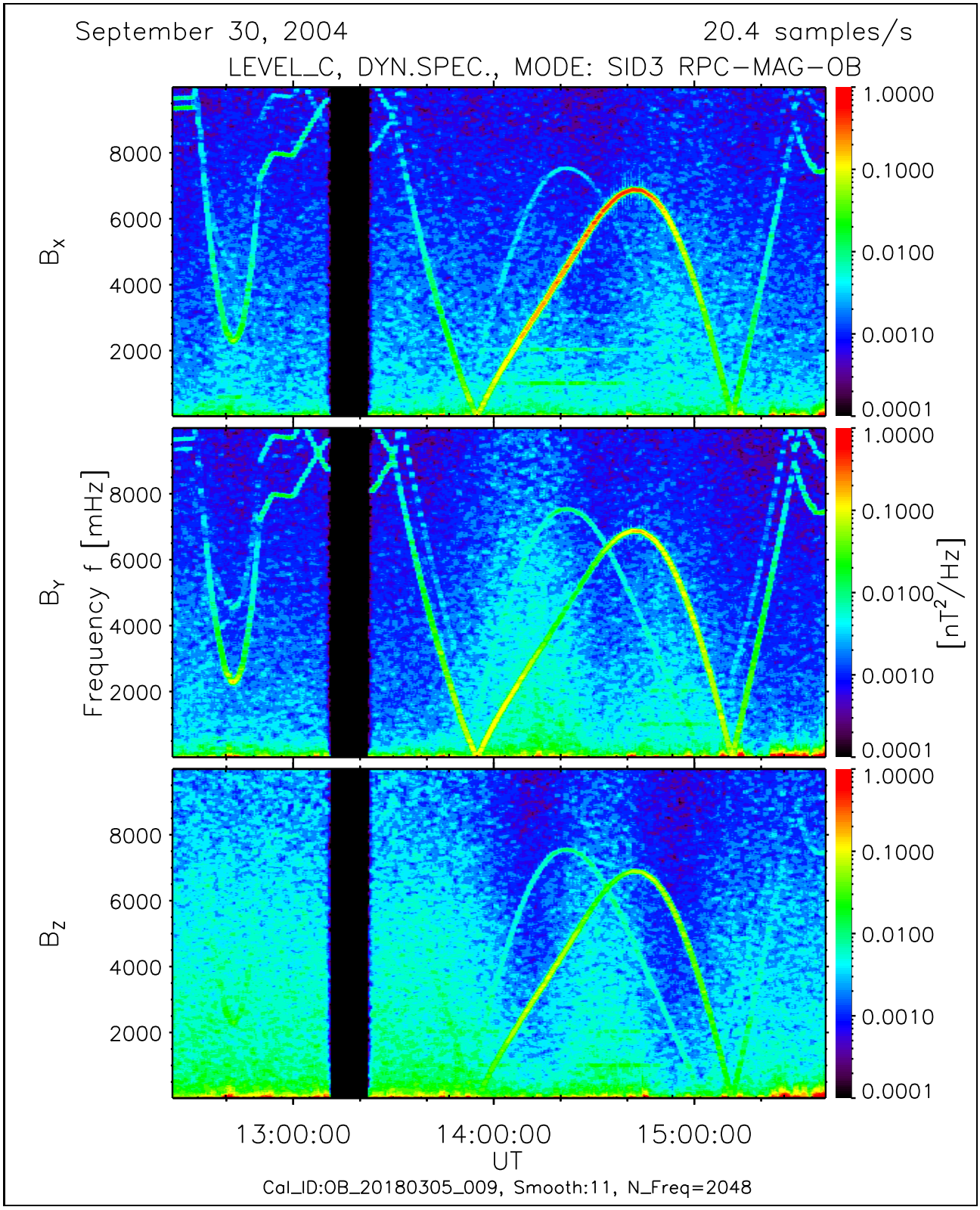

Figure 104: File: RPCMAG040930T1223_CLC_OB_M3_DS0_10000_009

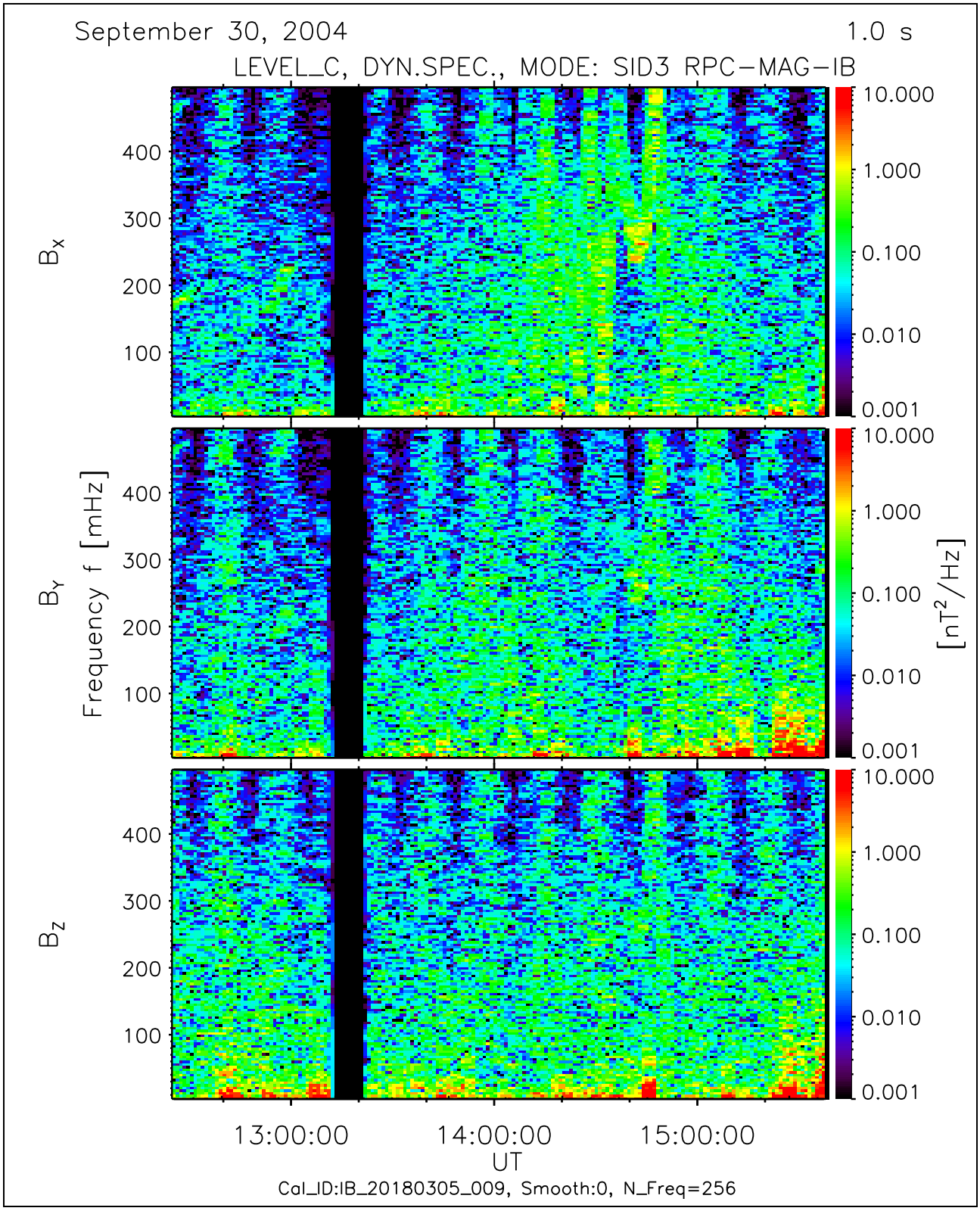

Figure 105: File: RPCMAG040930T1223_CLC_IB_M3_DS0_500_009

7.3 Plots of ROSETTA's Reaction Wheels Speeds

The following plots show the time series of the revolutions of the 4 reaction wheels. Two kinds of data are shown:

- The original reaction wheel data as they are stored in the DDS.
- The theoretical response of the wheels impact seen by an instrument sampling with different frequencies. Here the response at 20 Hz and 1 Hz sampling frequency is plotted.

A comparison with the dynamic spectra of the MAG data gives an impressive accordance between the reaction wheel frequencies and the spectral lines observed in the dynamic MAG spectra.

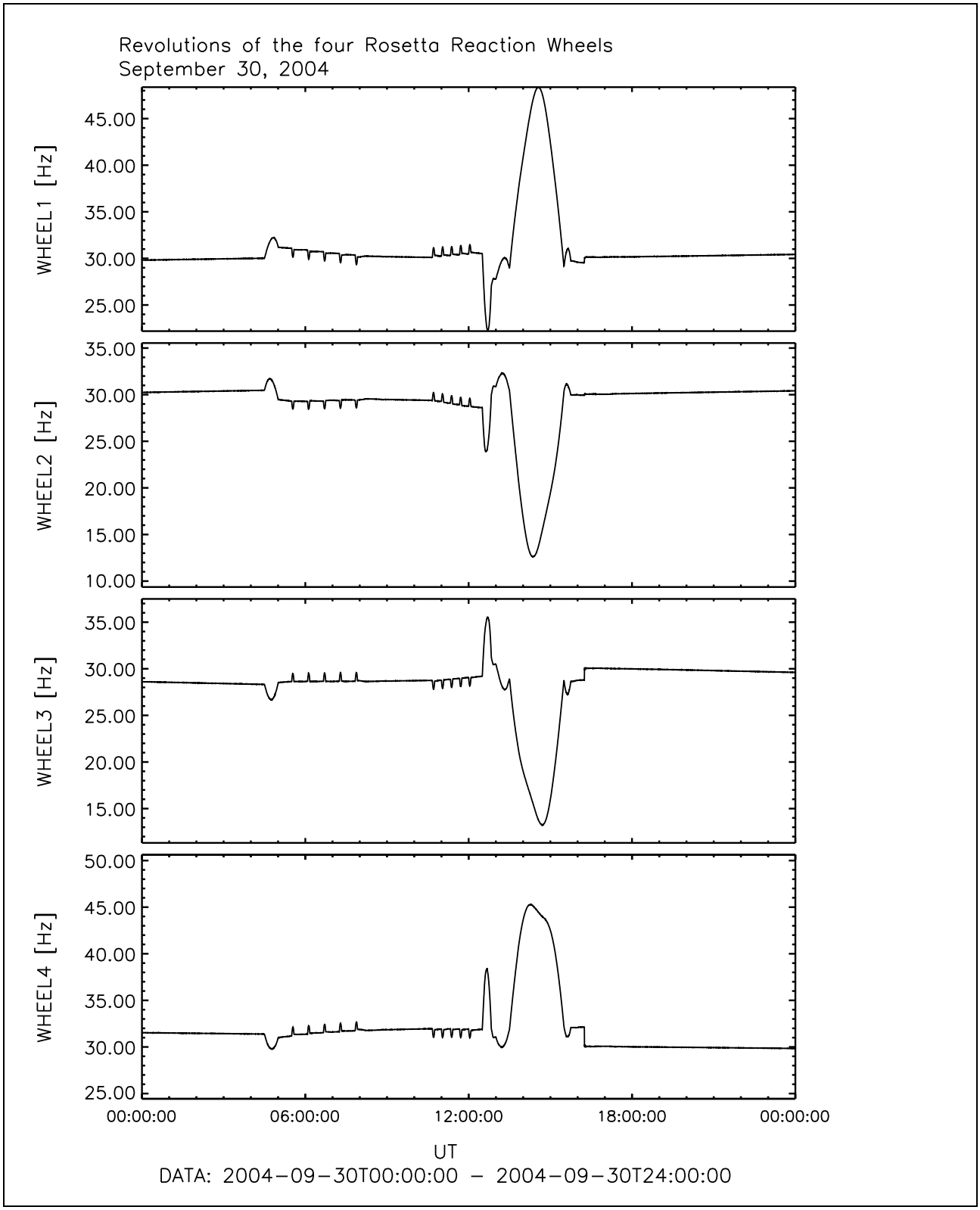

Figure 106: File: wheels_Hz2004-09-30T00-00

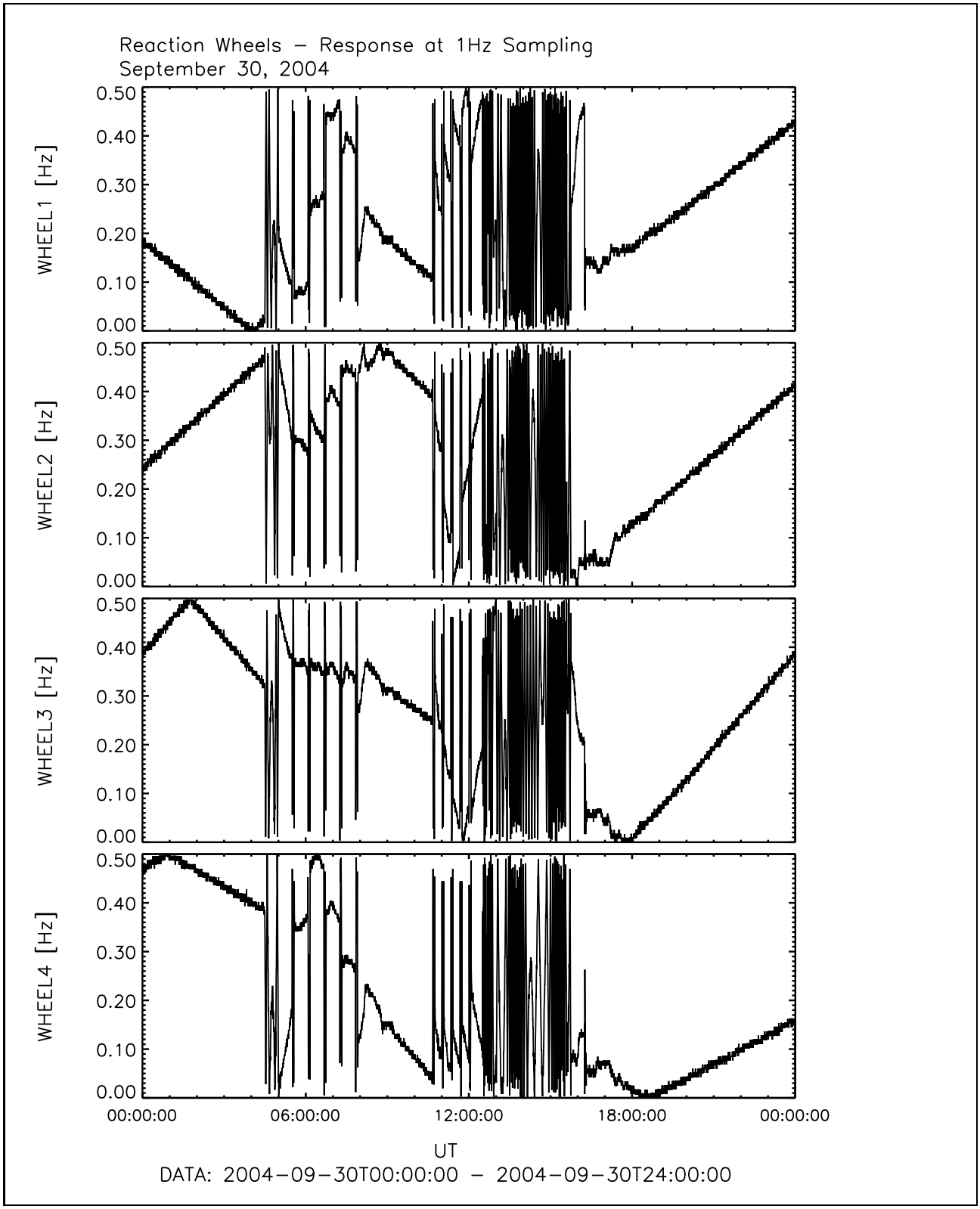

Figure 107: File: wheels_1Hz_Sampling2004-09-30T00-00

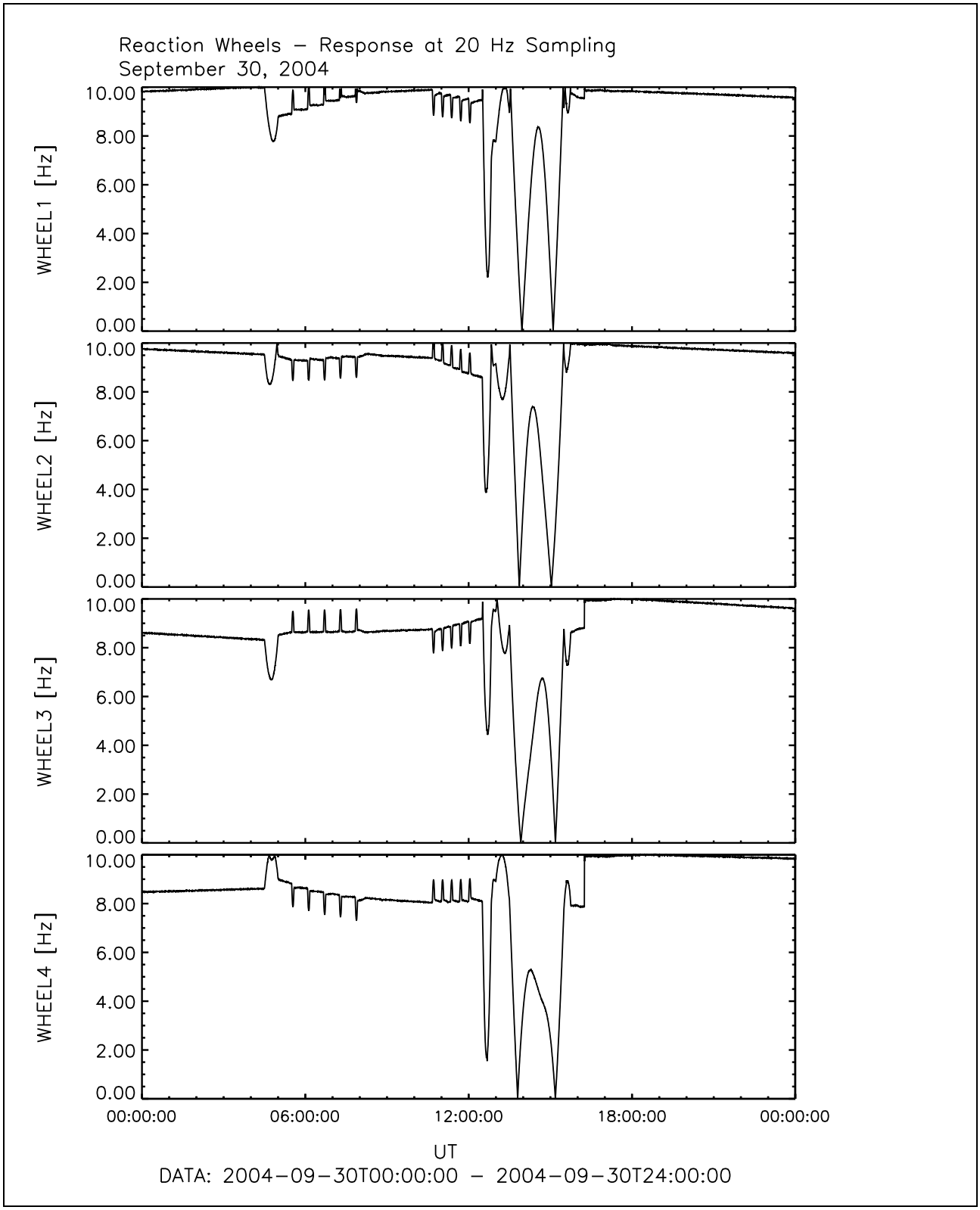

Figure 108: File: wheels_20Hz_Sampling2004-09-30T00-00

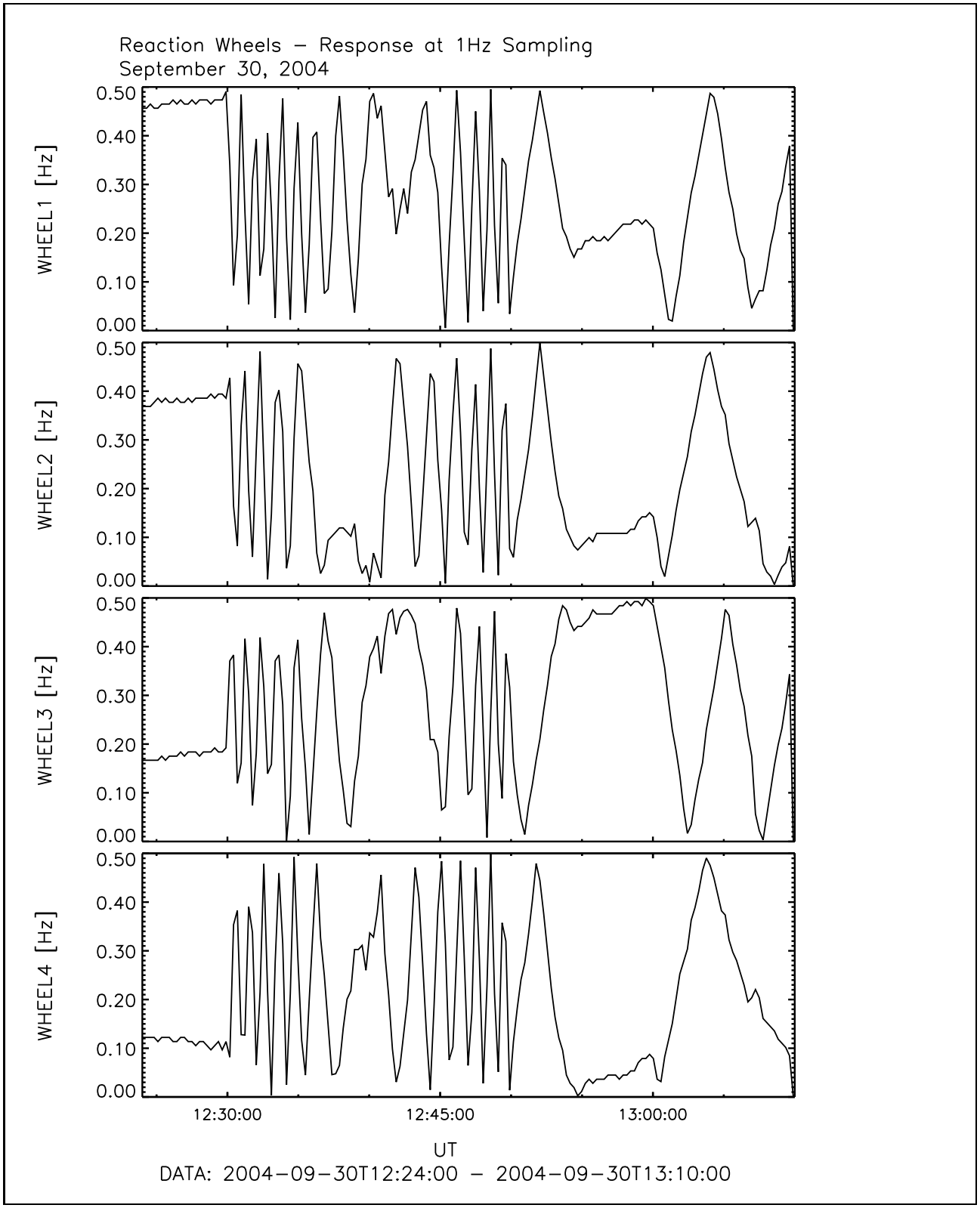

Figure 109: File: wheels_1Hz_Sampling2004-09-30T12-24

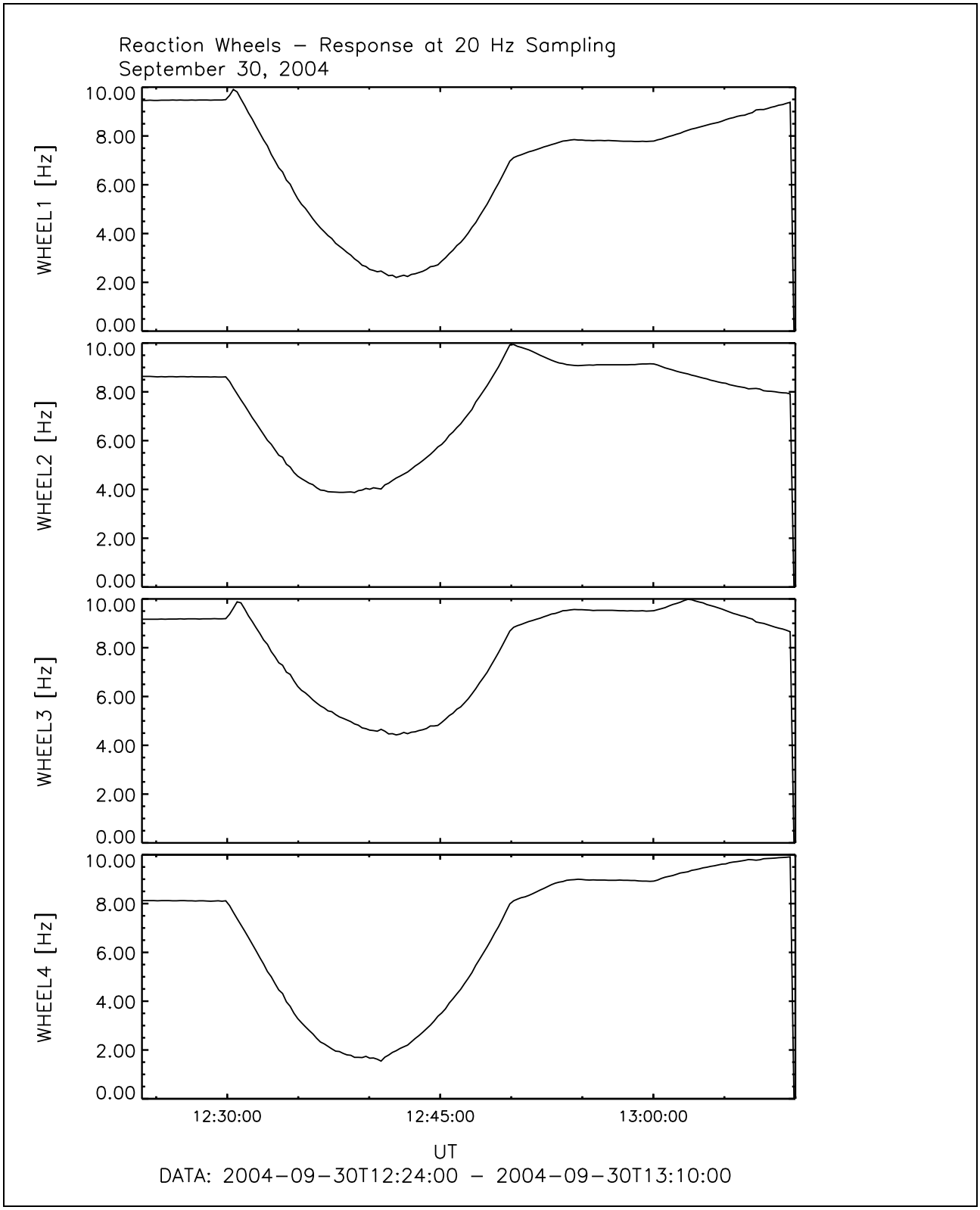

Figure 110: File: wheels_20Hz_Sampling2004-09-30T12-24

7.4 Plots of Reaction Wheel and LAP Disturbance corrected Data

The following plots show the dynamic spectra of the LEVEL_H data. These data have been purged from ROSETTAs reaction wheel disturbance and also from the disturbance of the LAP instrument. Plots are only shown for the primary sensor.

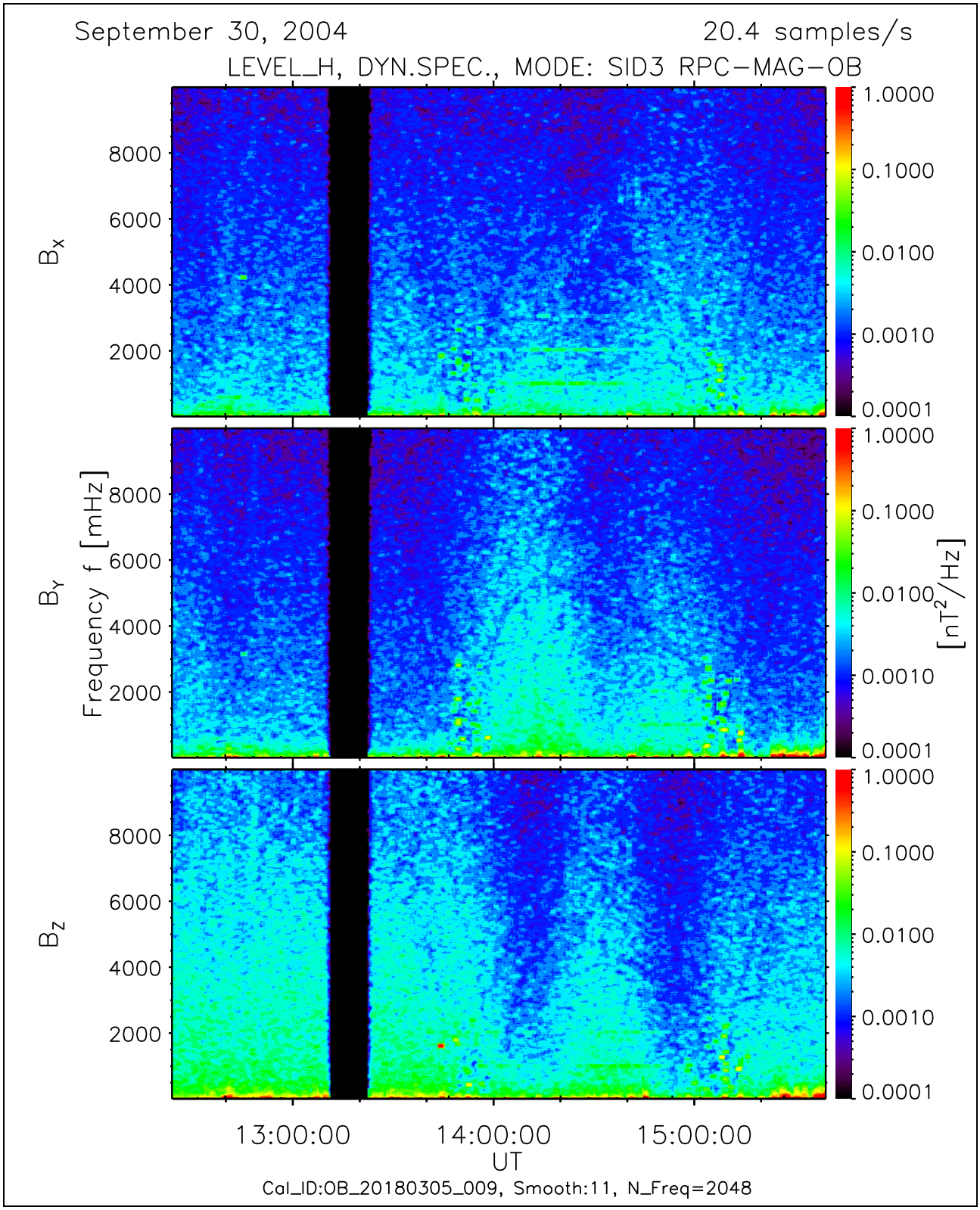

Figure 111: File: RPCMAG040930T1223_CLH_OB_M3_DS0_10000_009

8 October 10, 2004:

8.1 Actions

The Instrument was switched on at 04:52 and switched off at 14:14.

Time	Stage A, Stage B,Filter cfg	Stage 1, Stage 2, Stage3	Mode
05:07 – 06:00	4 3 0	4 3 0	SID5
06:03 – 07:04	0 0 0	0 0 0	SID3
07:05 – 08:13	4 3 0	4 3 0	SID5
08:16 – 08:45	0 0 0	0 0 0	SID3
08:46 – 09:52	4 3 0	4 3 0	SID5
09:55 – 12:45	0 0 0	0 0 0	SID3
12:45 – 14:00	1 2 0	1 2 0	SID2

8.2 Plots of Calibrated Data using the new Temperature Model

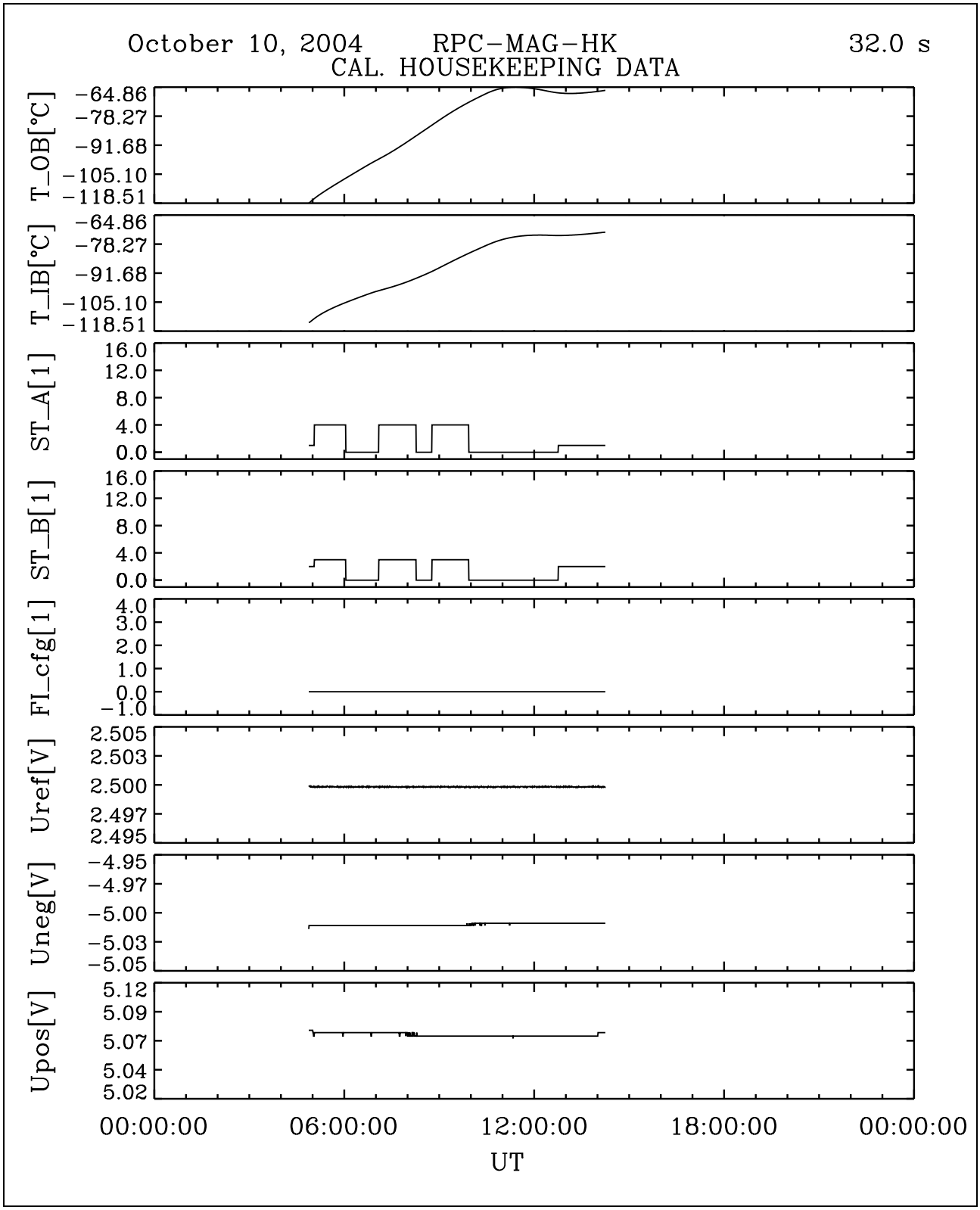

Figure 112: File: RPCMAG041010T0452_CLA_HK_P0000_2400

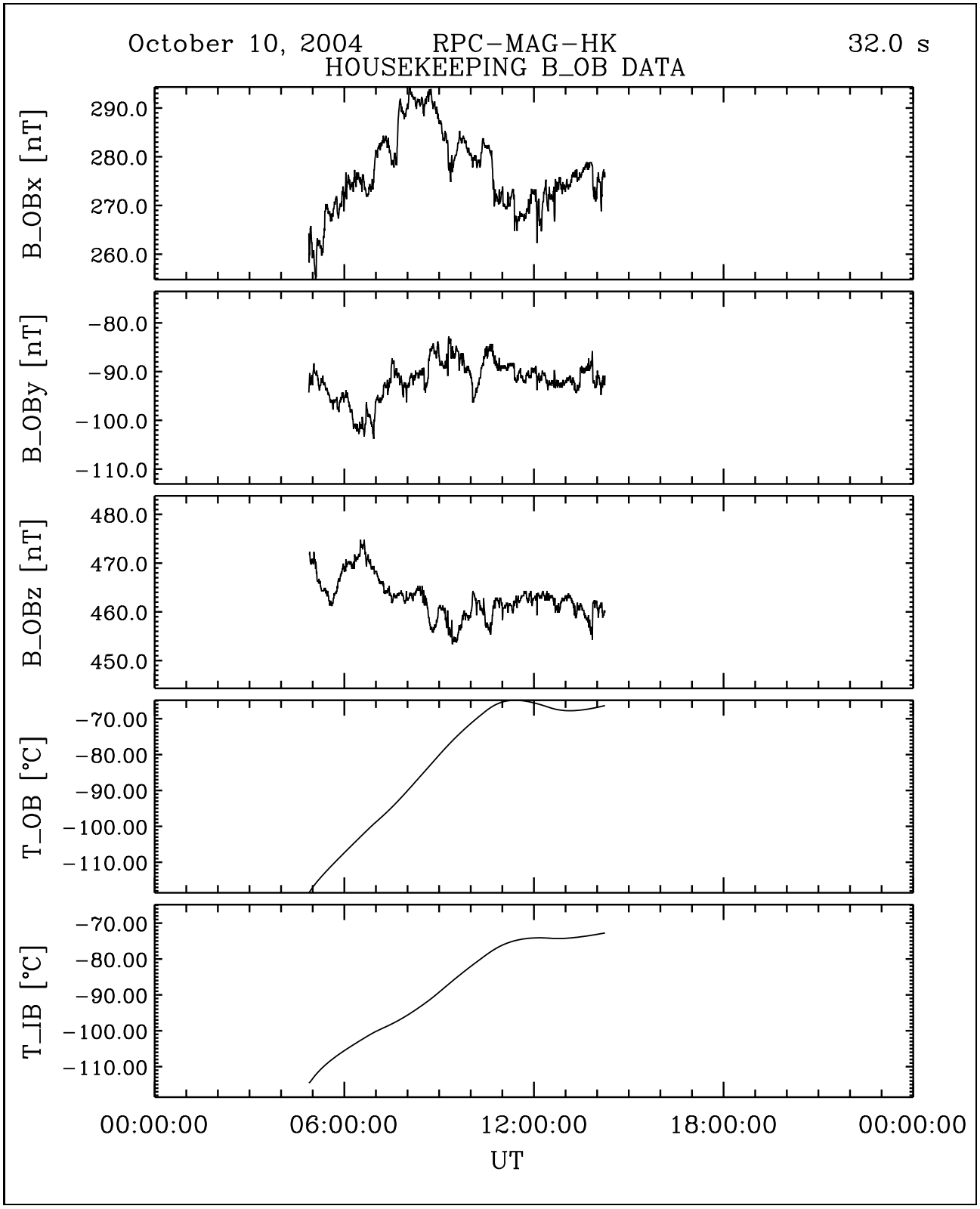

Figure 113: File: RPCMAG041010T0452_CLA_HK_B_P0000_2400

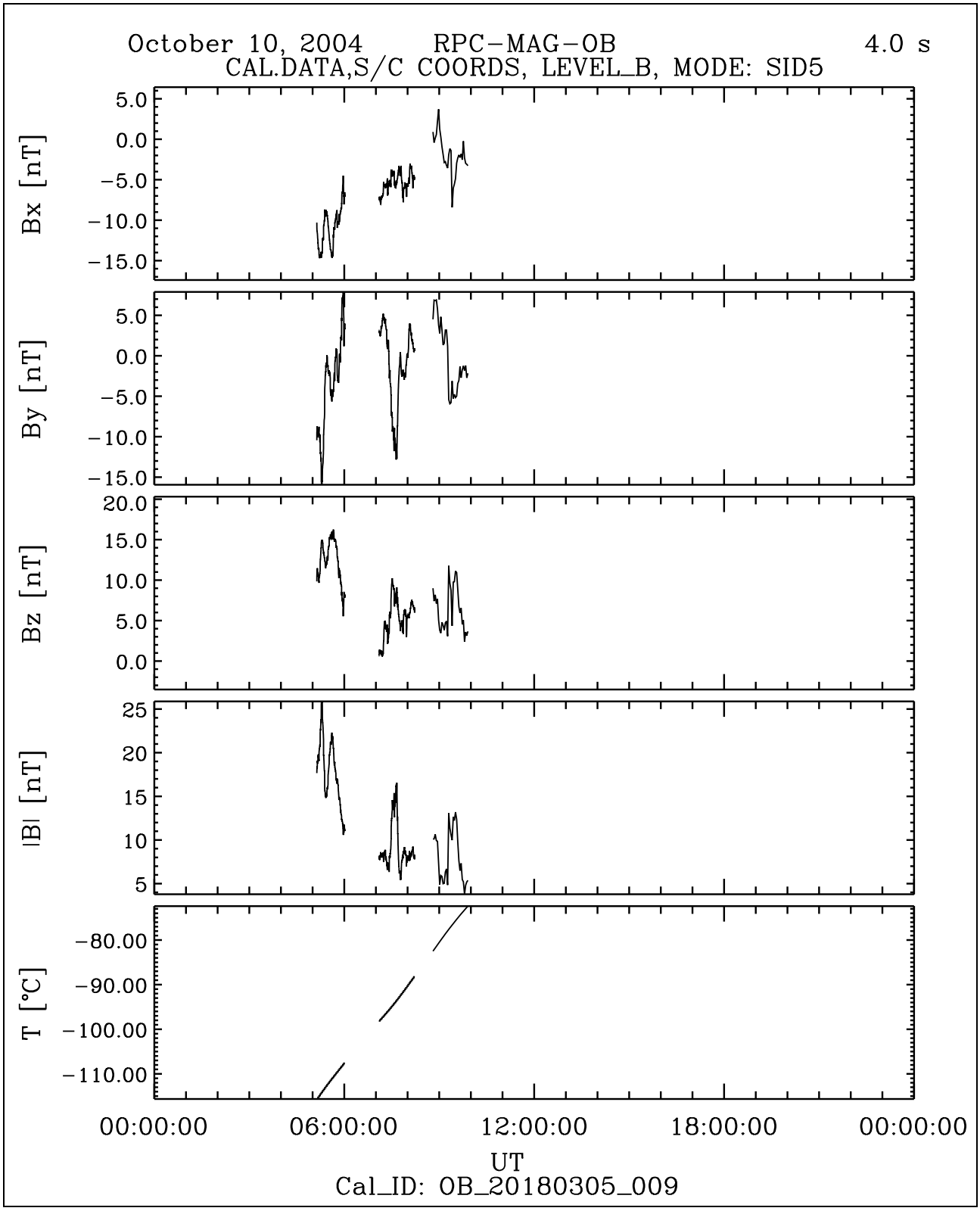

Figure 114: File: RPCMAG041010T0507_CLB_OB_M5_T0000_2400_009

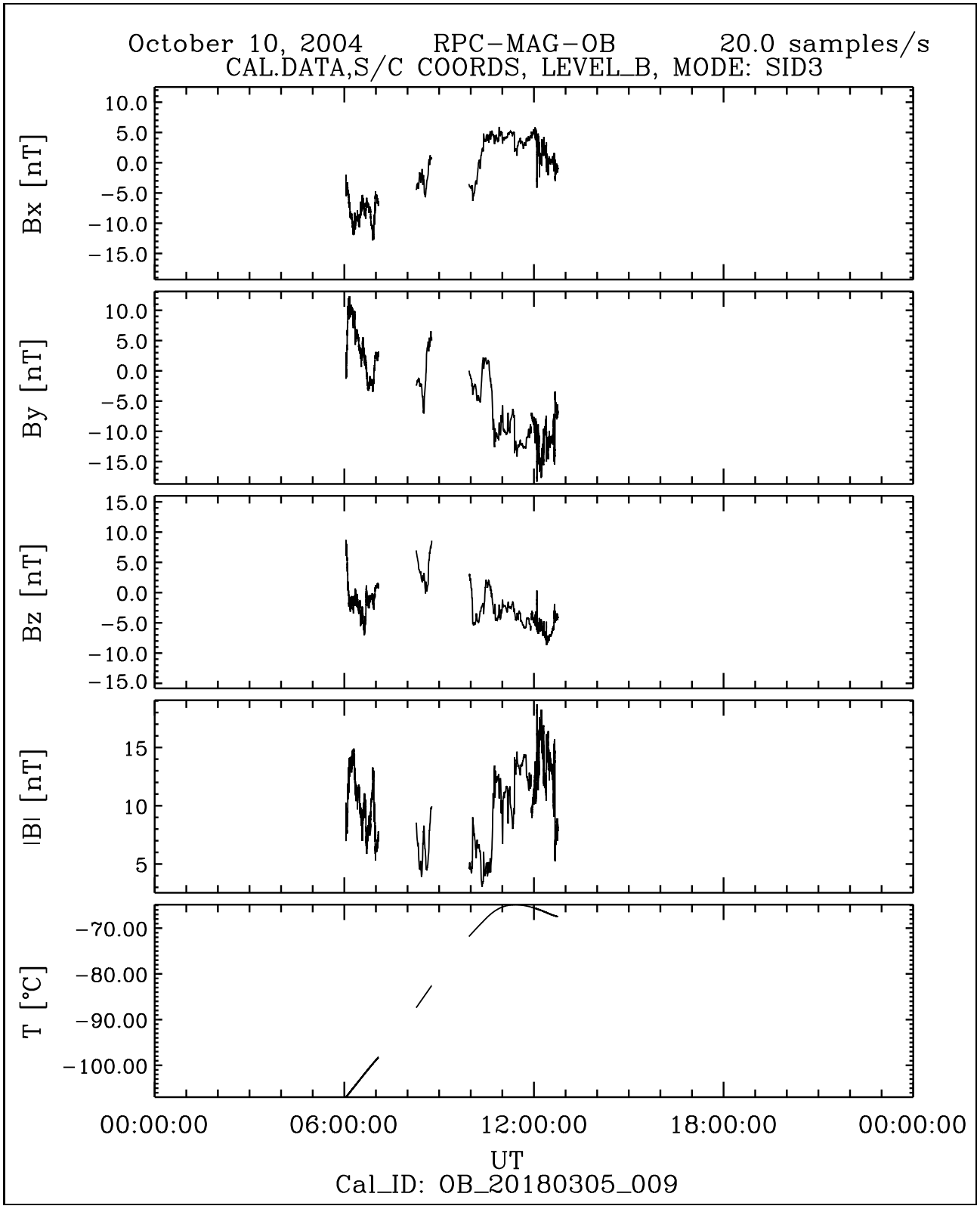

Figure 115: File: RPCMAG041010T0603_CLB_OB_M3_T0000_2400_009

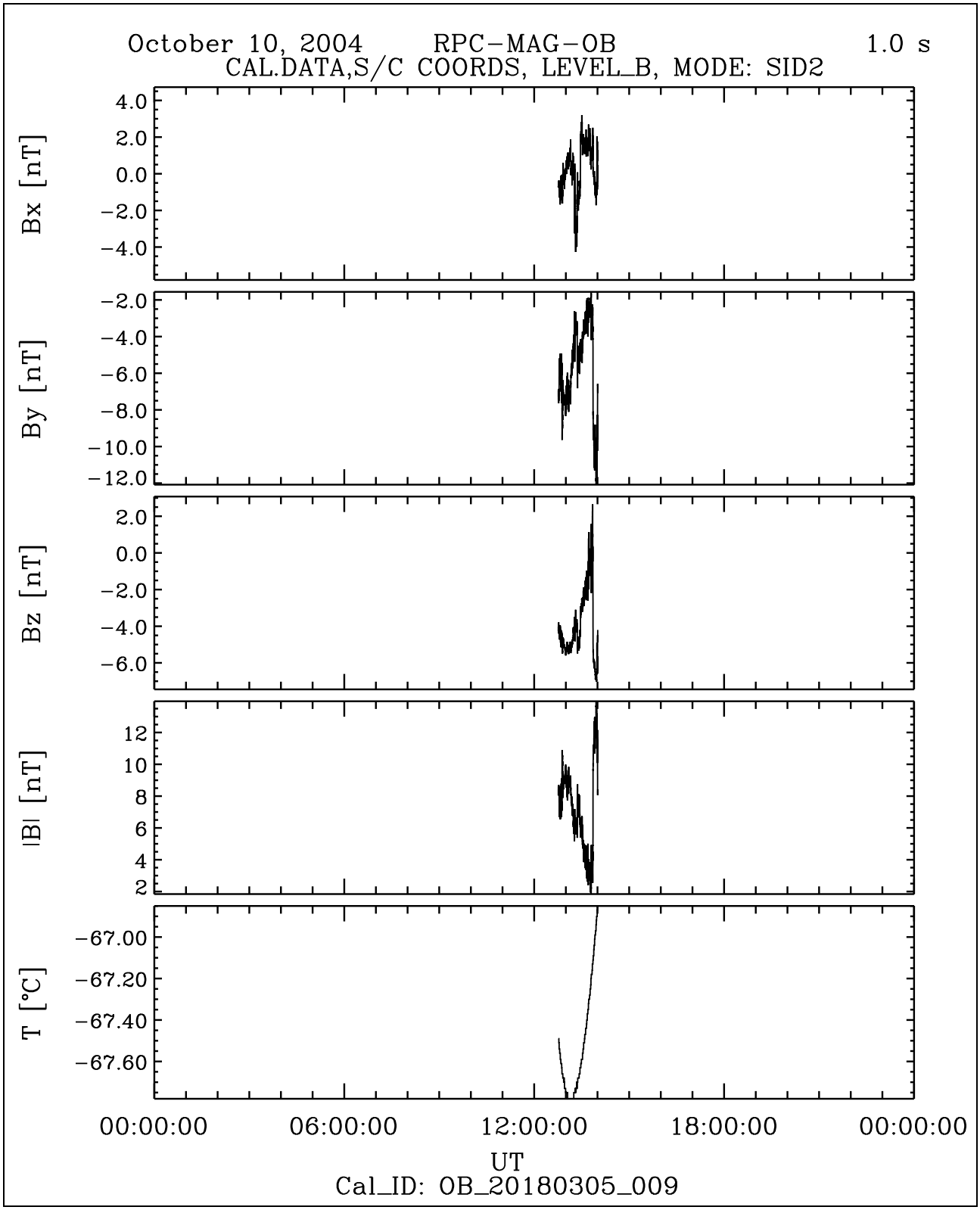

Figure 116: File: RPCMAG041010T1245_CLB_OB_M2_T0000_2400_009

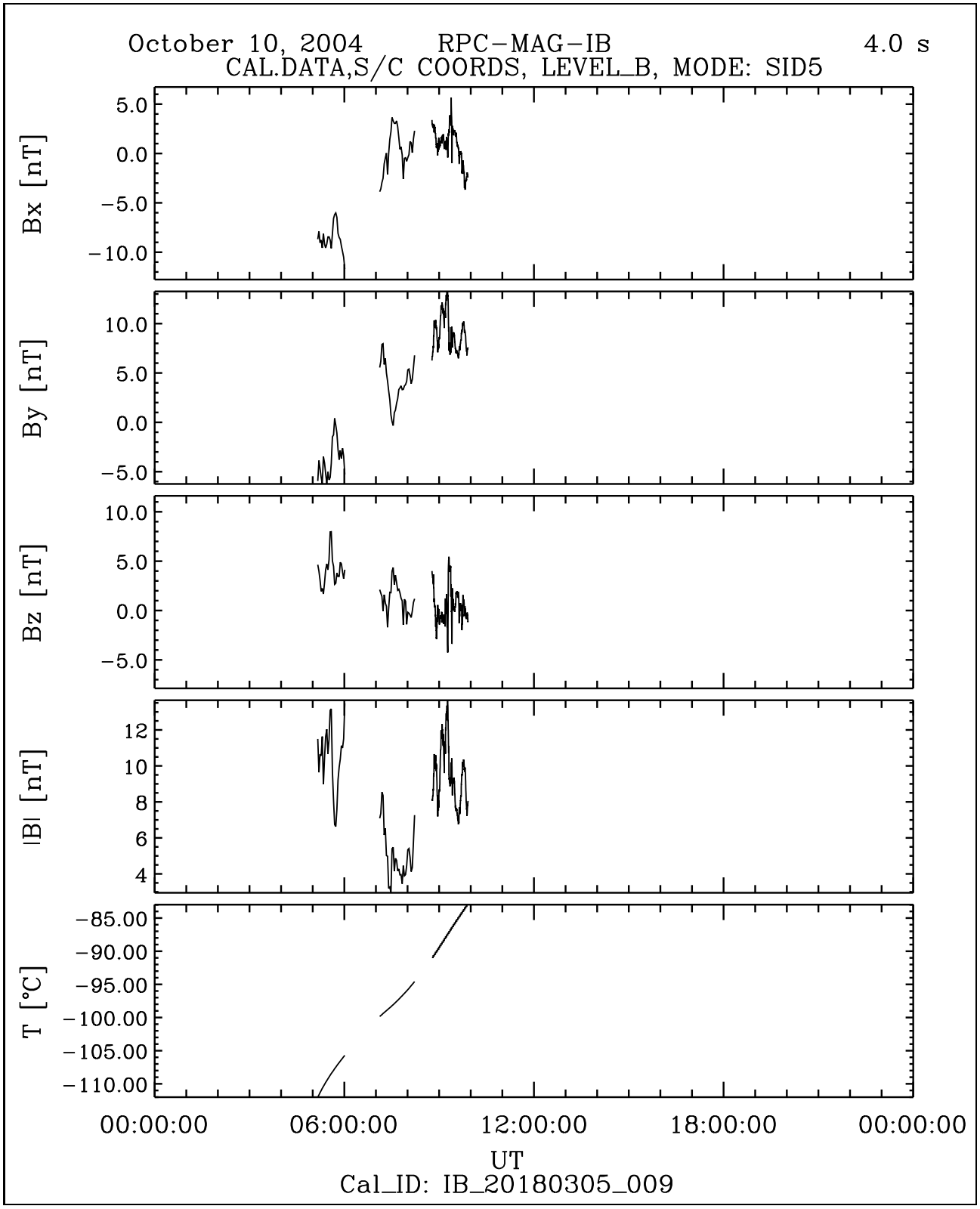

Figure 117: File: RPCMAG041010T0507_CLB_IB_M5_T0000_2400_009

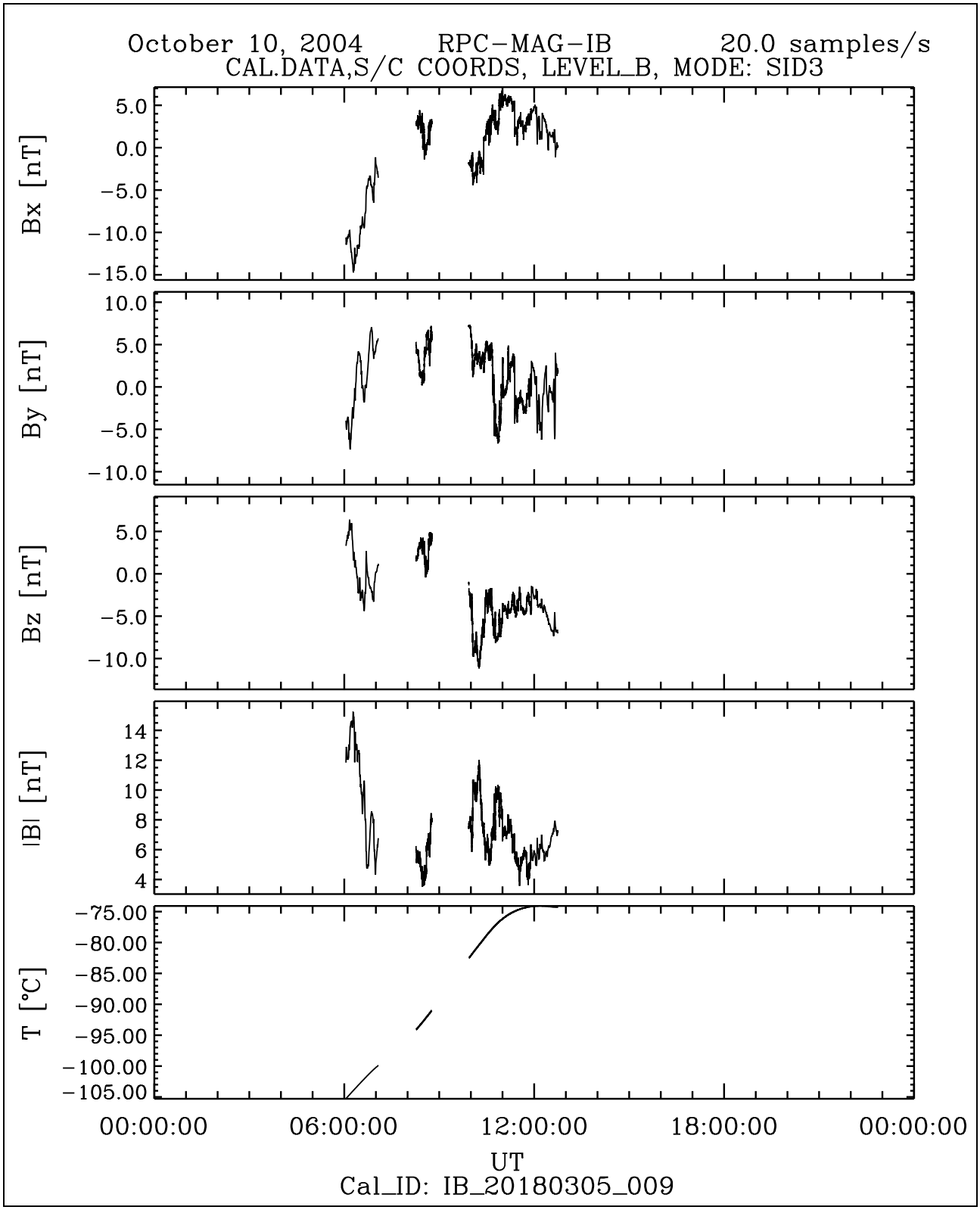

Figure 118: File: RPCMAG041010T0603_CLB_IB_M3_T0000_2400_009

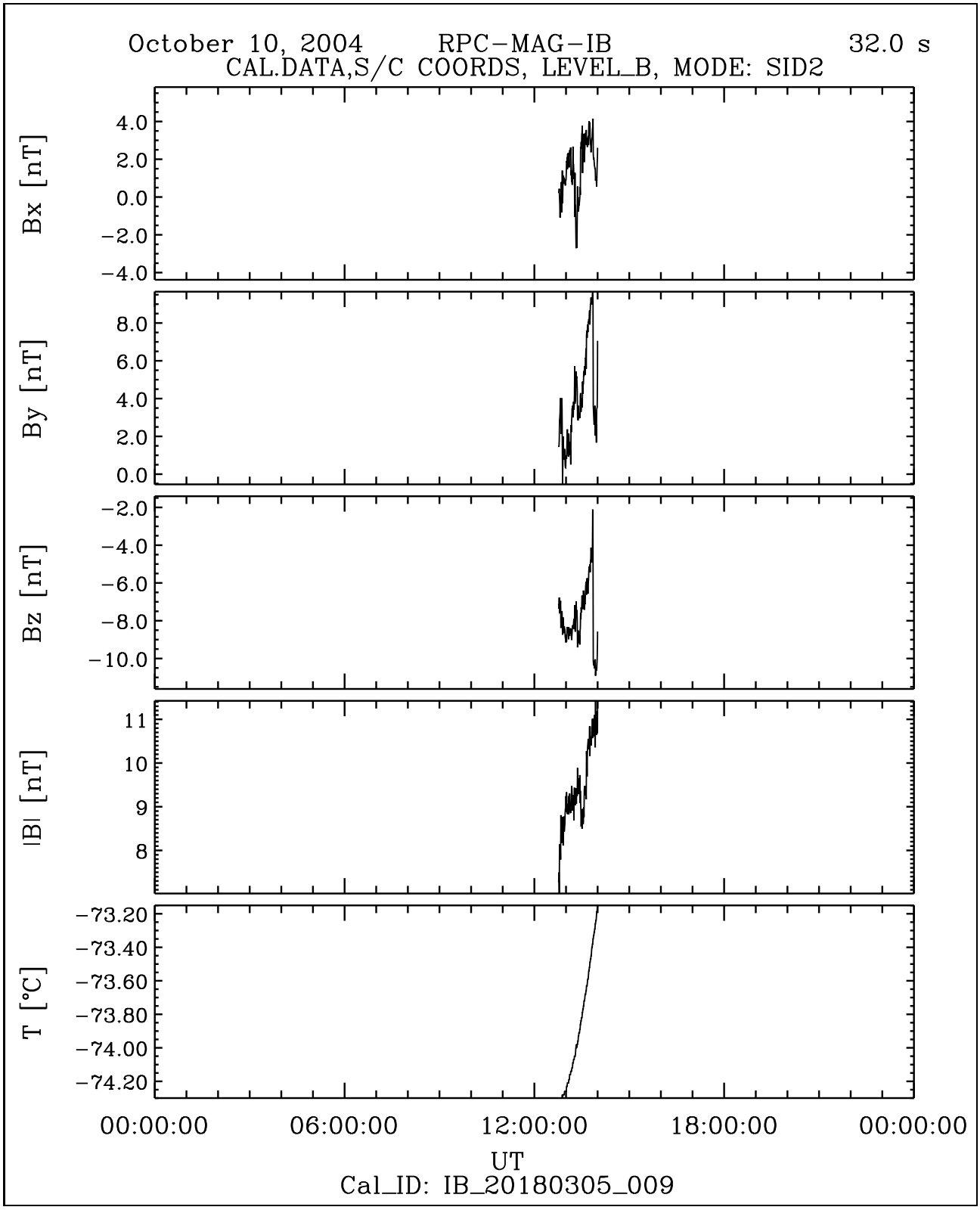

Figure 119: File: RPCMAG041010T1245_CLB_IB_M2_T0000_2400_009

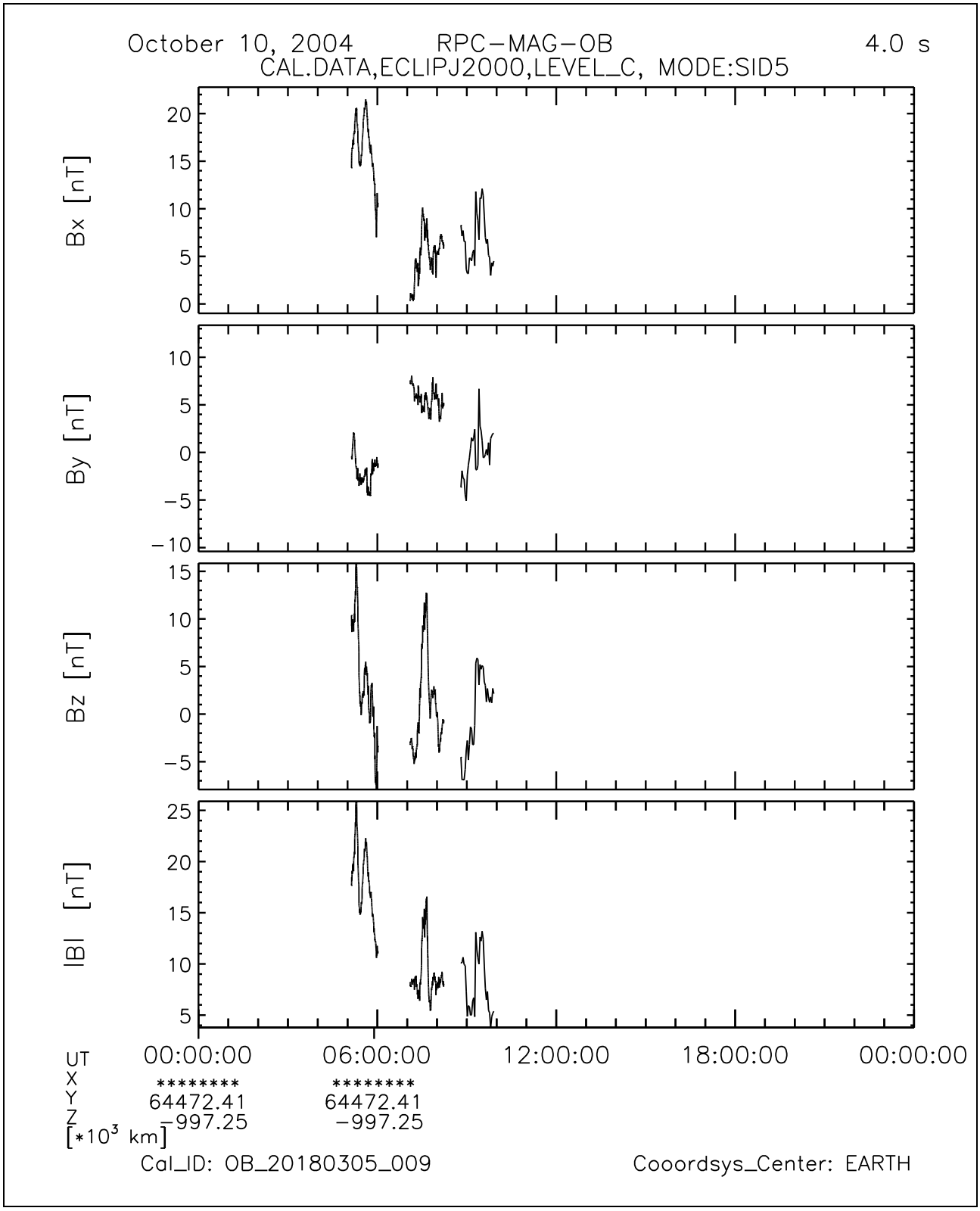

Figure 120: File: RPCMAG041010T0507_CLC_OB_M5_T0000_2400_009

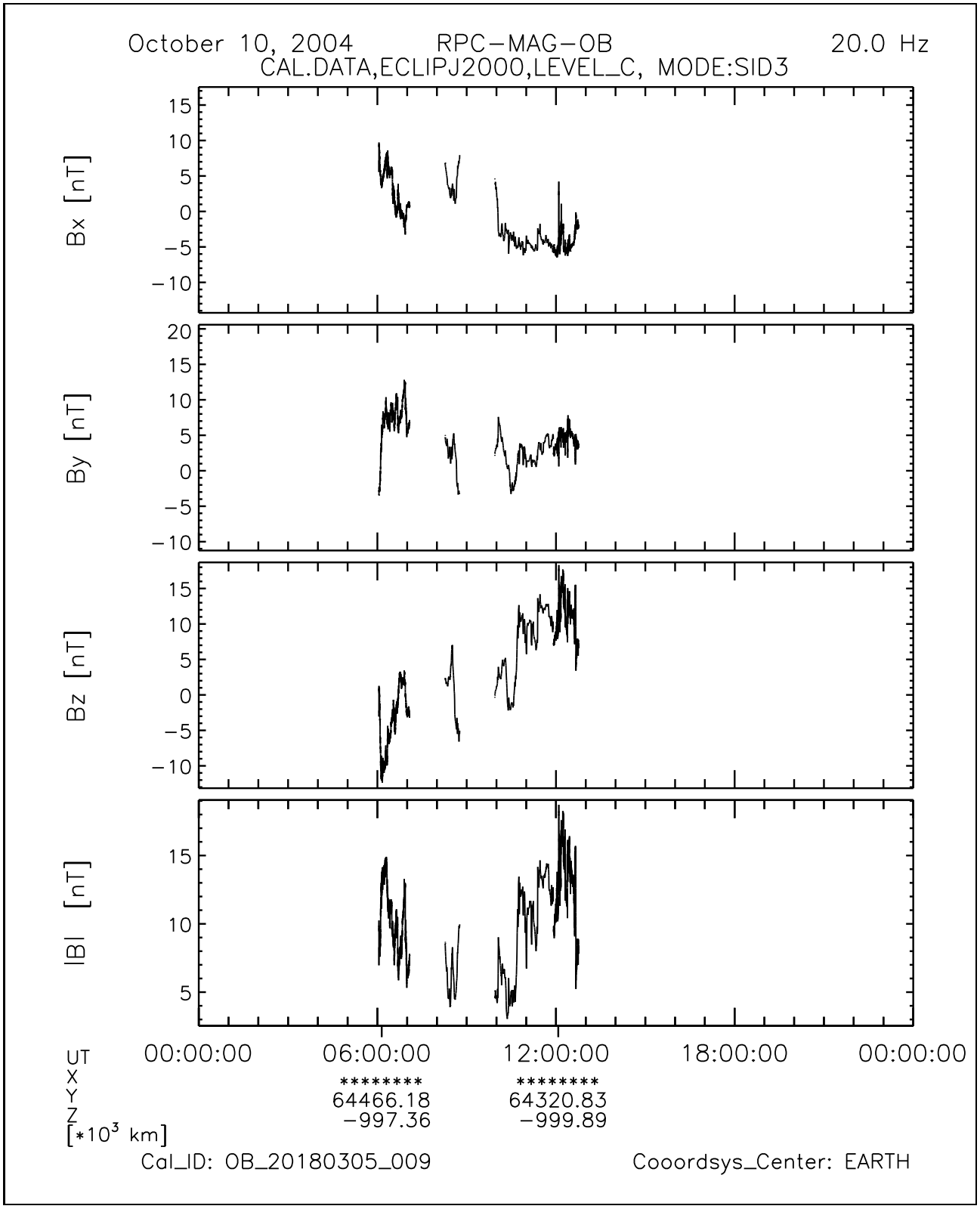

Figure 121: File: RPCMAG041010T0603_CLC_OB_M3_T0000_2400_009

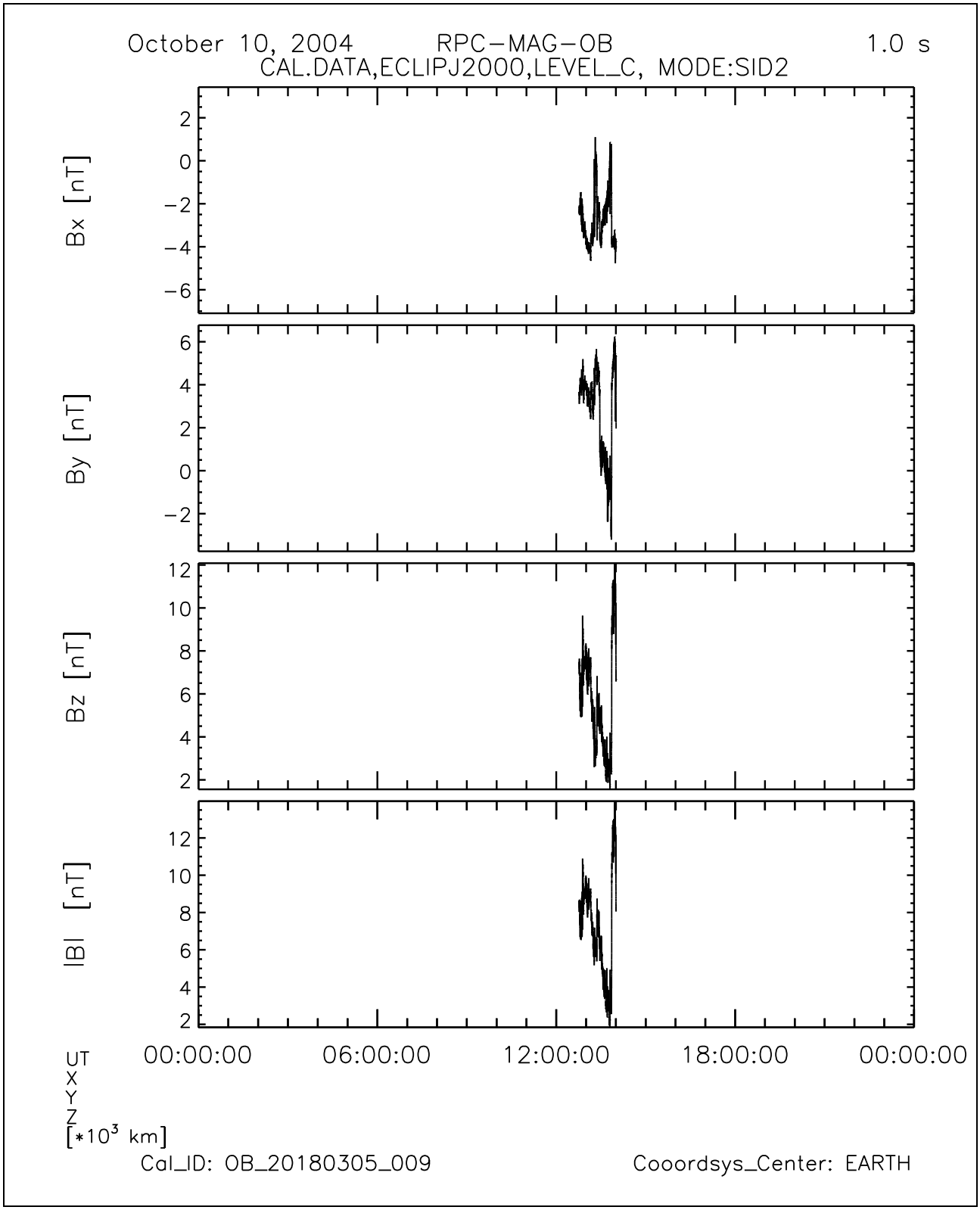

Figure 122: File: RPCMAG041010T1245_CLC_OB_M2_T0000_2400_009

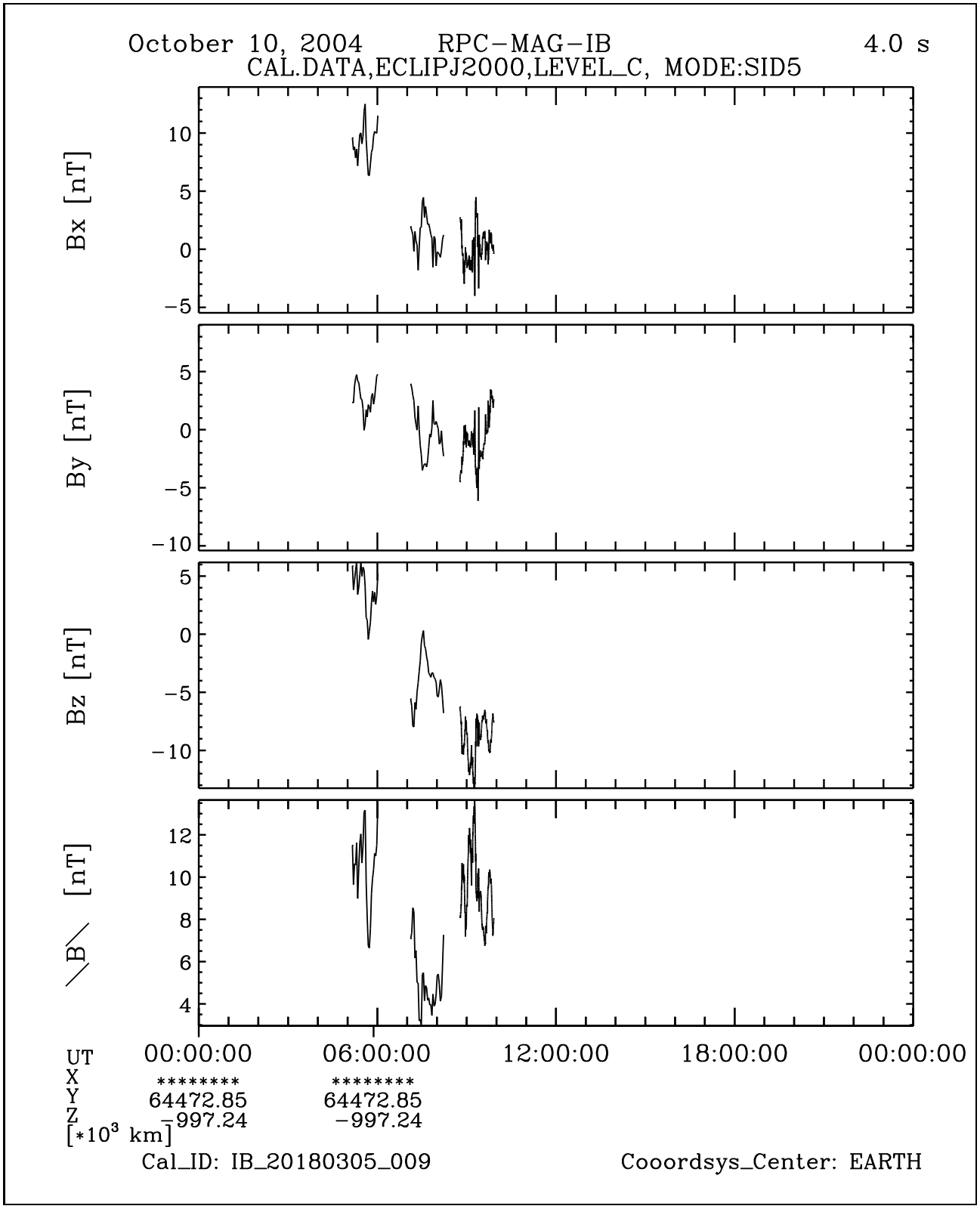

Figure 123: File: RPCMAG041010T0507_CLC_IB_M5_T0000_2400_009

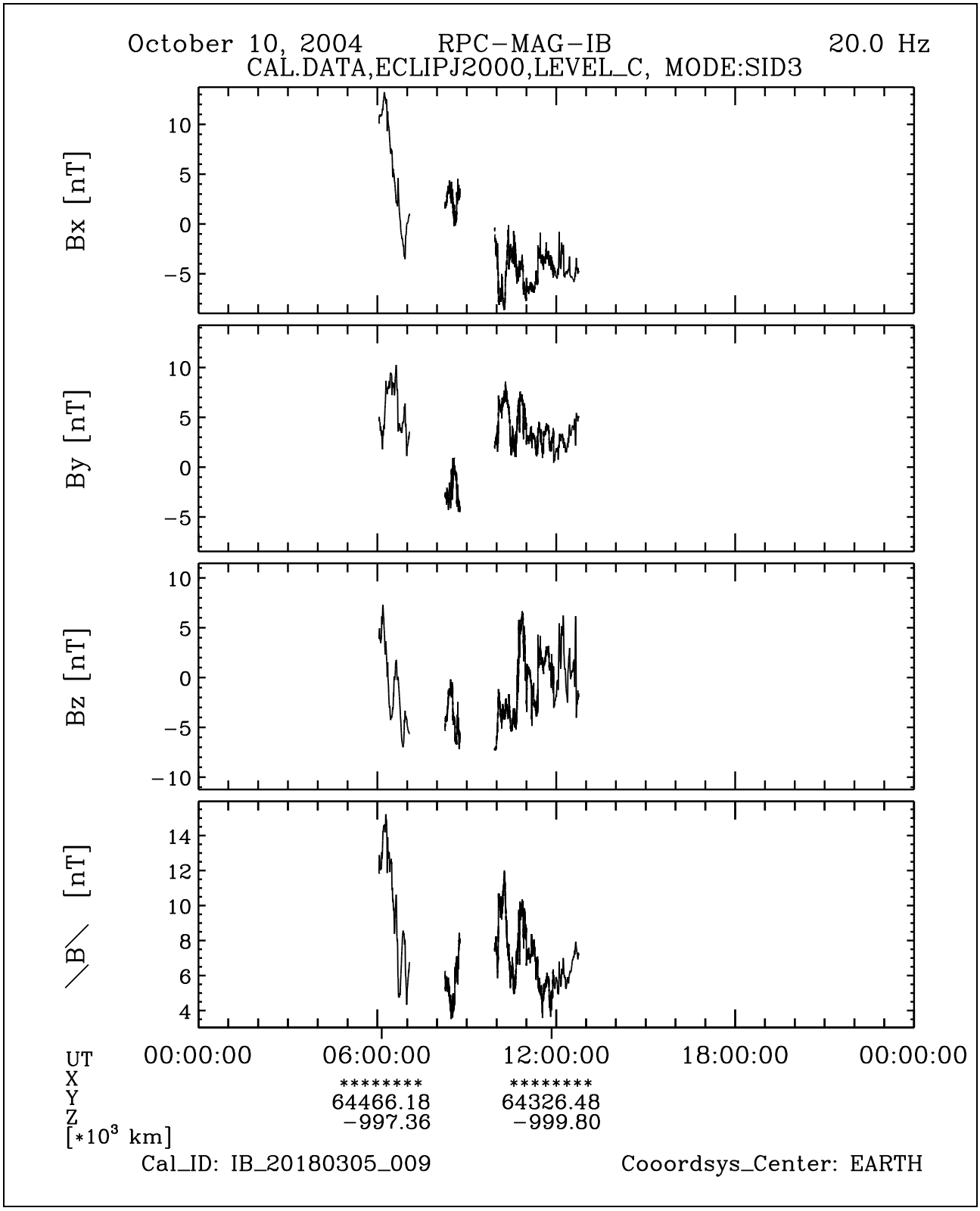

Figure 124: File: RPCMAG041010T0603_CLC_IB_M3_T0000_2400_009

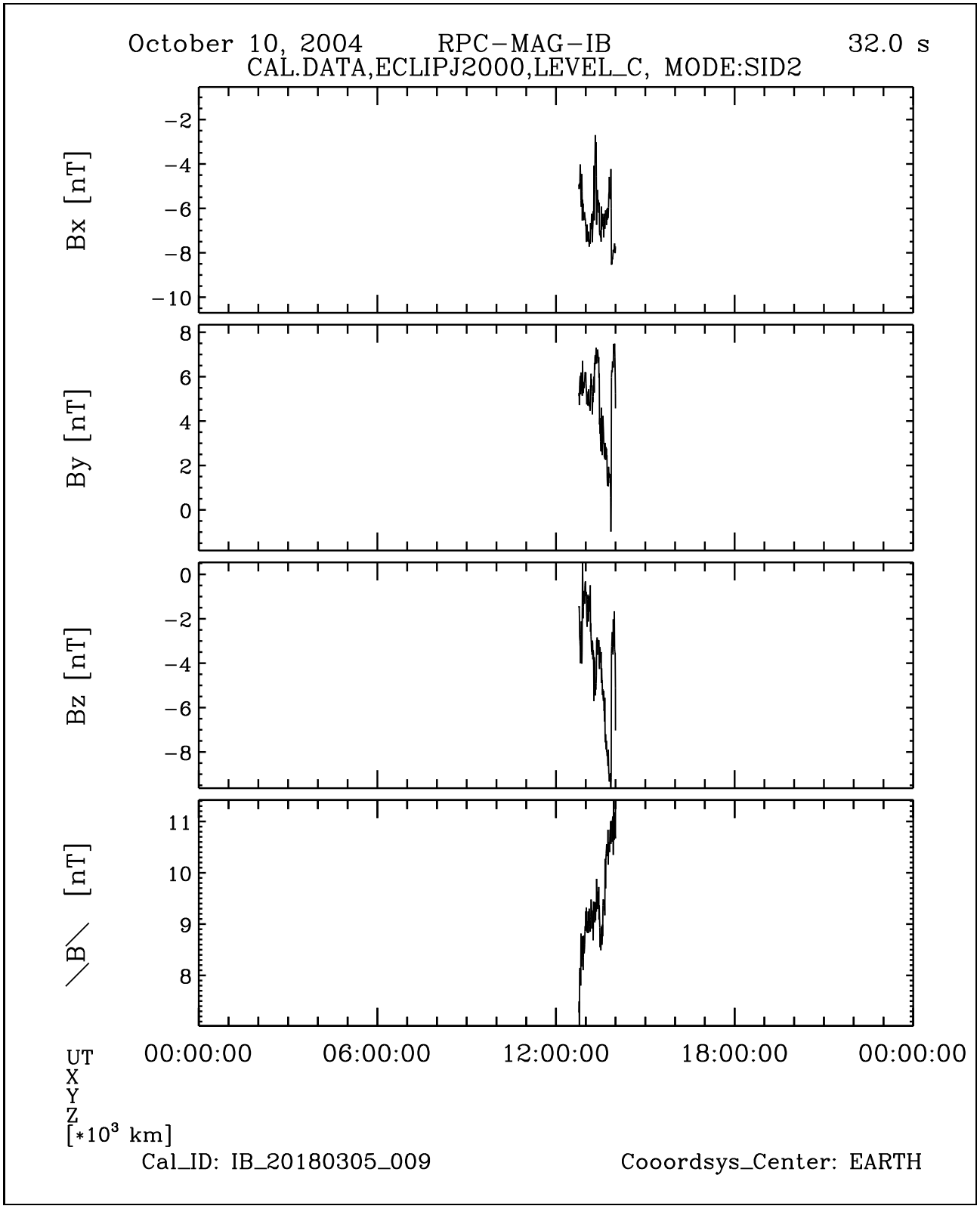

Figure 125: File: RPCMAG041010T1245_CLC_IB_M2_T0000_2400_009

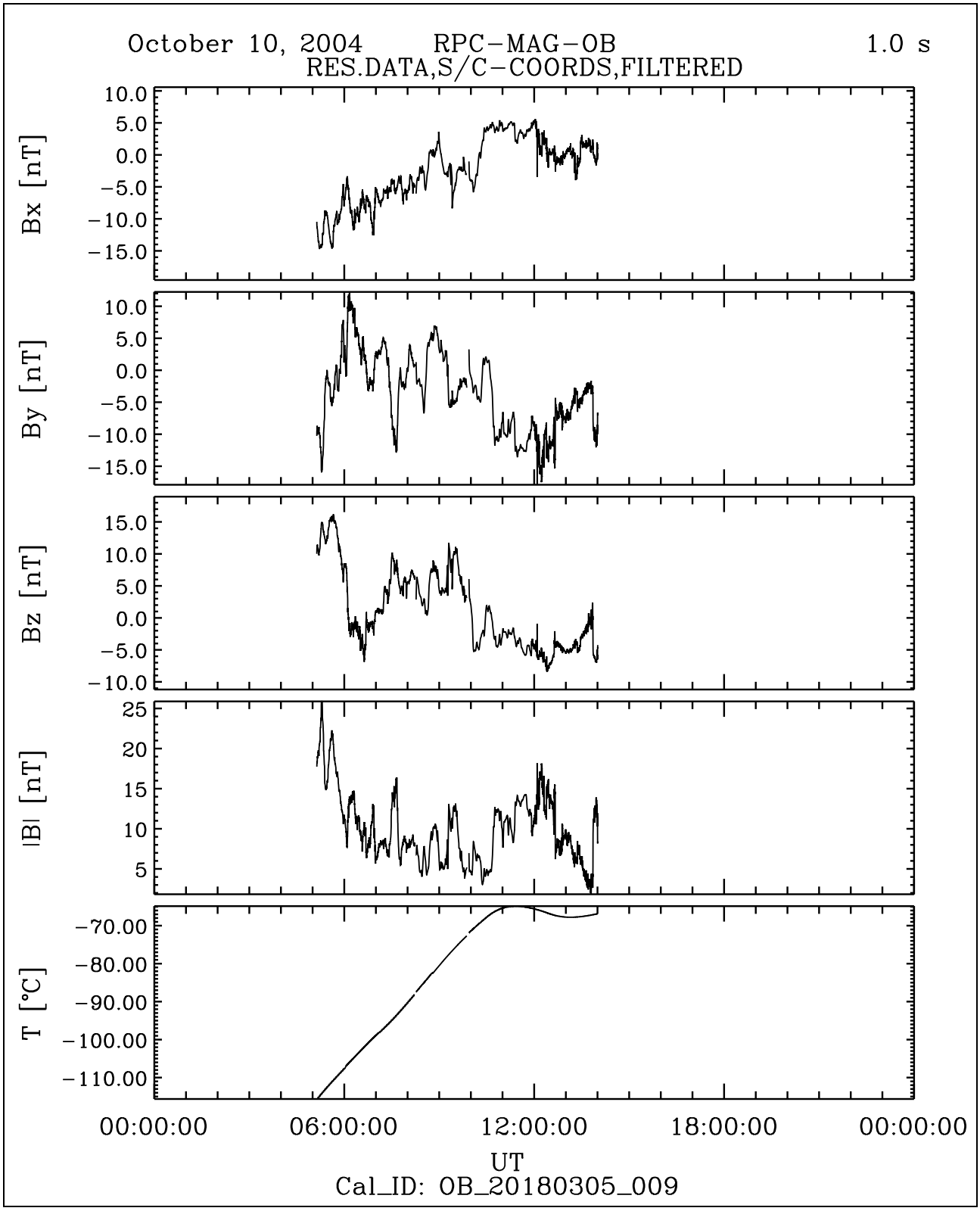

Figure 126: File: RPCMAG041010_CLF_OB_A1_T0000_2400_009

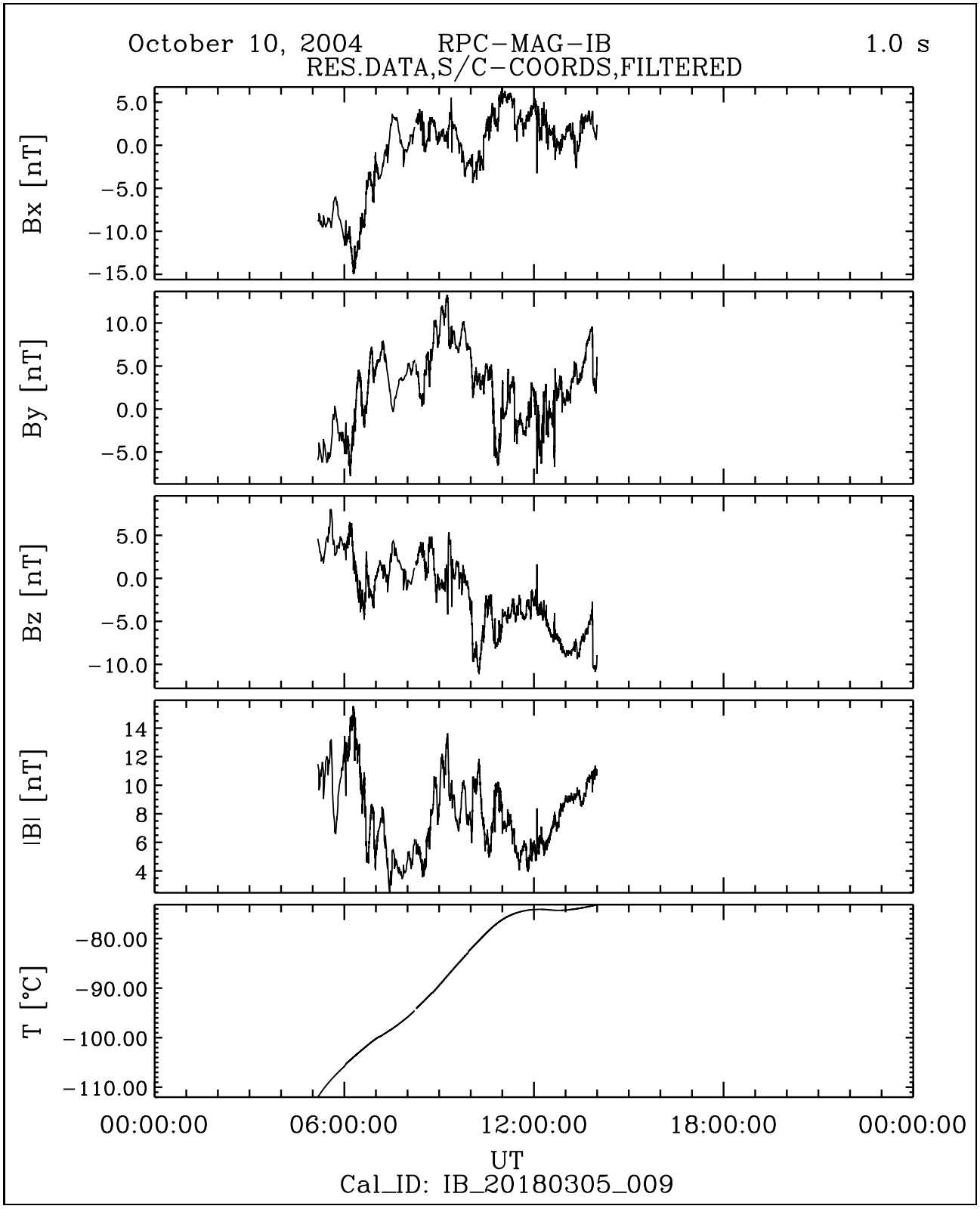

Figure 127: File: RPCMAG041010_CLF_IB_A1_T0000_2400_009

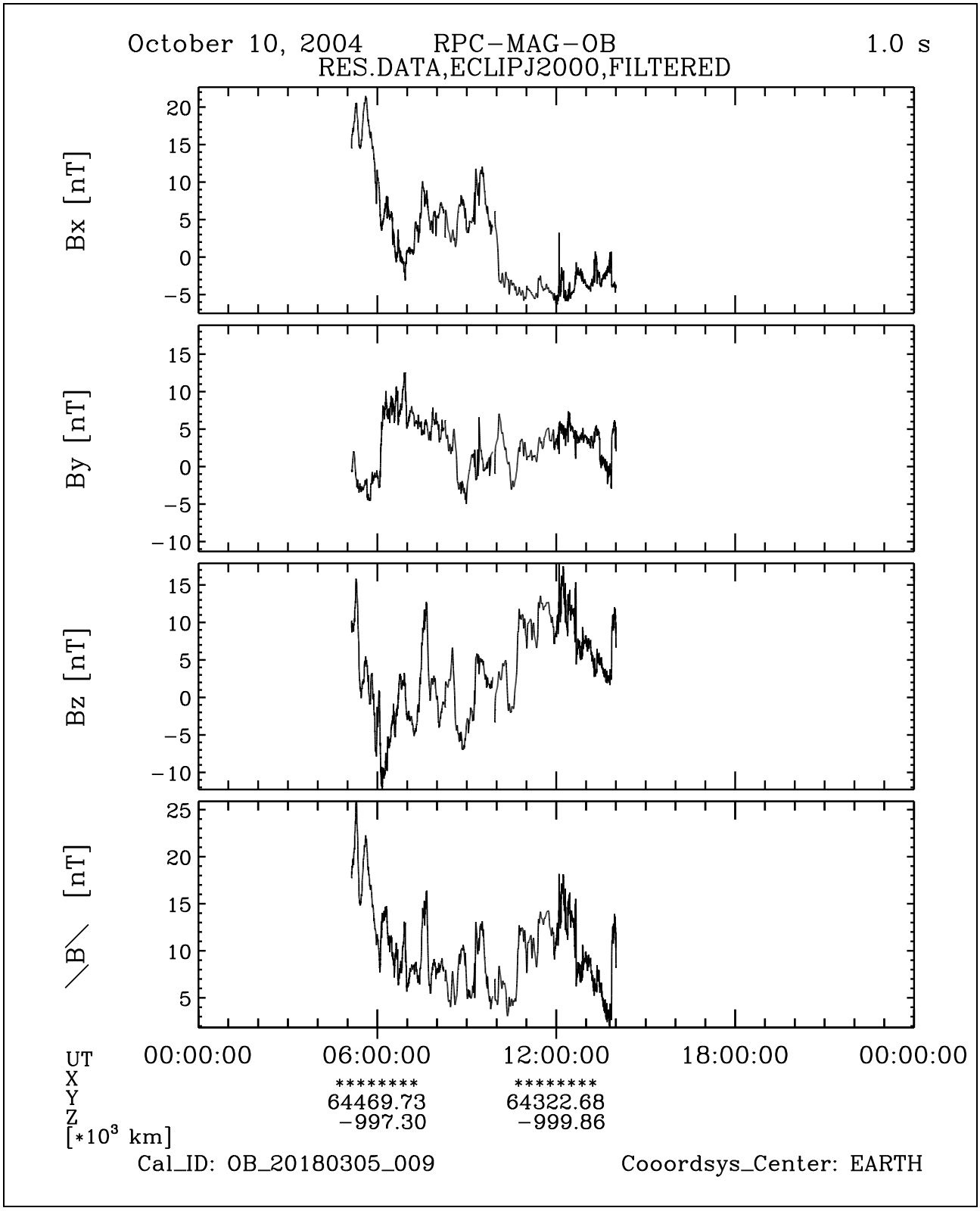

Figure 128: File: RPCMAG041010_CLG_OB_A1_T0000_2400_009

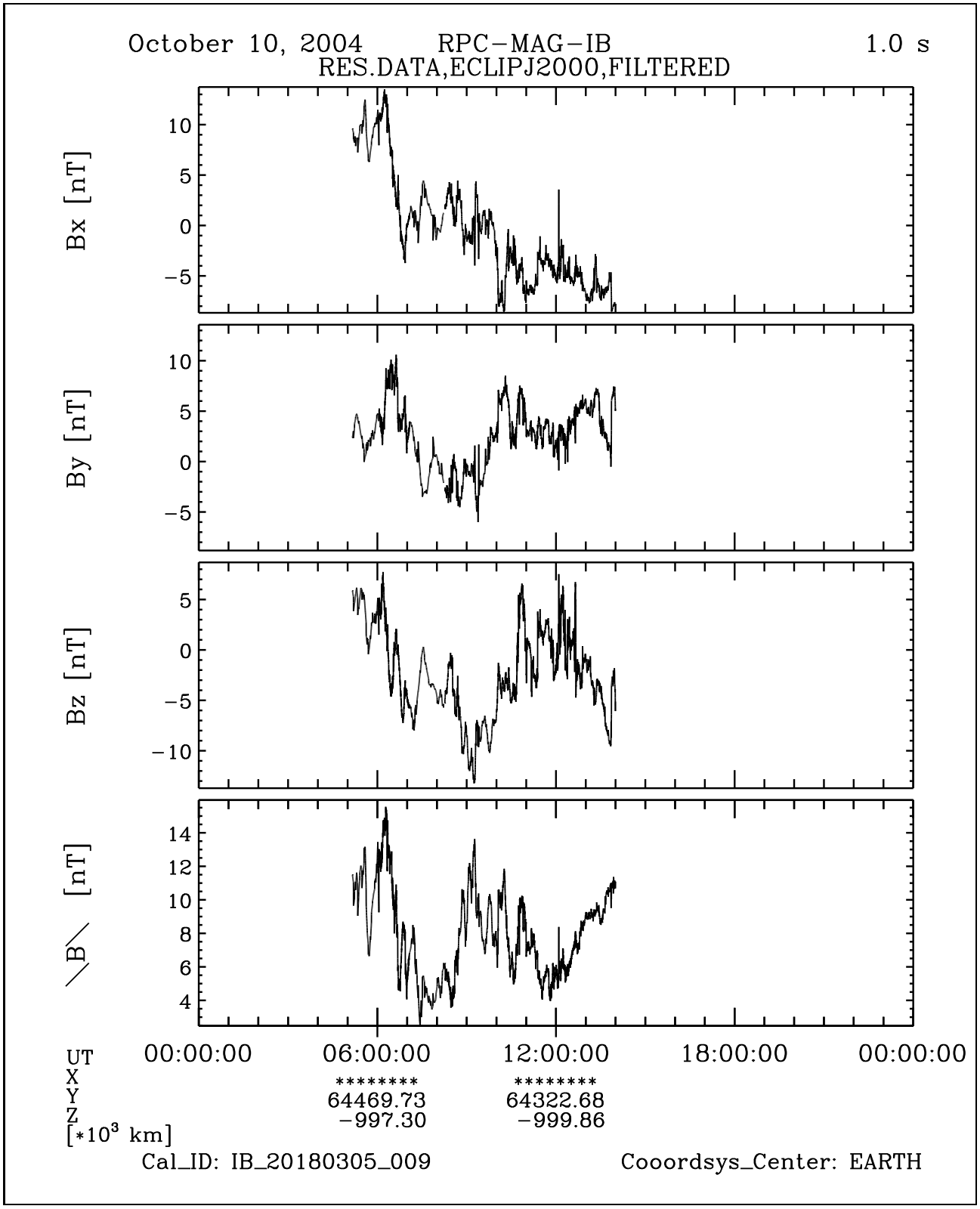

Figure 129: File: RPCMAG041010_CLG_IB_A1_T0000_2400_009

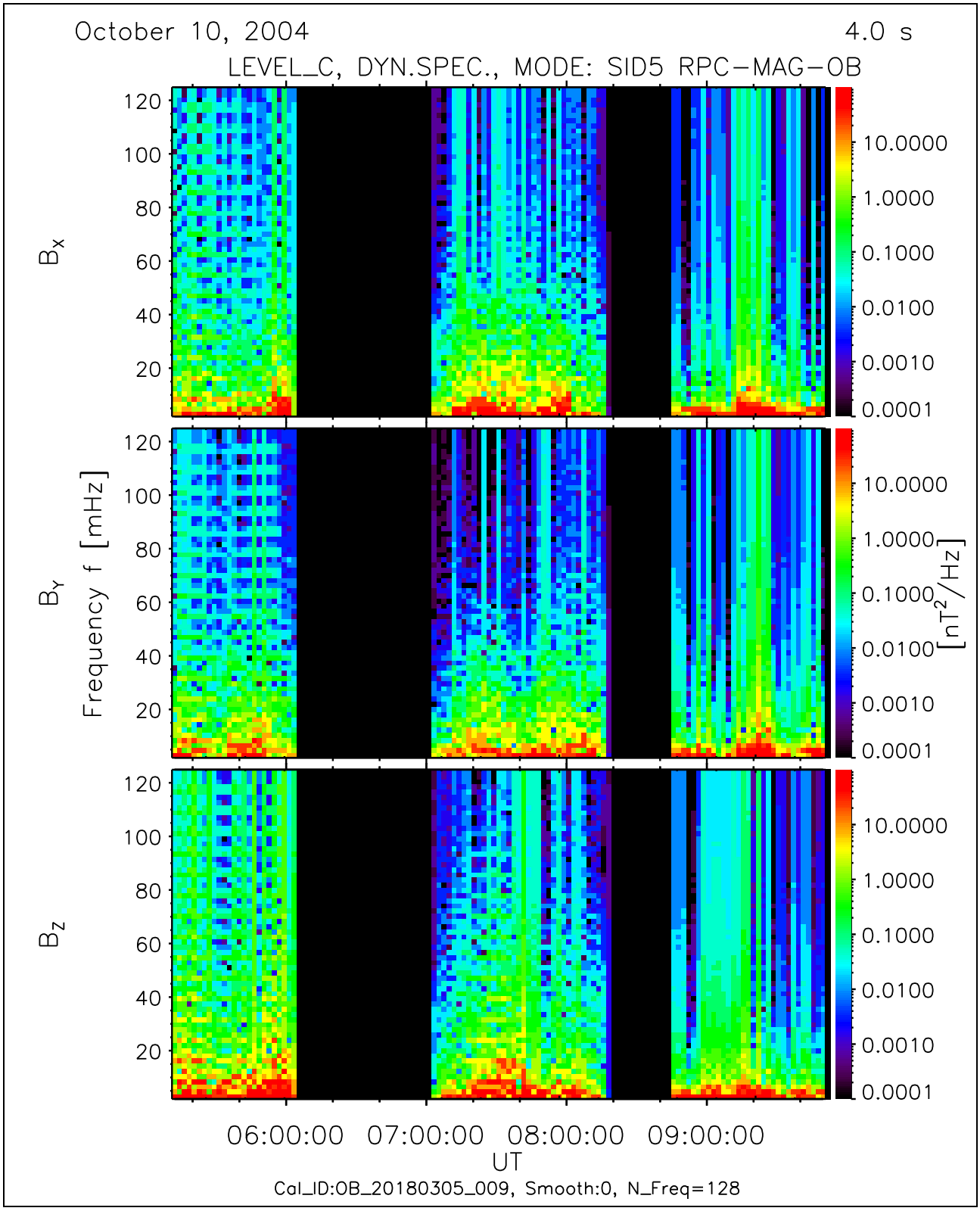

Figure 130: File: RPCMAG041010T0507_CLC_OB_M5_DS0_10000_009

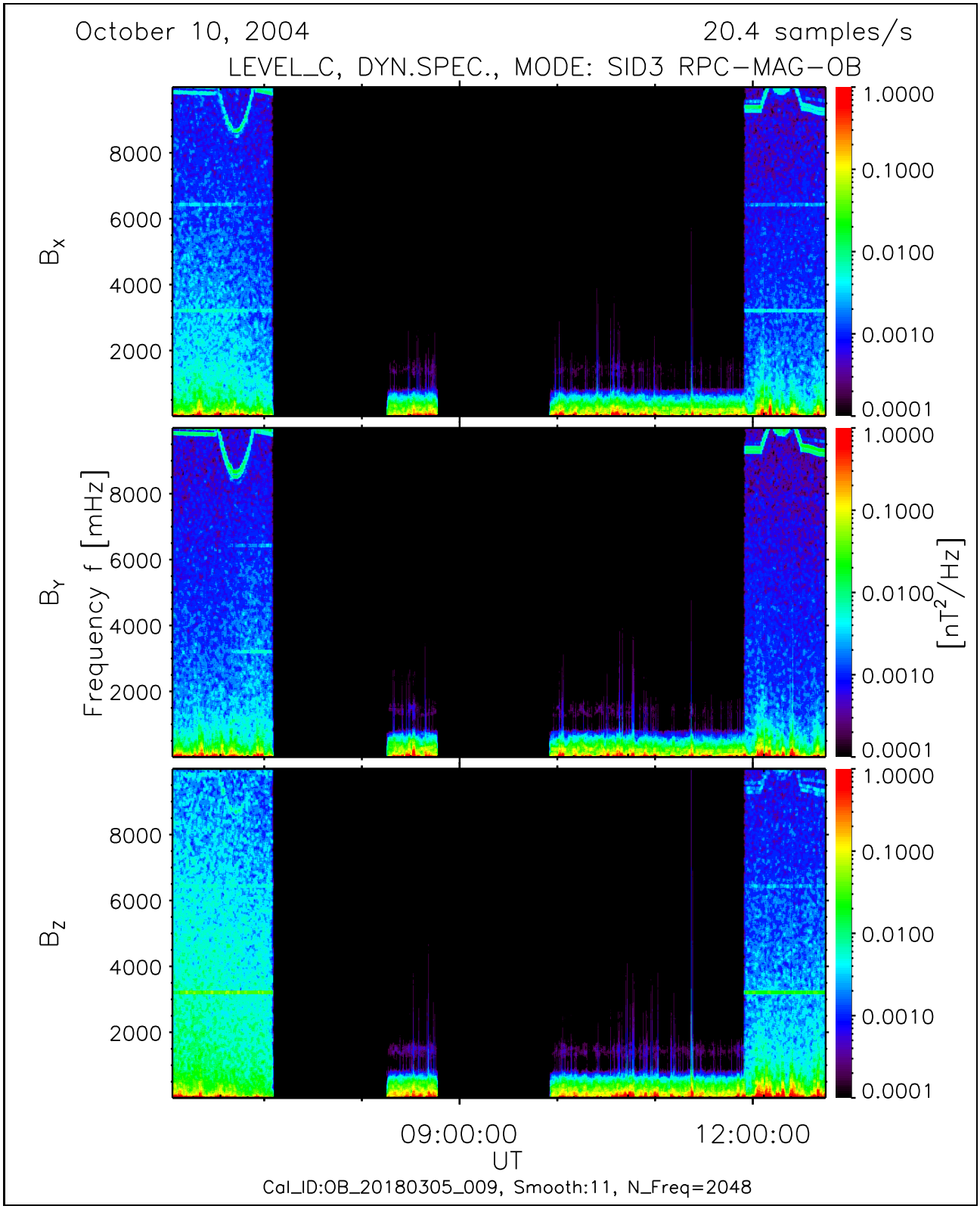

Figure 131: File: RPCMAG041010T0603_CLC_OB_M3_DS0_10000_009

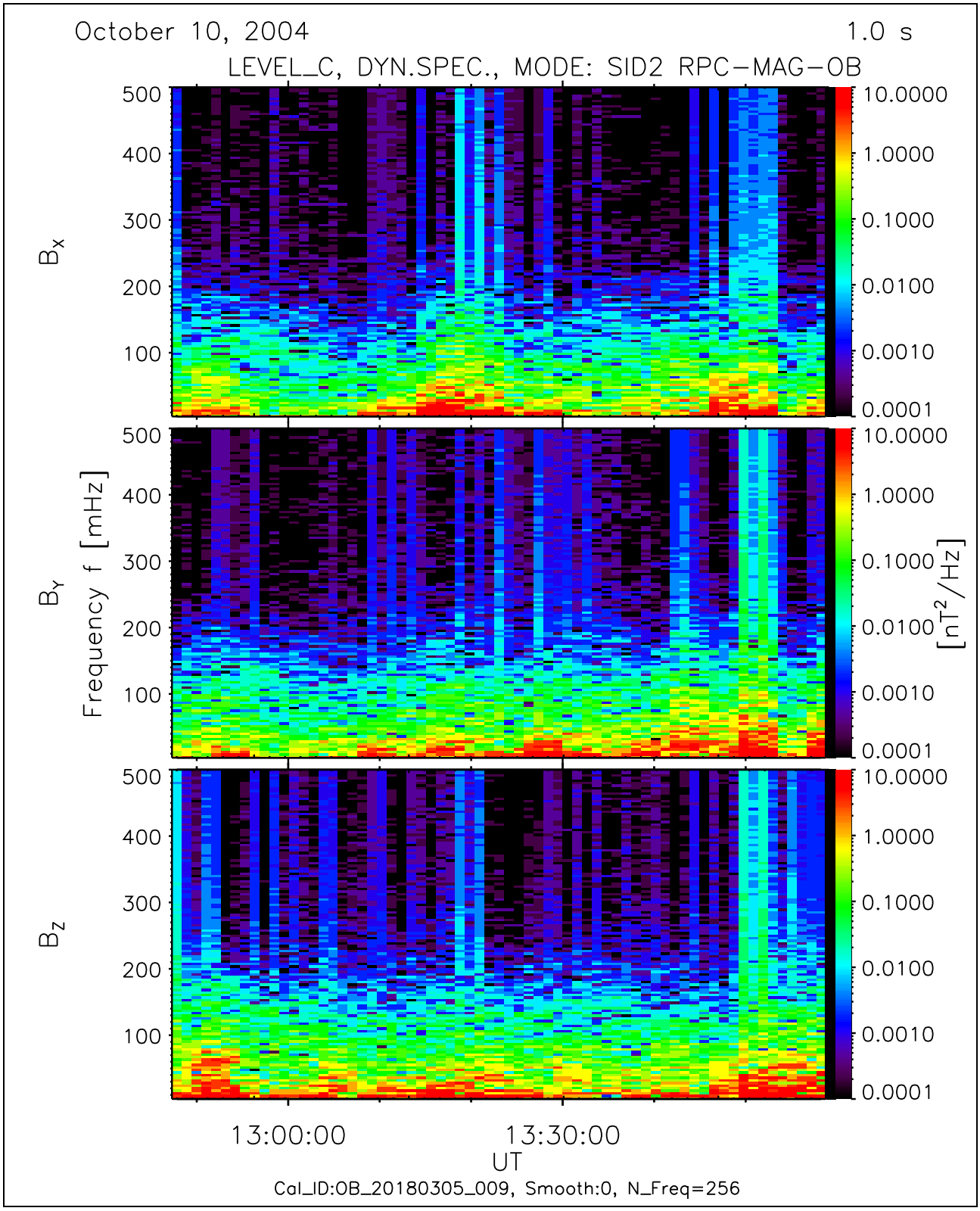

Figure 132: File: RPCMAG041010T1245_CLC_OB_M2_DS0_10000_009

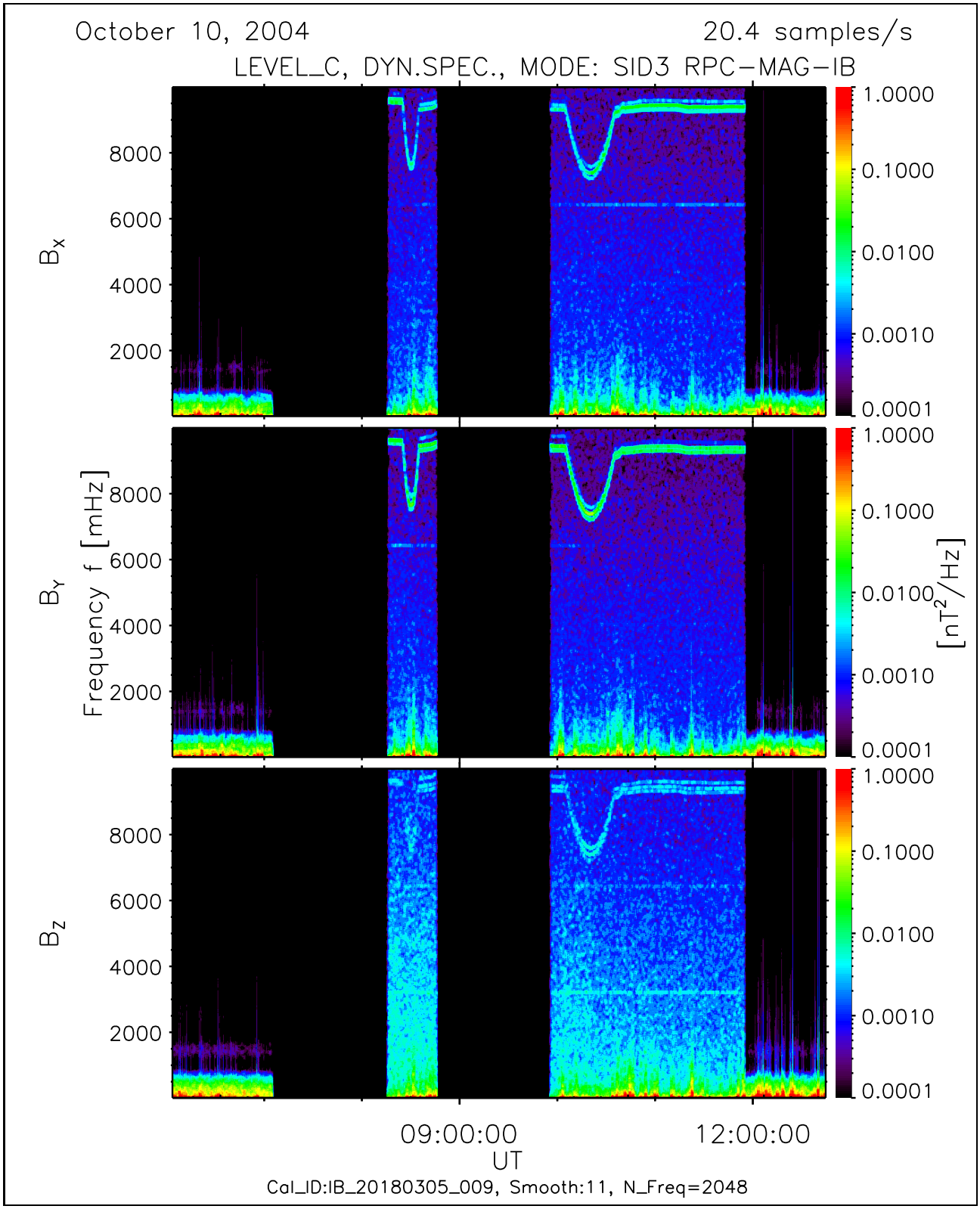

Figure 133: File: RPCMAG041010T0603_CLC_IB_M3_DS0_10000_009

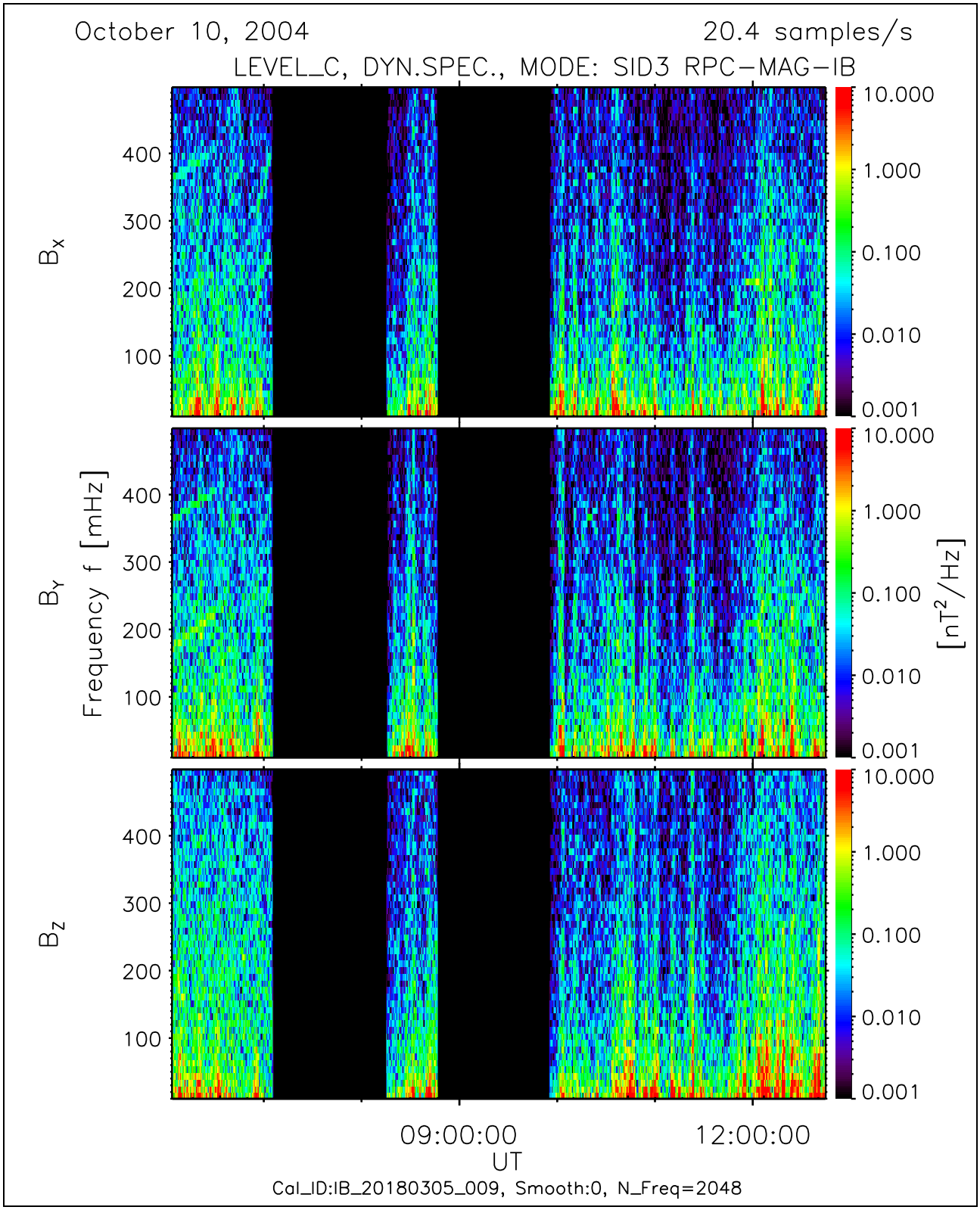

Figure 134: File: RPCMAG041010T0603_CLC_IB_M3_DS0_500_009

8.3 Plots of ROSETTA's Reaction Wheels Speeds

The following plots show the time series of the revolutions of the 4 reaction wheels. Two kinds of data are shown:

- The original reaction wheel data as they are stored in the DDS.
- The theoretical response of the wheels impact seen by an instrument sampling with different frequencies. Here the response at 20 Hz and 1 Hz sampling frequency is plotted.

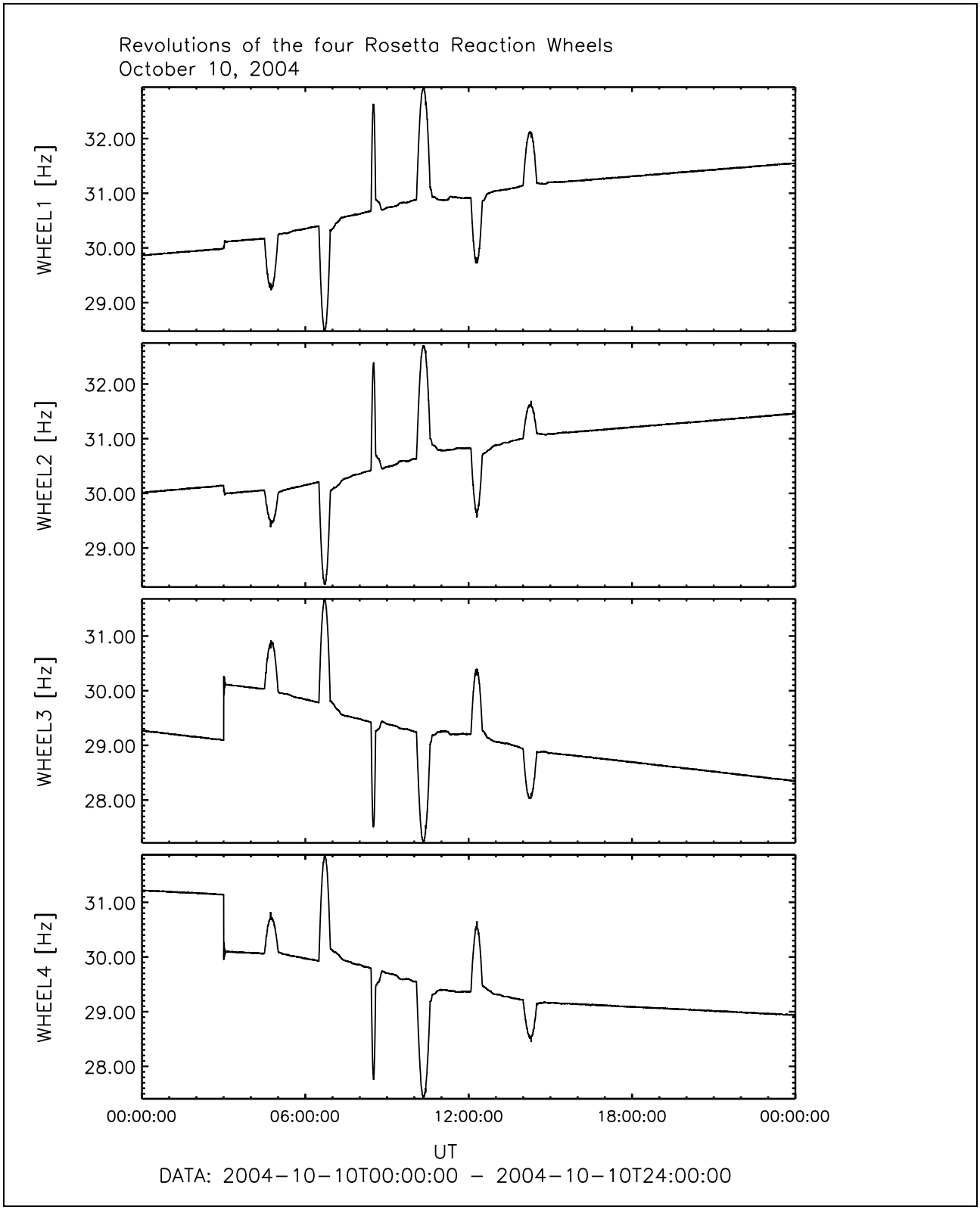

Figure 135: File: wheels_Hz2004-10-10T00-00

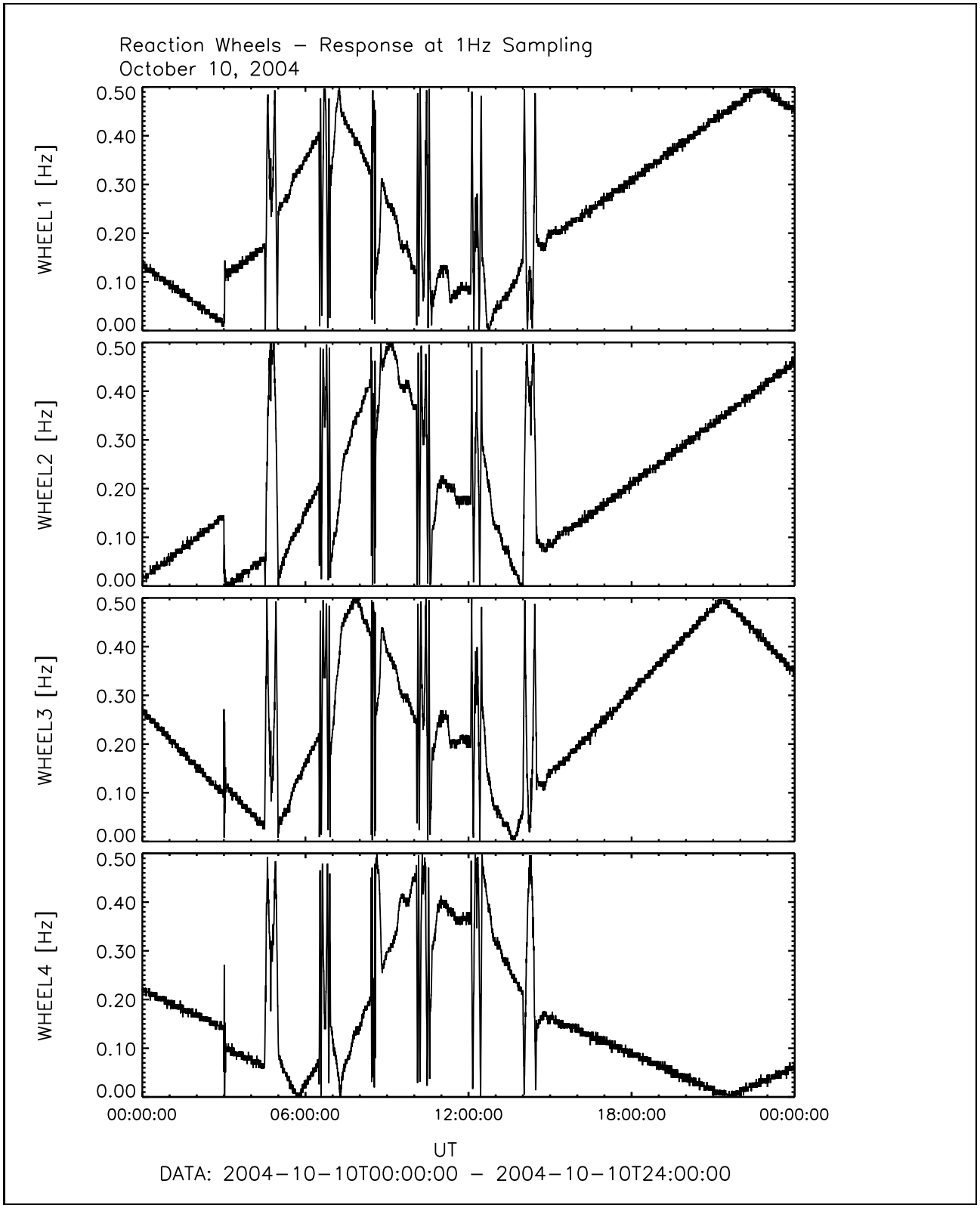

Figure 136: File: wheels_1Hz_Sampling2004-10-10T00-00

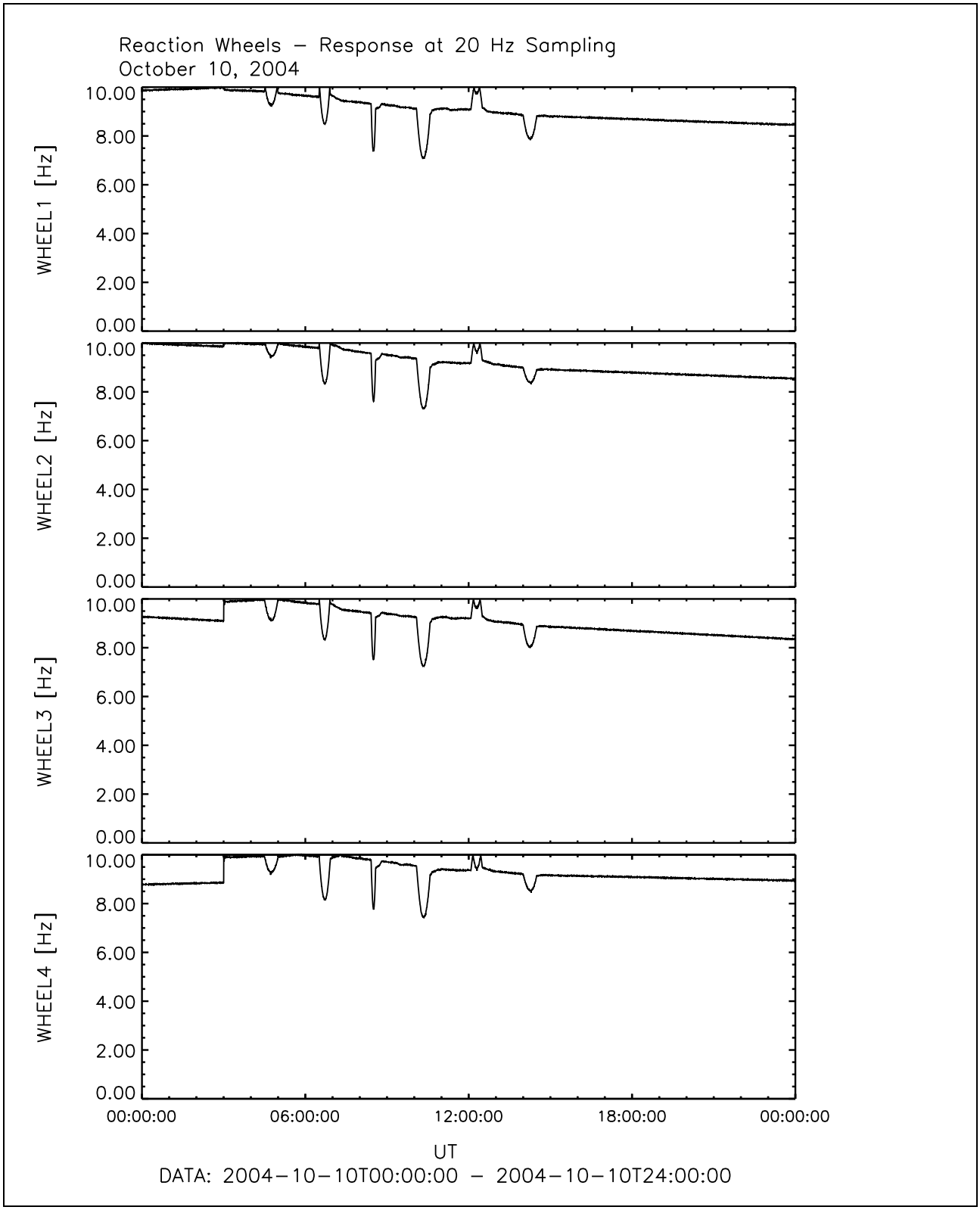

Figure 137: File: wheels_20Hz_Sampling2004-10-10T00-00

8.4 Plots of Reaction Wheel and LAP Disturbance corrected Data

The following plots show the dynamic spectra of the LEVEL_H data. These data have been purged from ROSETTAs reaction wheel disturbance and also from the disturbance of the LAP instrument. Plots are only shown for the primary sensor.

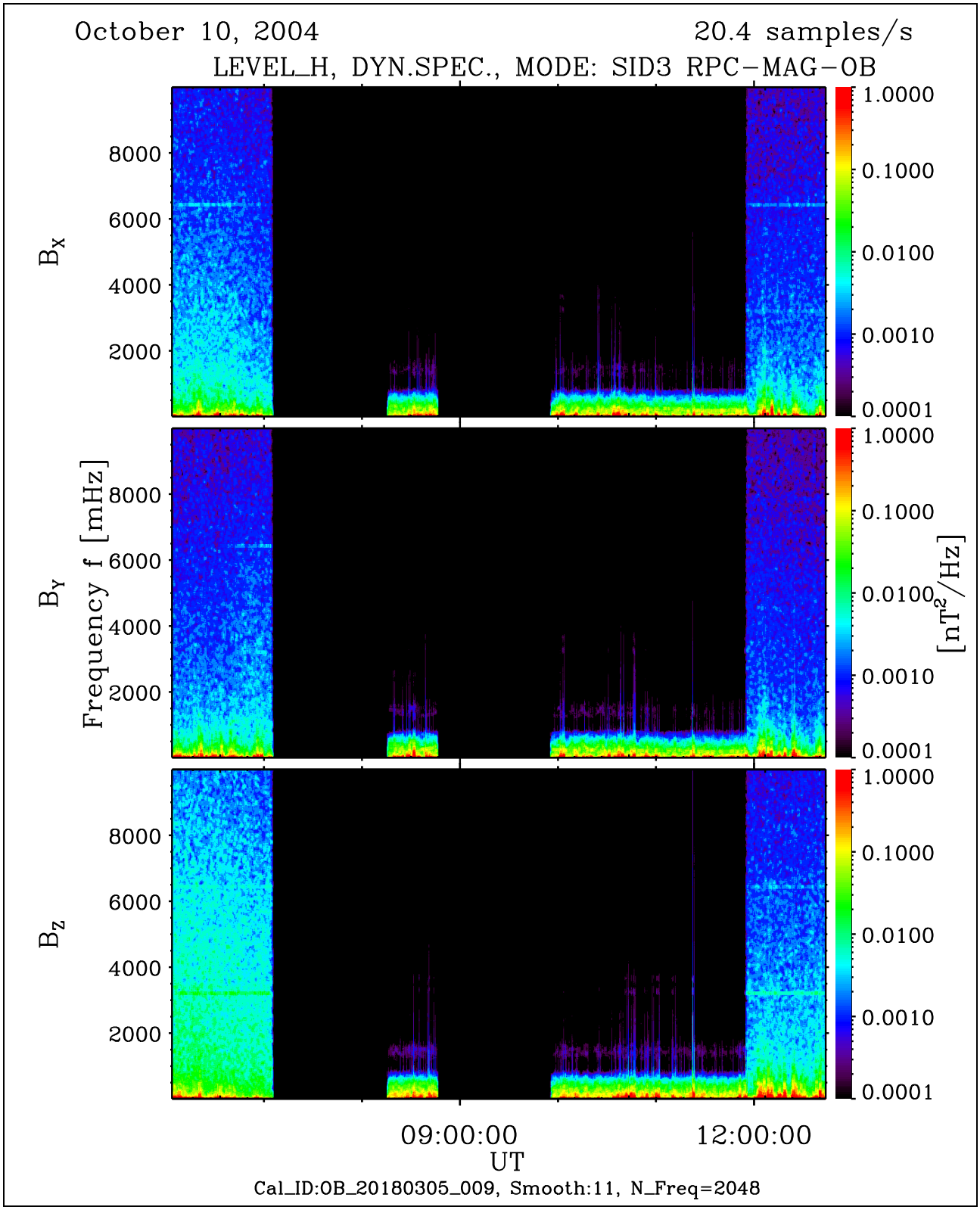

Figure 138: File: RPCMAG041010T0603_CLH_OB_M3_DS0_10000_009

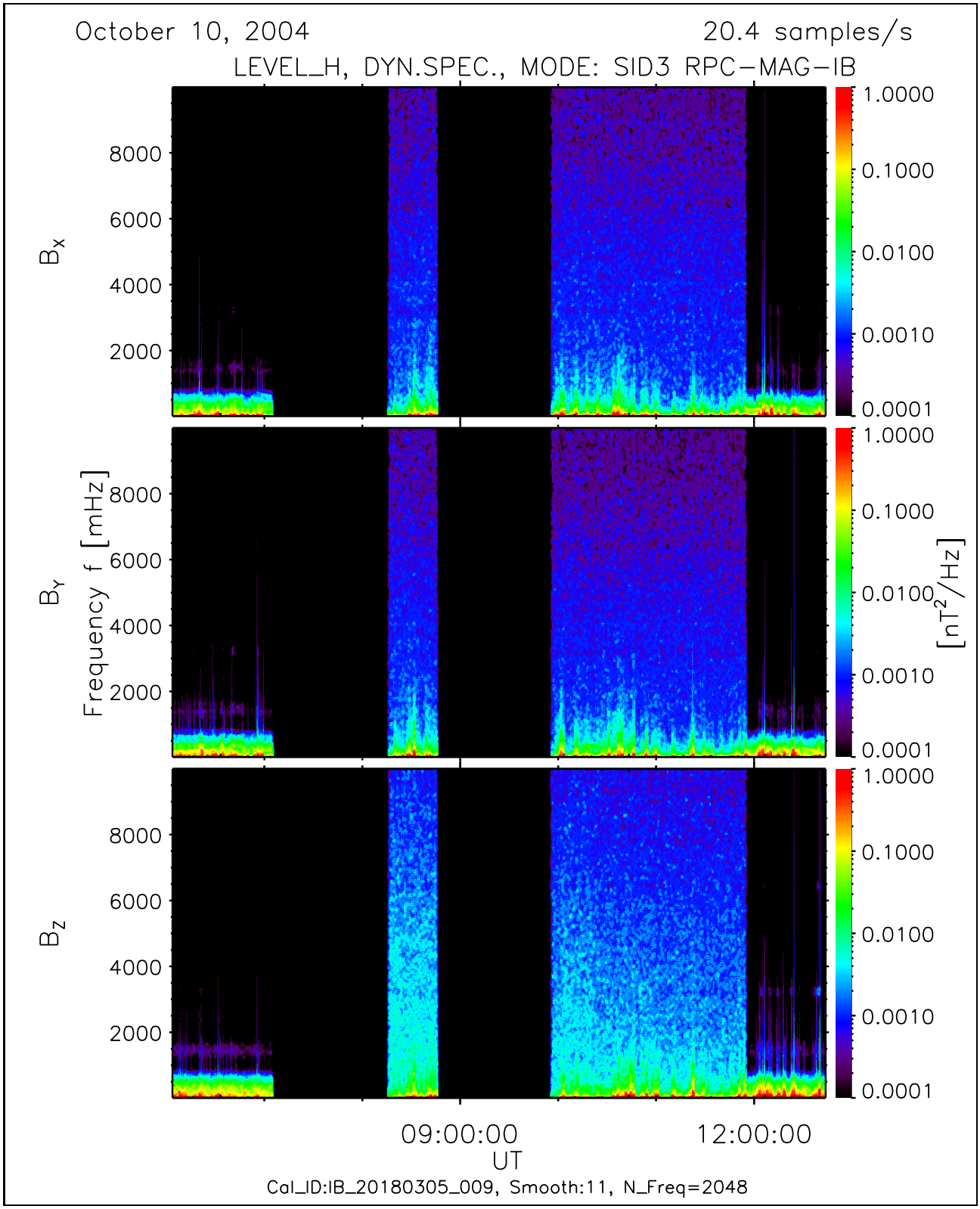

Figure 139: File: RPCMAG041010T0603_CLH_IB_M3_DS0_10000_009

9 October 13, 2004:

9.1 Actions

The Instrument was switched on at 01:02 and switched off at 04:47.
The second operation interval on this day started at 22:12.

Time	Stage A, Stage B,Filter cfg	Stage 1, Stage 2, Stage3	Mode
01:19 – 04:46	0 0 0	0 0 0	SID3
22:19 – 24:00	0 0 0	0 0 0	SID3

9.2 Plots of Calibrated Data using the new Temperature Model

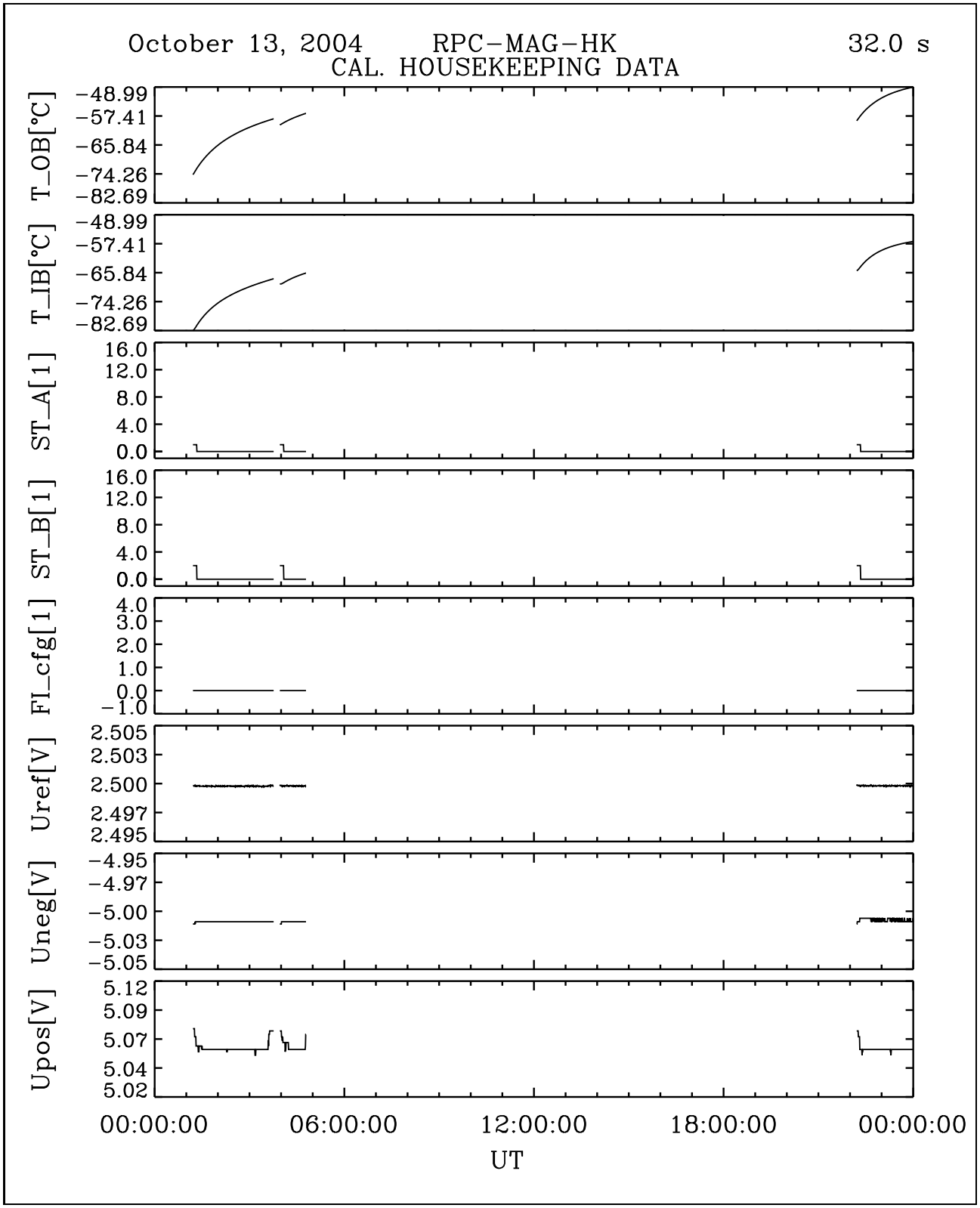

Figure 140: File: RPCMAG041013T0112_CLA_HK_P0000_2400

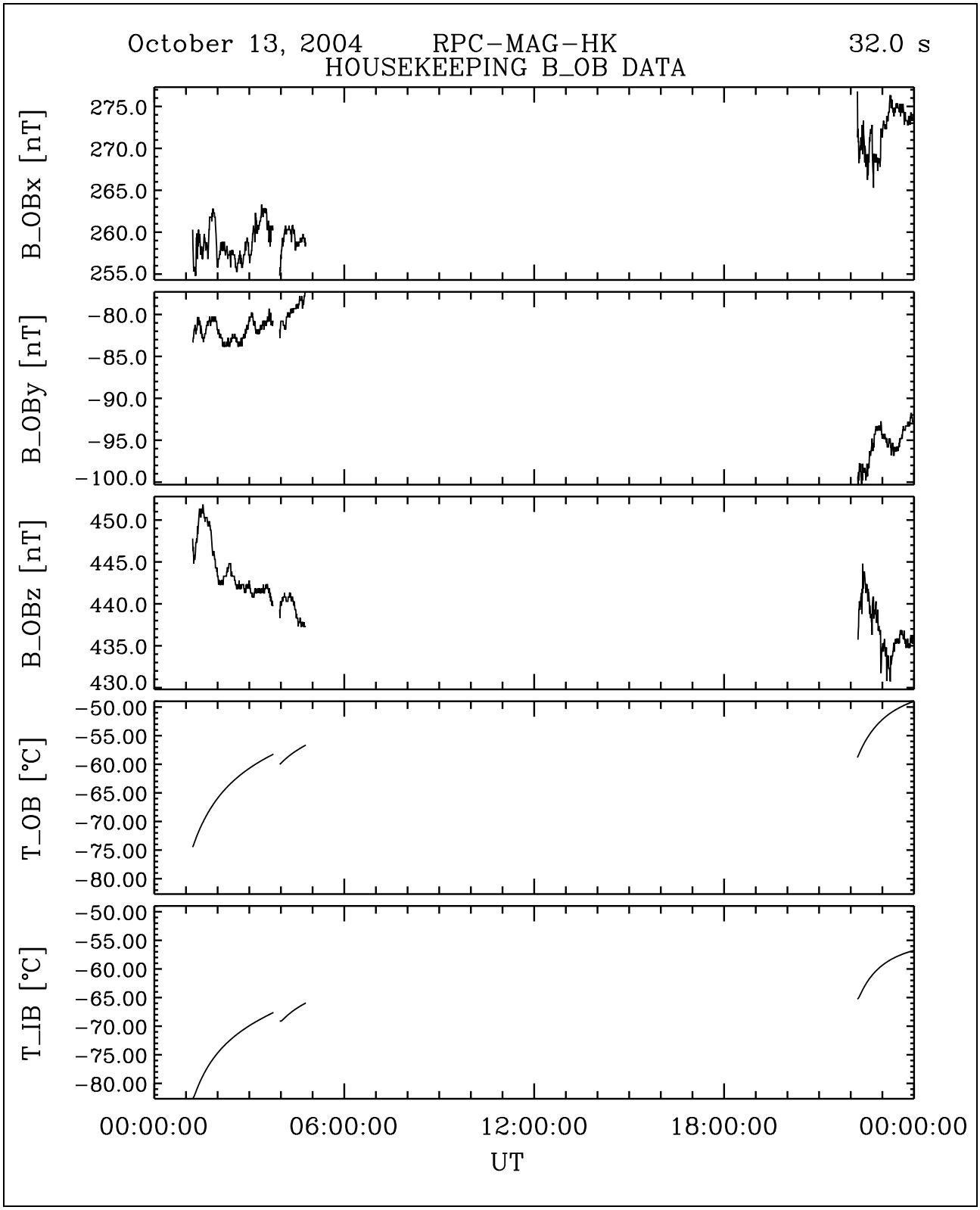

Figure 141: File: RPCMAG041013T0112_CLA_HK_B_P0000_2400

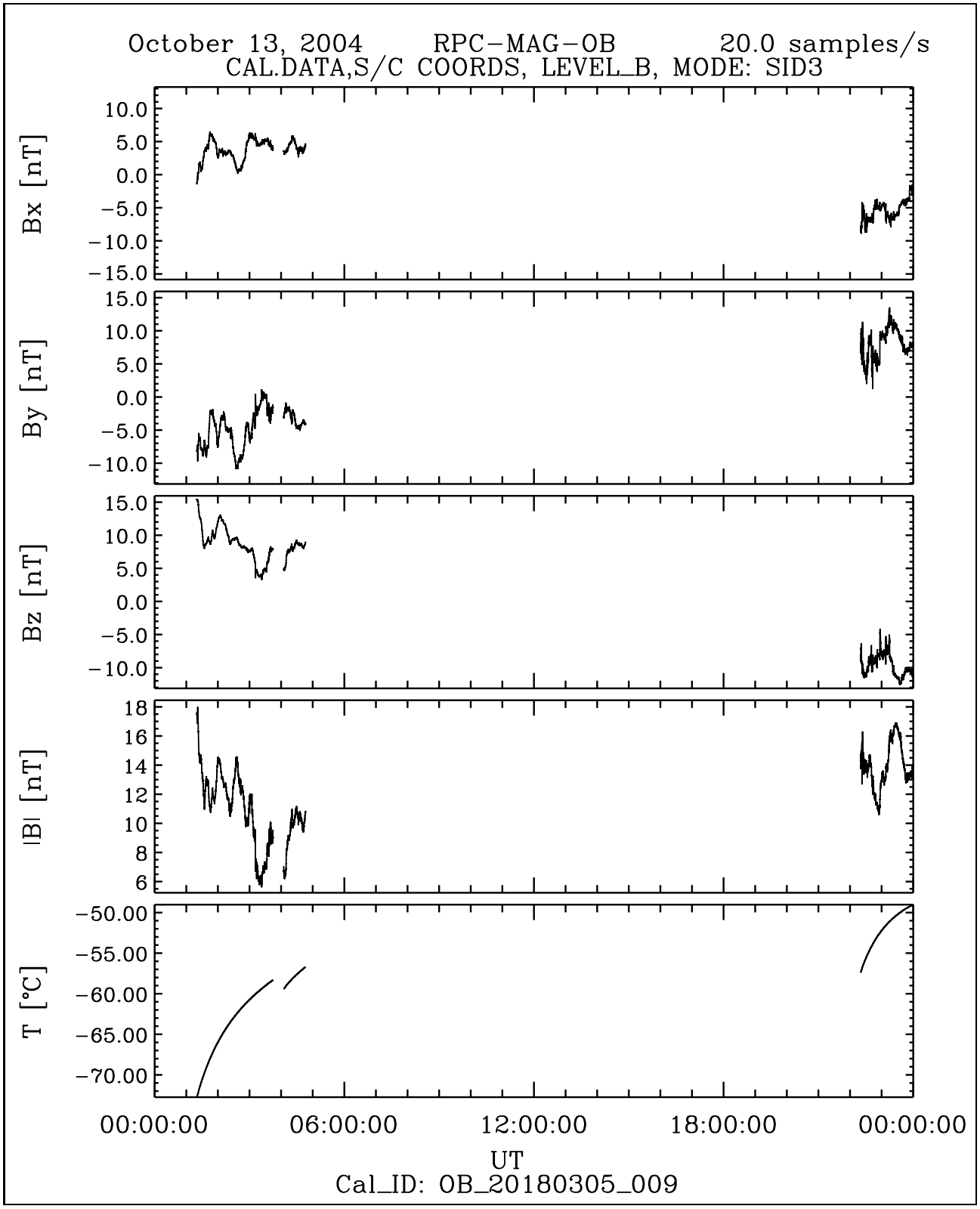

Figure 142: File: RPCMAG041013T0119_CLB_OB_M3_T0000_2400_009

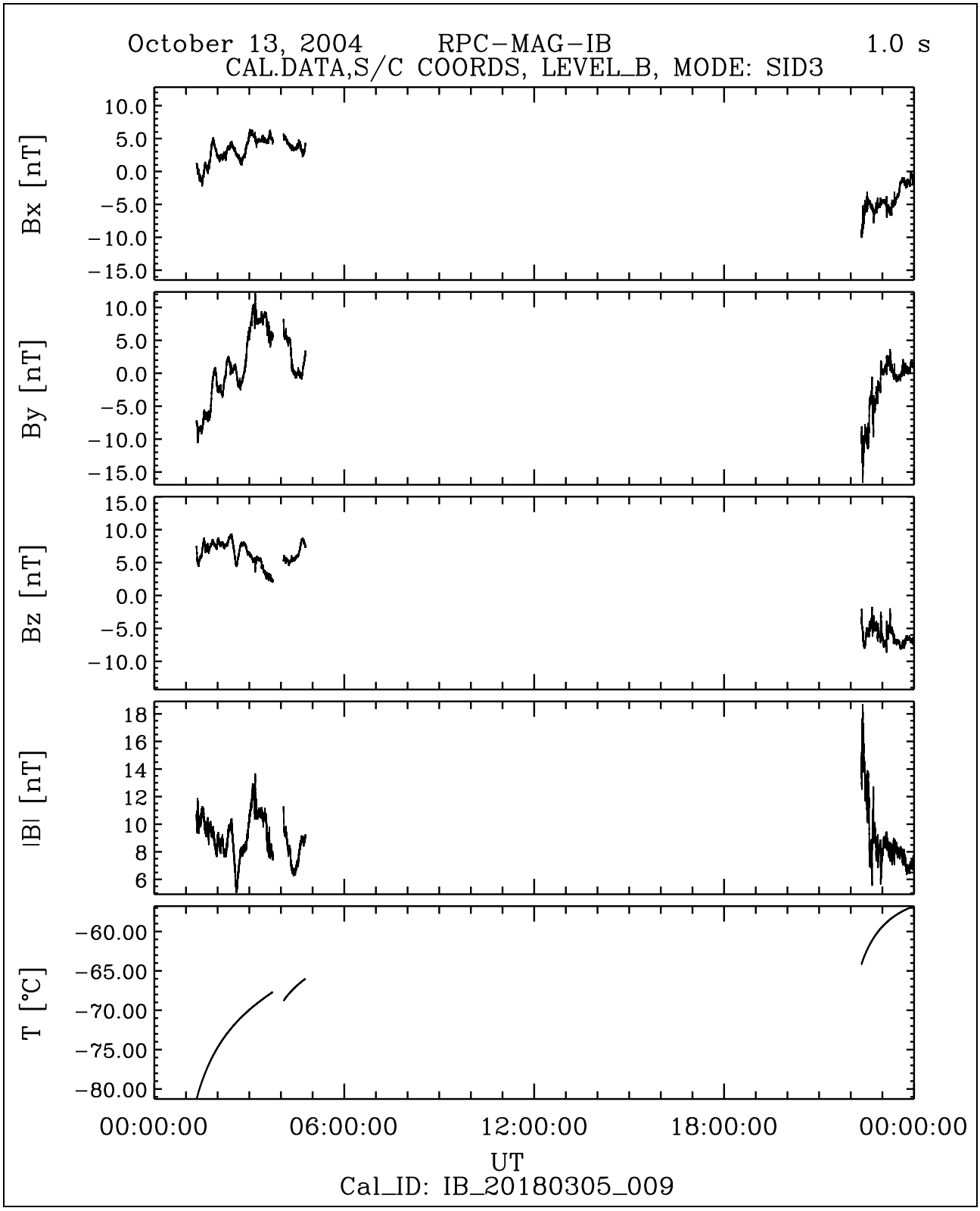

Figure 143: File: RPCMAG041013T0119_CLB_IB_M3_T0000_2400_009

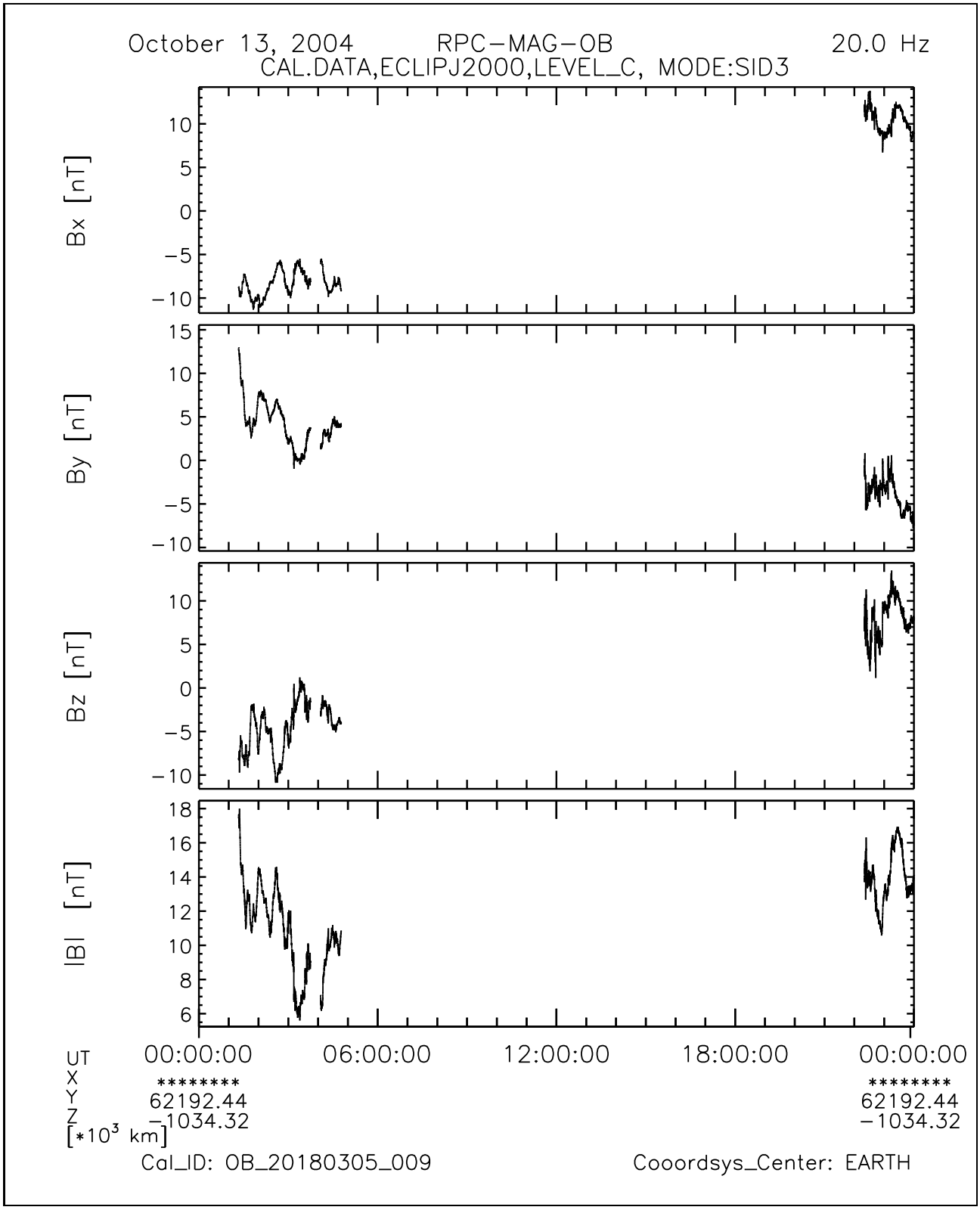

Figure 144: File: RPCMAG041013T0119_CLC_OB_M3_T0000_2400_009

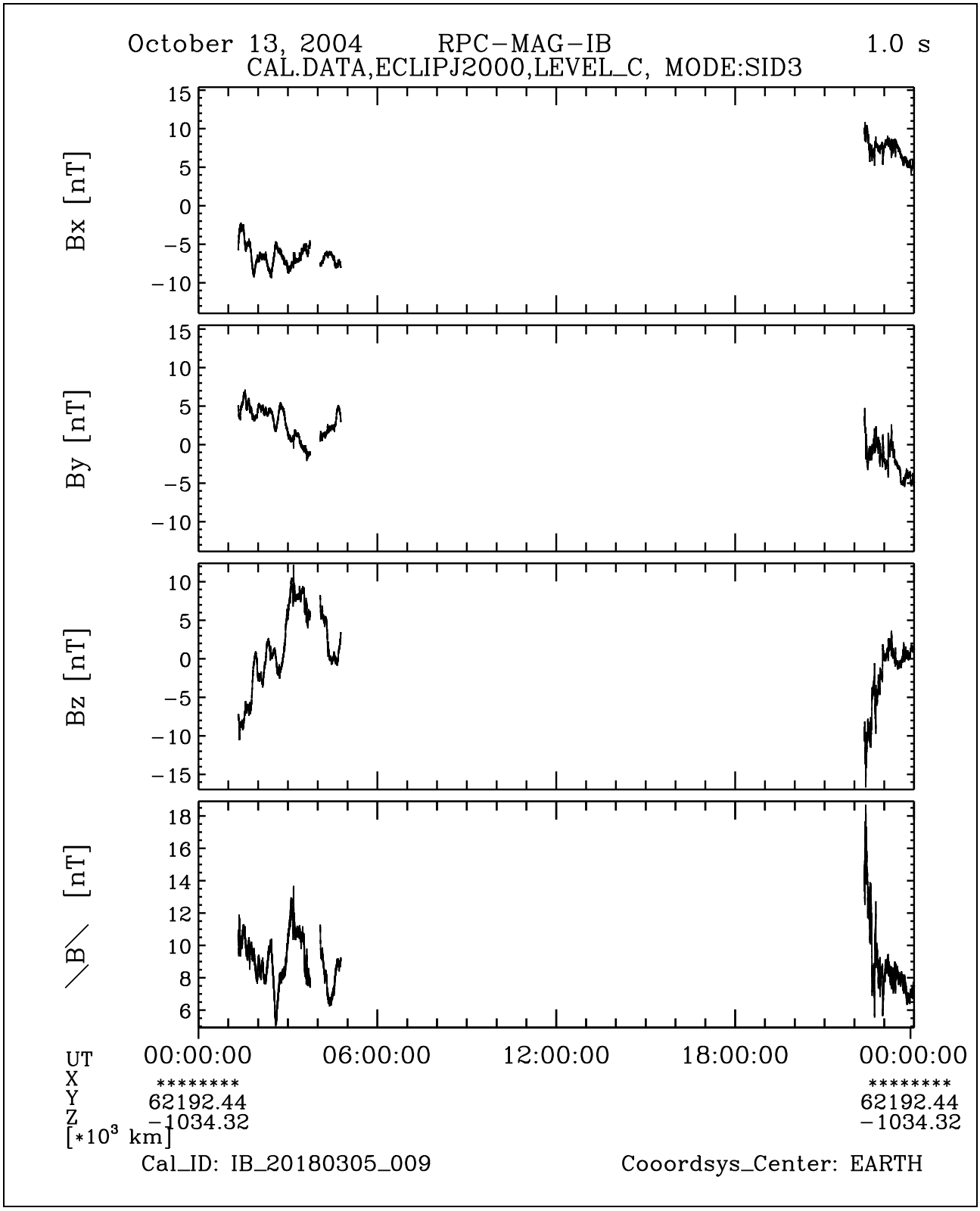

Figure 145: File: RPCMAG041013T0119_CLC_IB_M3_T0000_2400_009

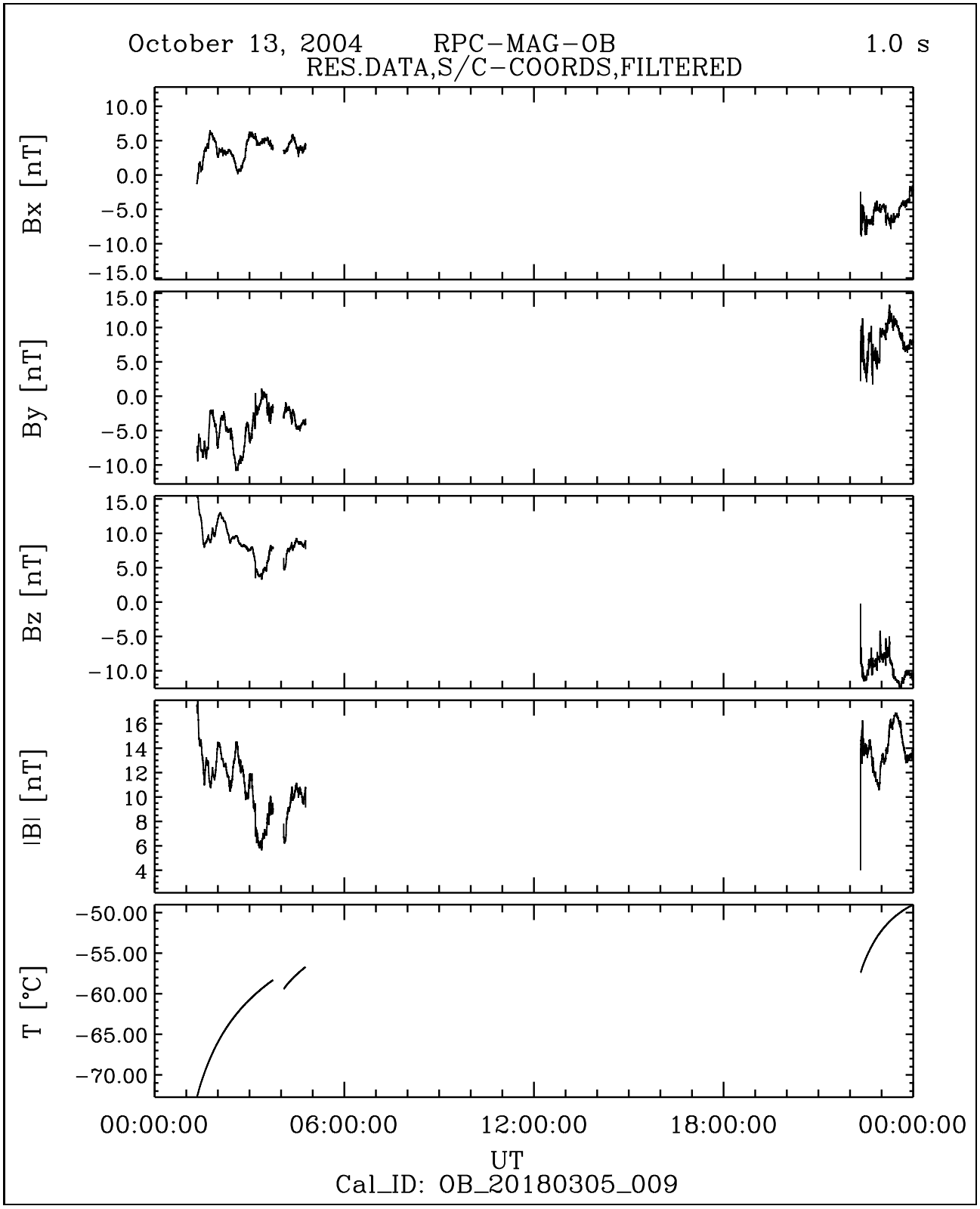

Figure 146: File: RPCMAG041013_CLF_OB_A1_T0000_2400_009

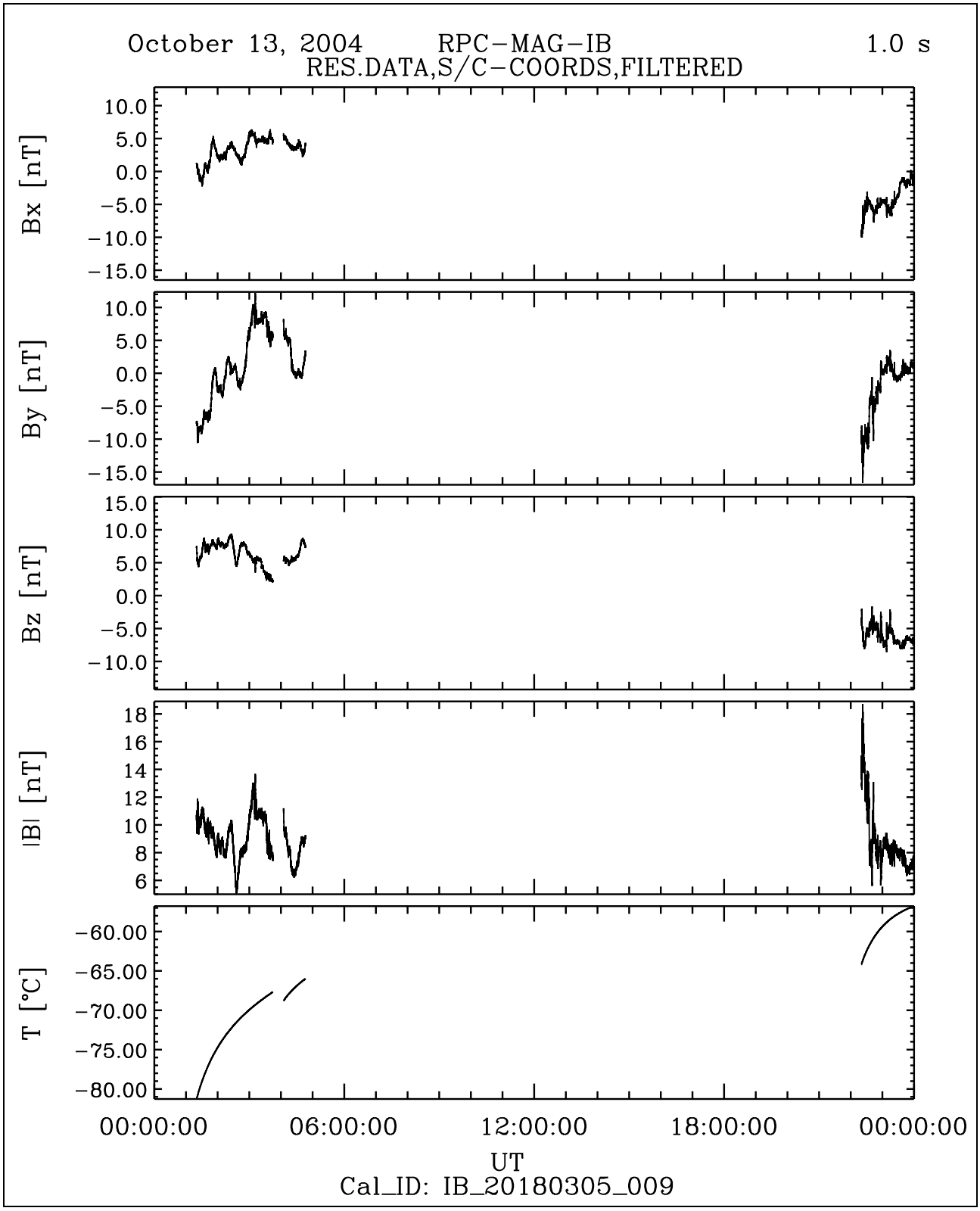

Figure 147: File: RPCMAG041013_CLF_IB_A1_T0000_2400_009

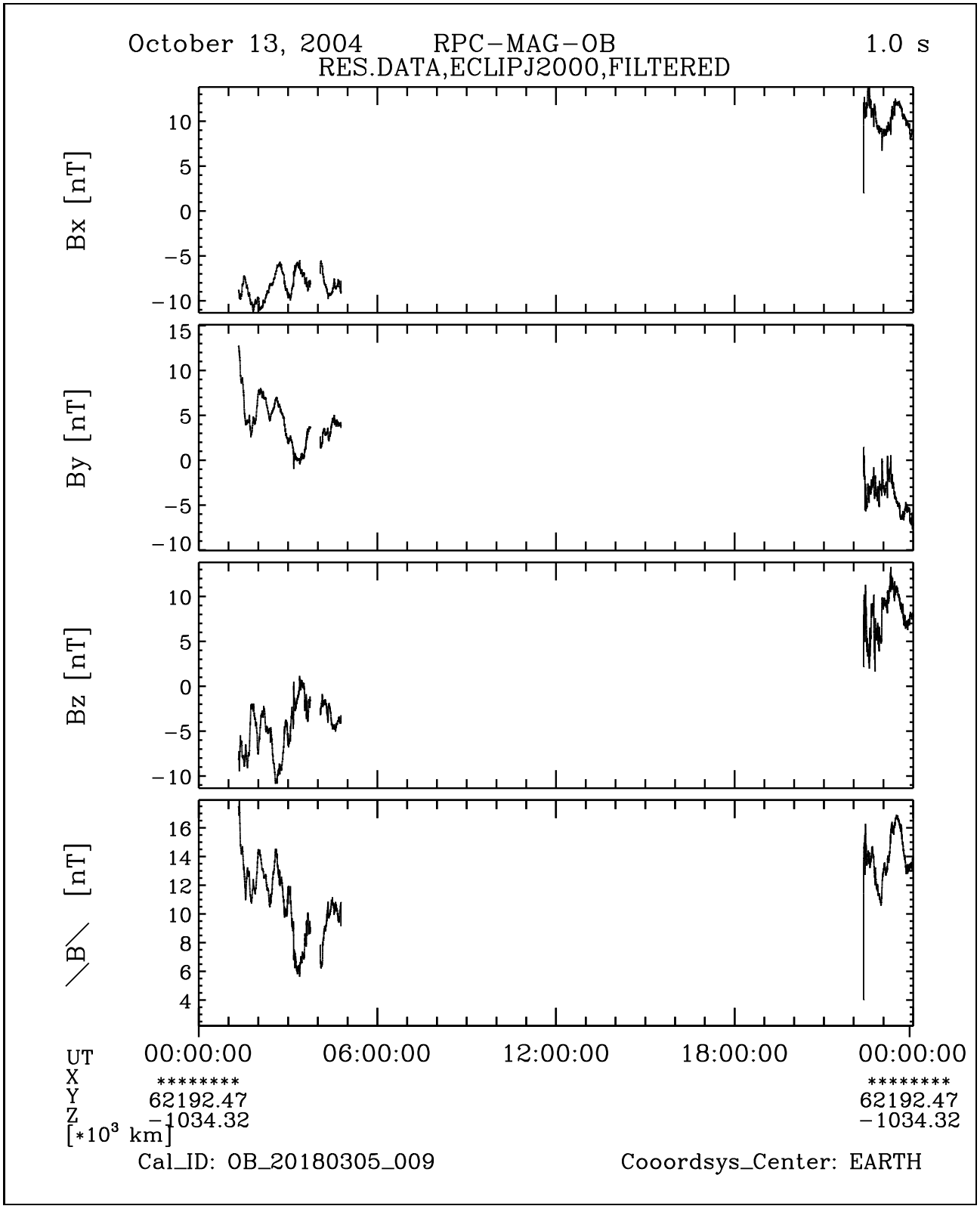

Figure 148: File: RPCMAG041013_CLG_OB_A1_T0000_2400_009

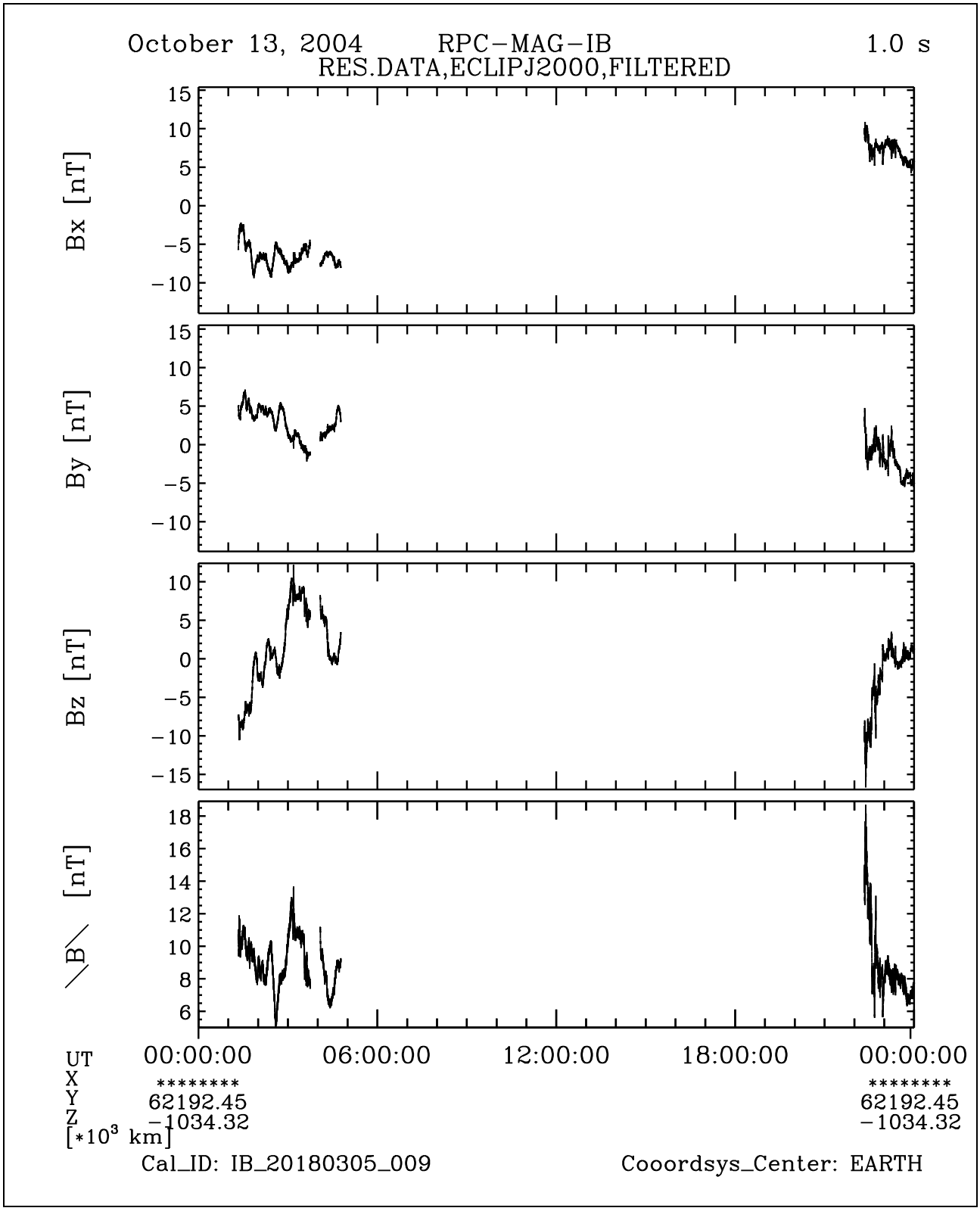

Figure 149: File: RPCMAG041013_CLG_IB_A1_T0000_2400_009

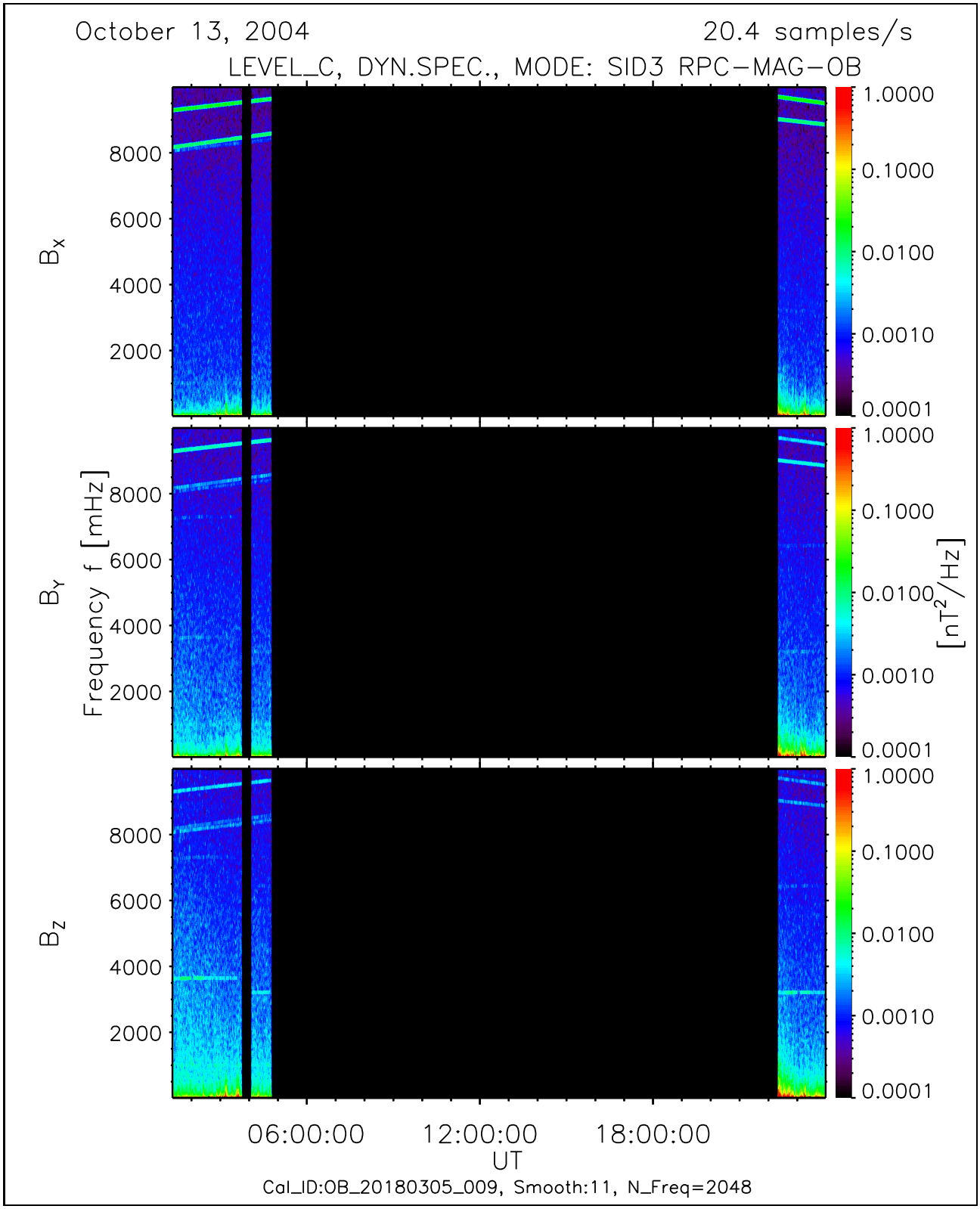

Figure 150: File: RPCMAG041013T0119_CLC_OB_M3_DS0_10000_009

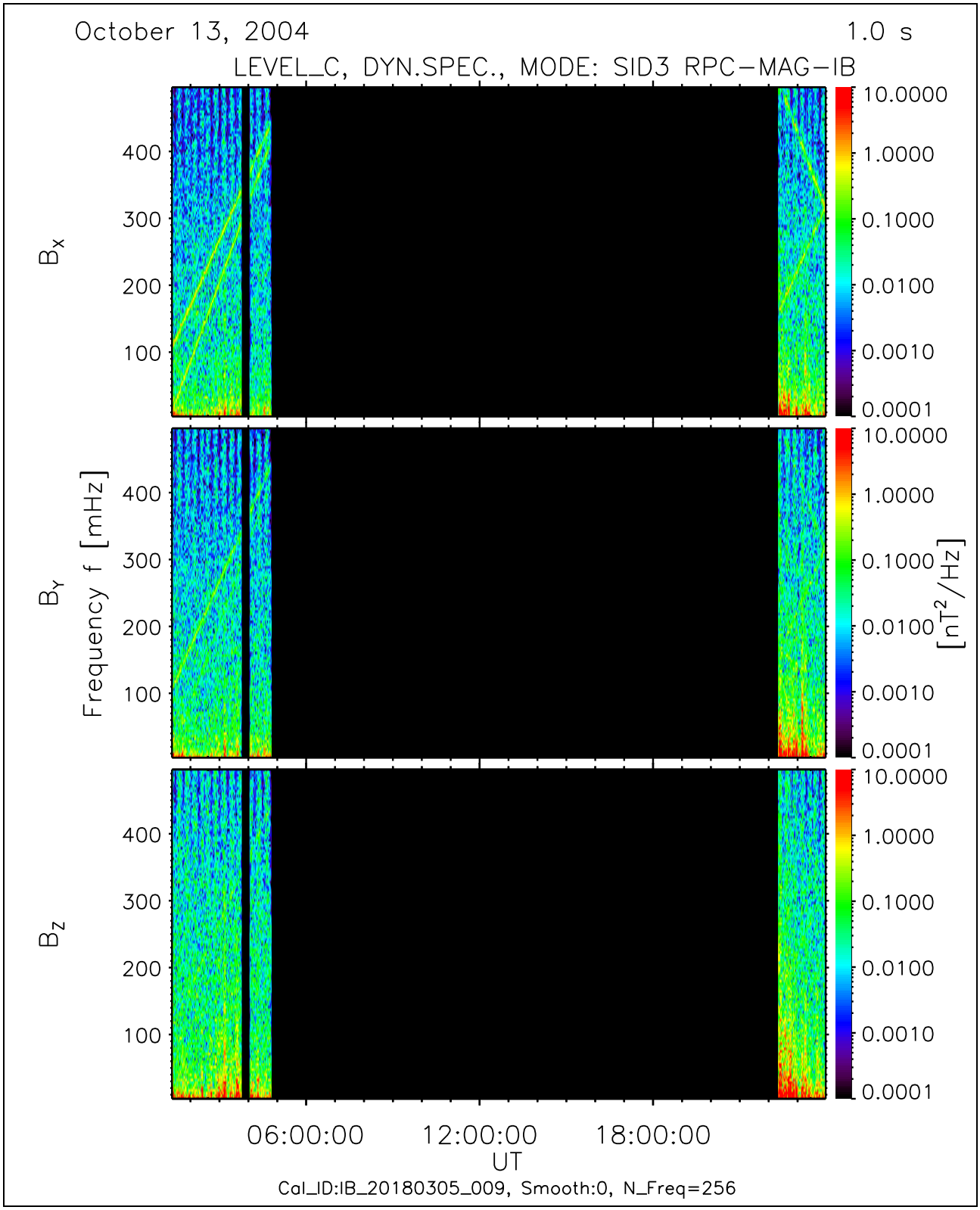

Figure 151: File: RPCMAG041013T0119_CLC_IB_M3_DS0_10000_009

9.3 Plots of ROSETTA's Reaction Wheels Speeds

The following plots show the time series of the revolutions of the 4 reaction wheels. Two kinds of data are shown:

- The original reaction wheel data as they are stored in the DDS.
- The theoretical response of the wheels impact seen by an instrument sampling with different frequencies. Here the response at 20 Hz and 1 Hz sampling frequency is plotted.

A comparison with the dynamic spectra of the MAG data gives an impressive accordance between the reaction wheel frequencies and the spectral lines observed in the dynamic MAG spectra.

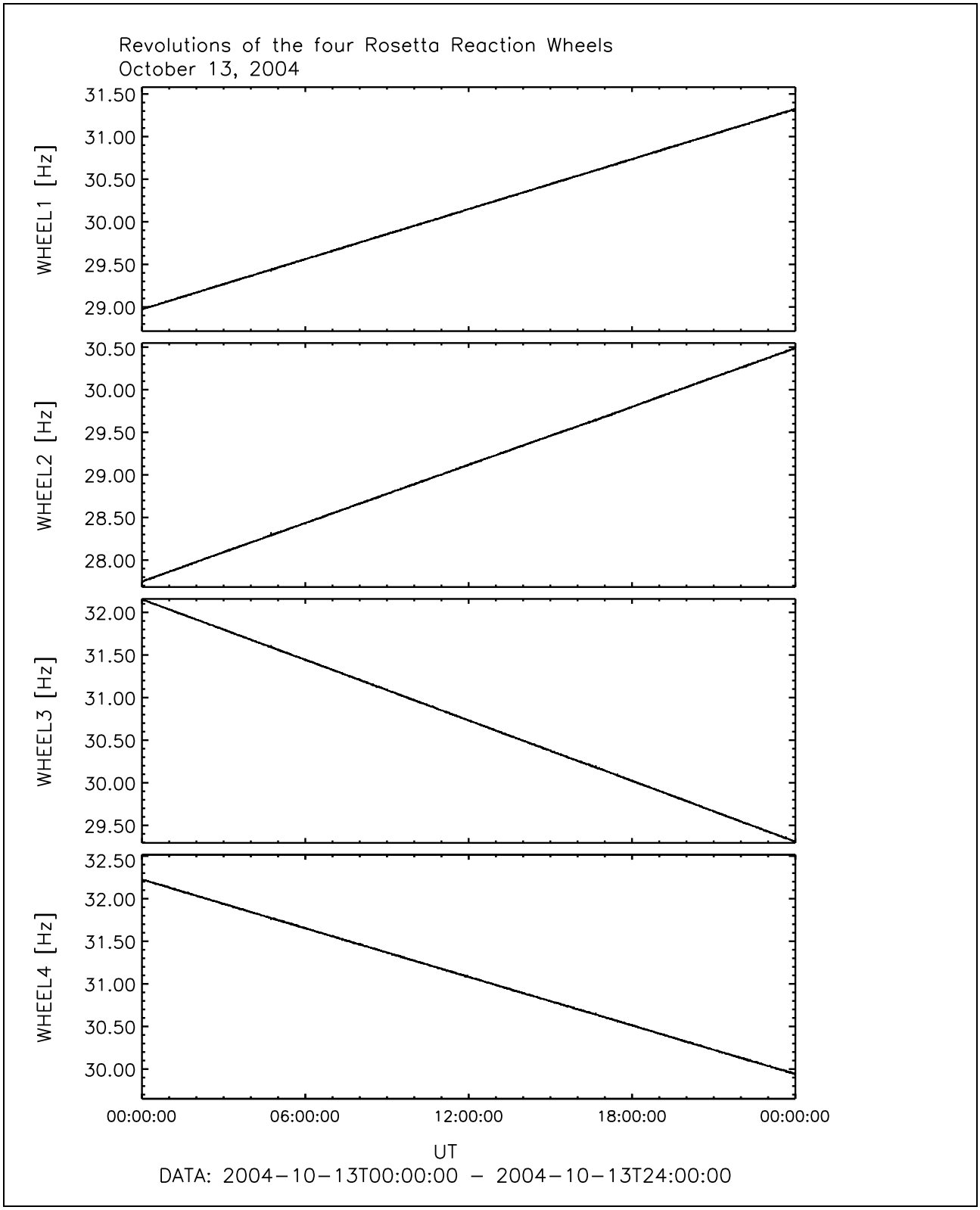

Figure 152: File: wheels_Hz2004-10-13T00-00

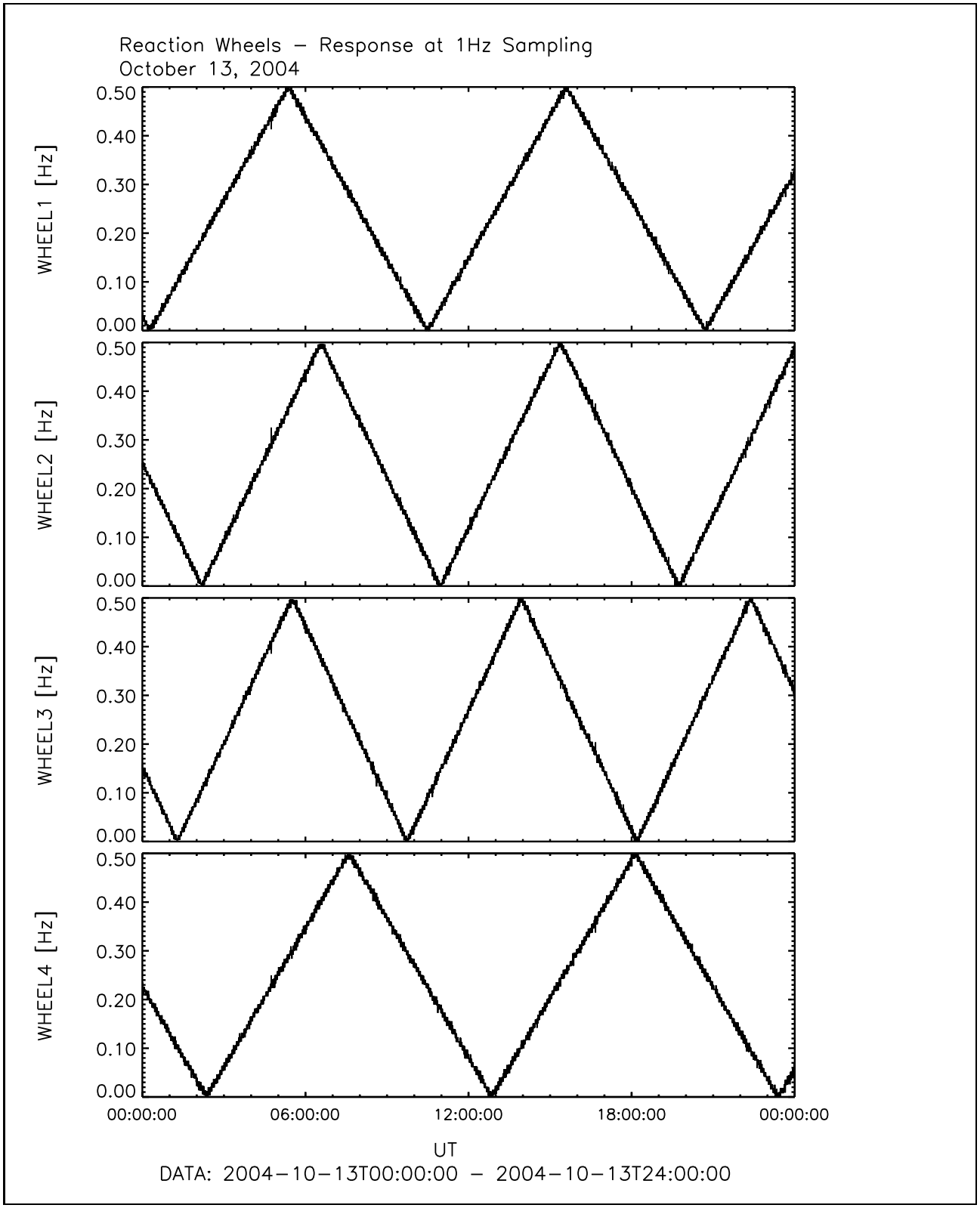

Figure 153: File: wheels_1Hz_Sampling2004-10-13T00-00

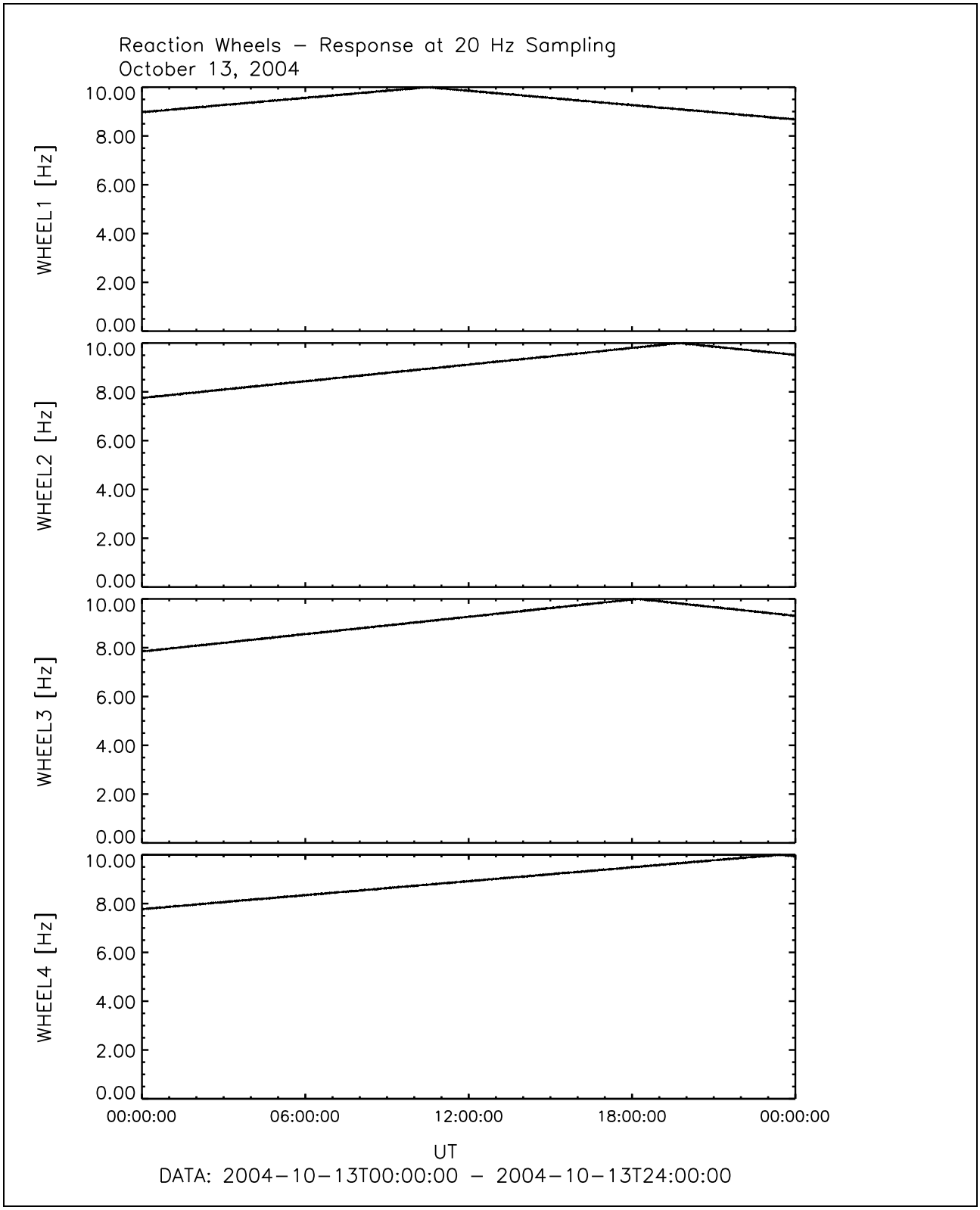

Figure 154: File: wheels_20Hz_Sampling2004-10-13T00-00

9.4 Plots of Reaction Wheel and LAP Disturbance corrected Data

The following plots show the dynamic spectra of the LEVEL_H data. These data have been purged from ROSETTAs reaction wheel disturbance and also from the disturbance of the LAP instrument. Plots are only shown for the primary sensor.

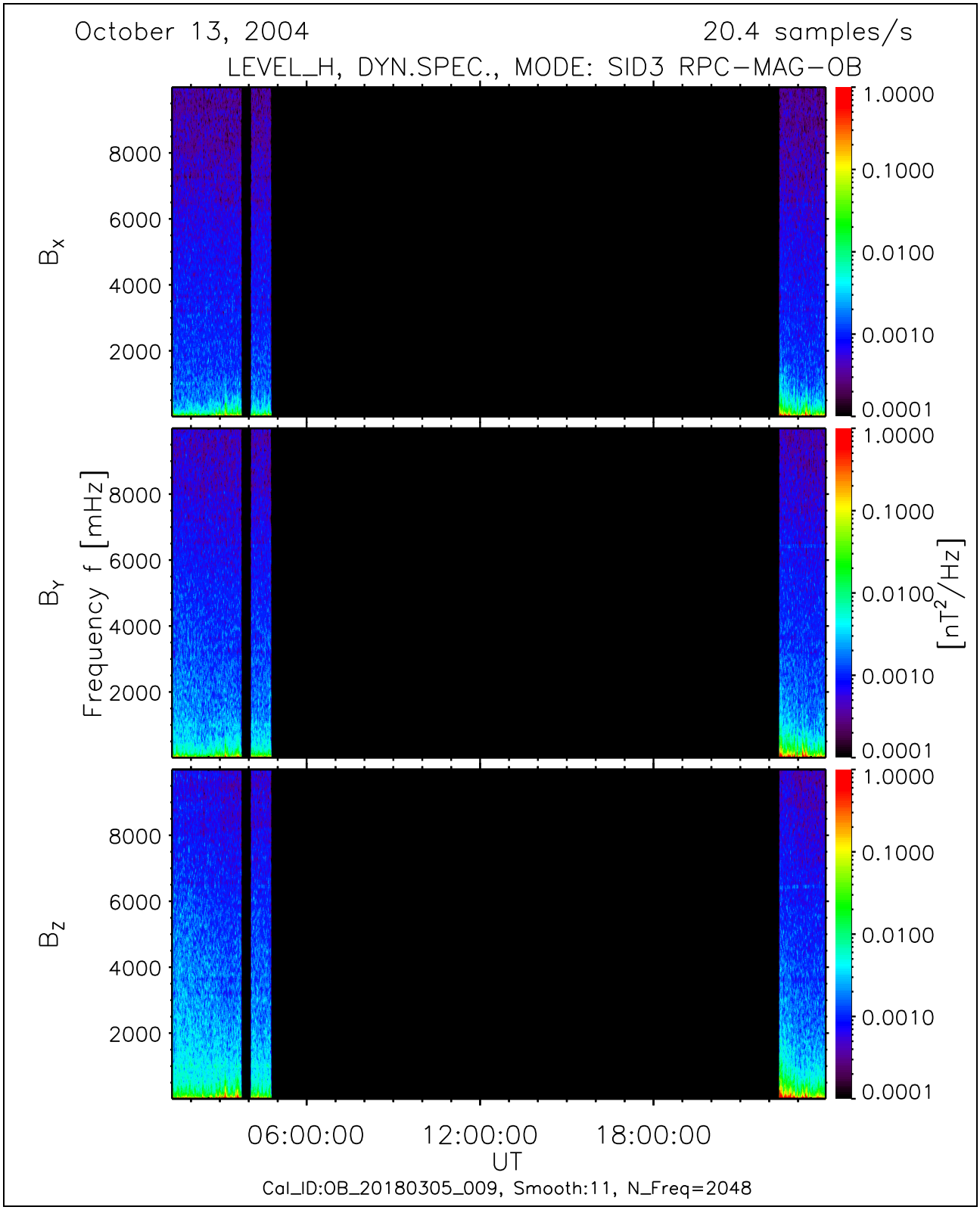

Figure 155: File: RPCMAG041013T0119_CLH_OB_M3_DS0_10000_009

10 October 14, 2004:

10.1 Actions

The Instrument was switched off at 01:47.

Time	Stage A, Stage B,Filter cfg	Stage 1, Stage 2, Stage3	Mode
00:00 – 01:46	0 0 0	0 0 0	SID3

10.2 Plots of Calibrated Data using the new Temperature Model

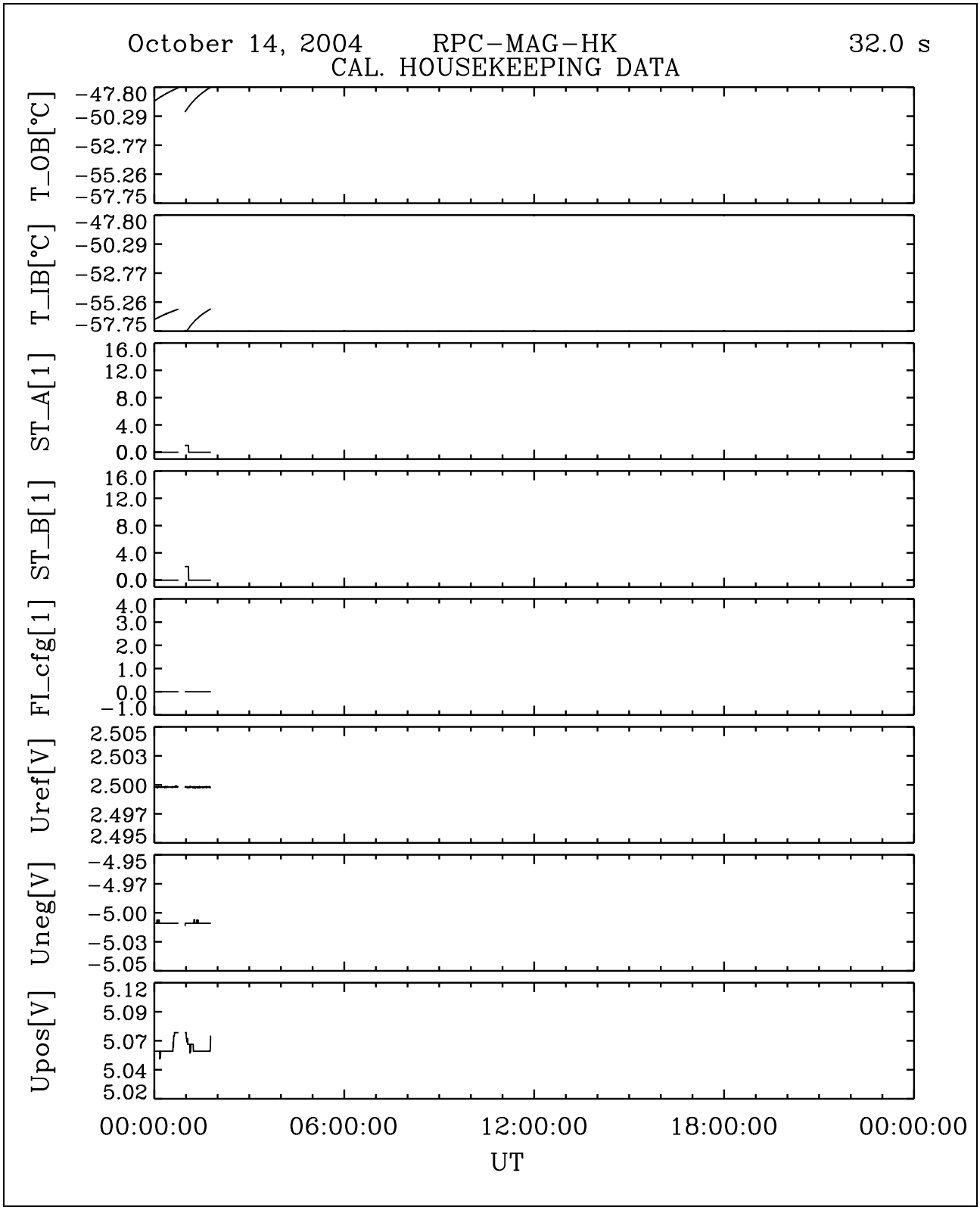

Figure 156: File: RPCMAG041014T0000_CLA_HK_P0000_2400

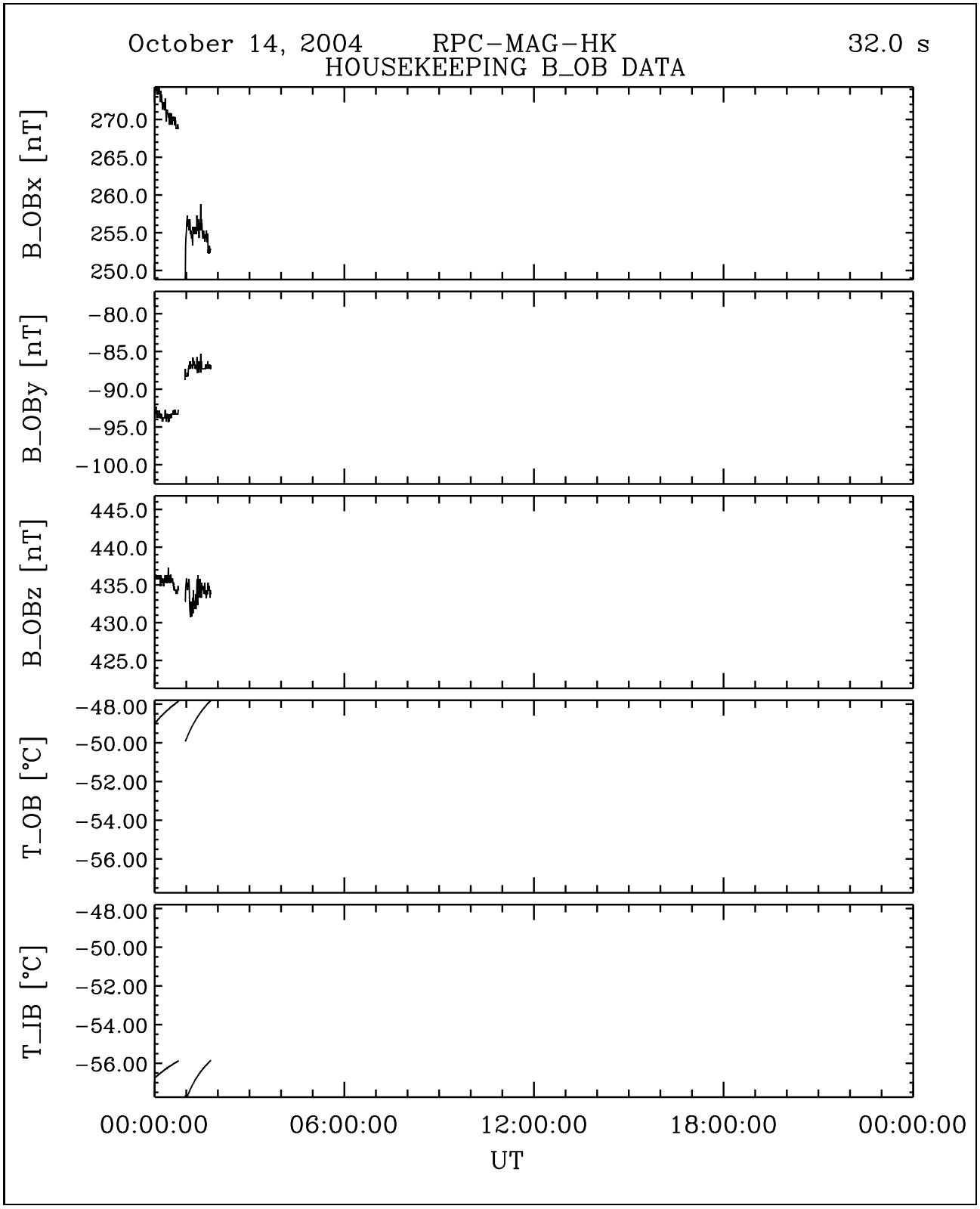

Figure 157: File: RPCMAG041014T0000_CLA_HK_B_P0000_2400

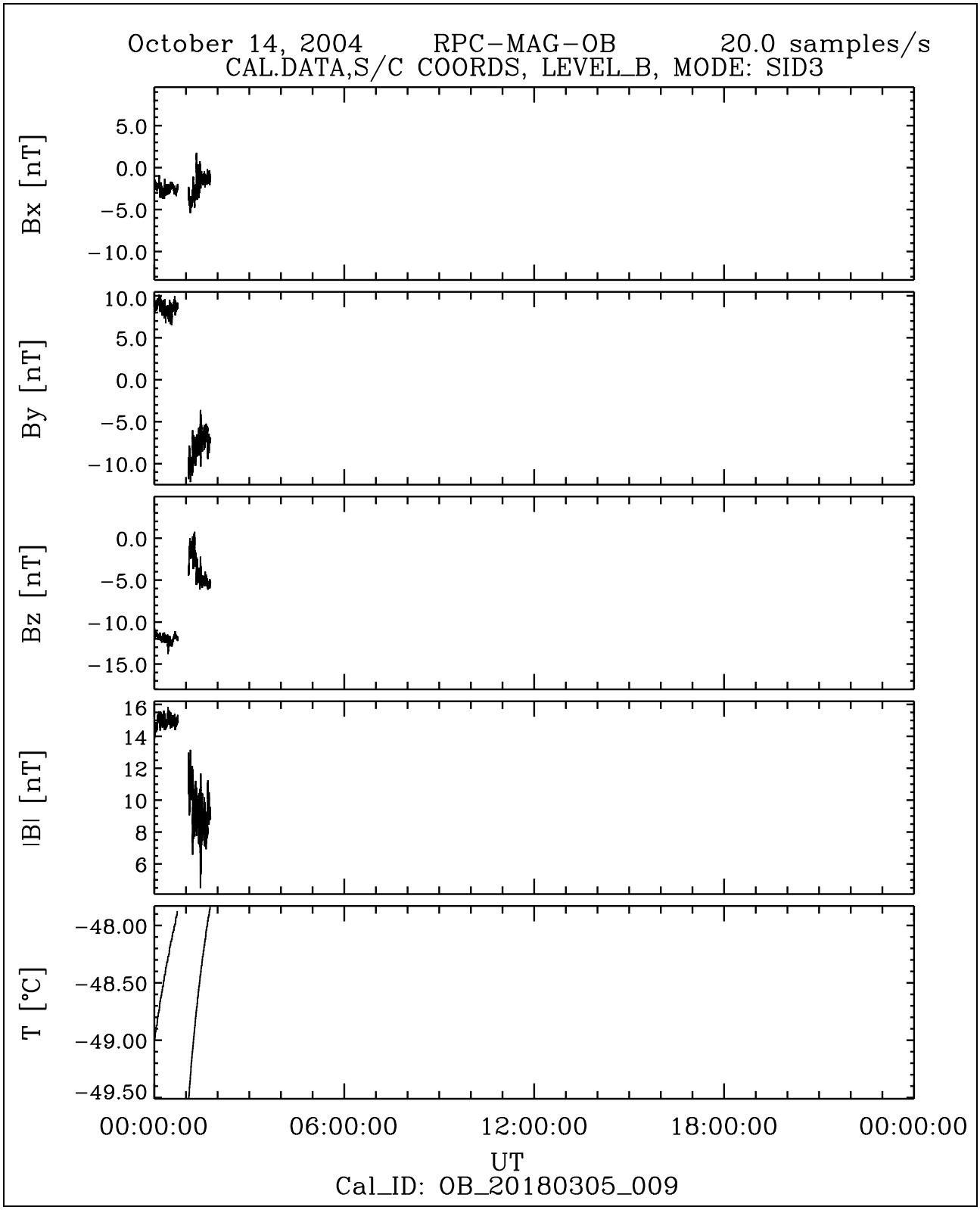

Figure 158: File: RPCMAG041014T0000_CLB_OB_M3_T0000_2400_009

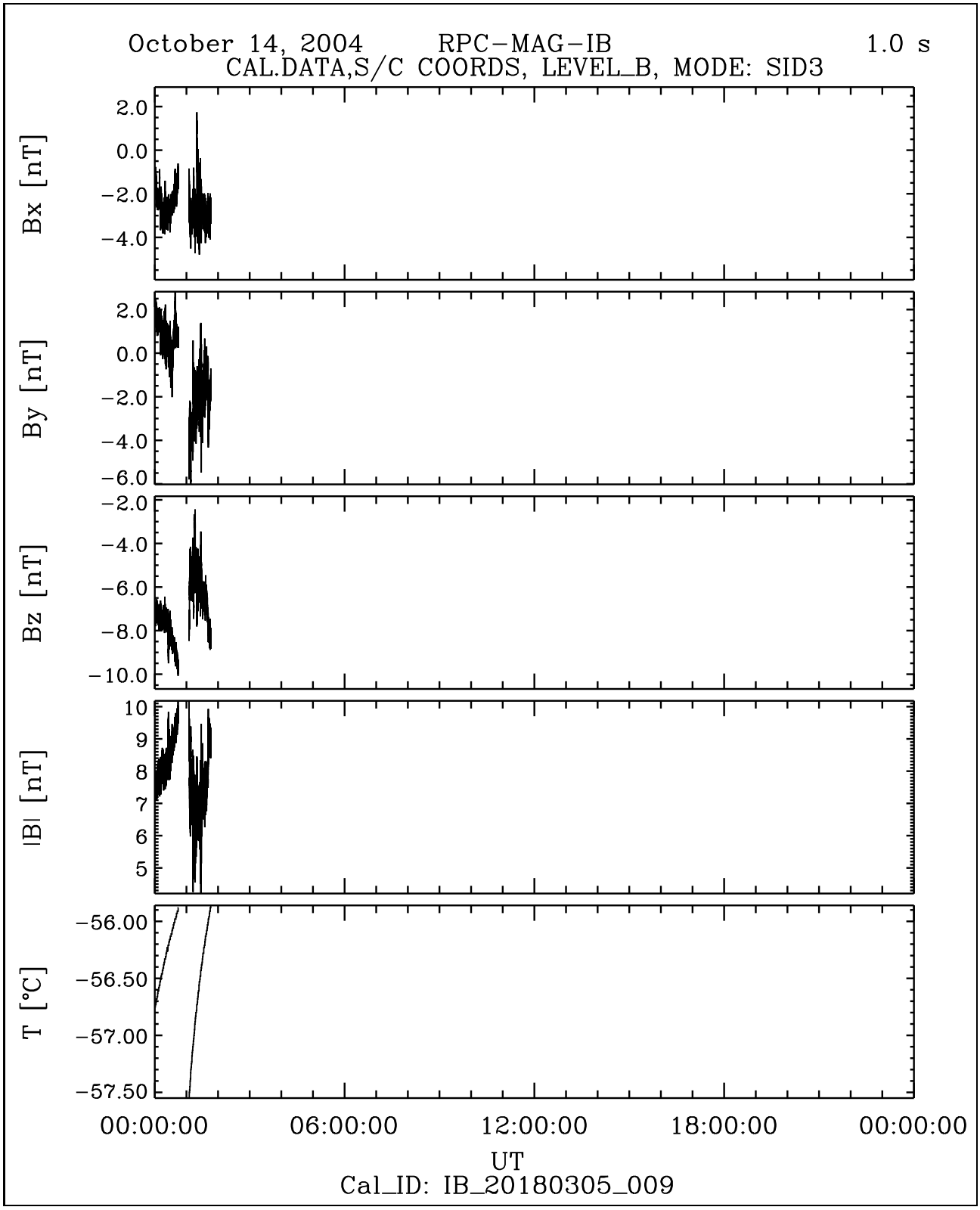

Figure 159: File: RPCMAG041014T0000_CLB_IB_M3_T0000_2400_009

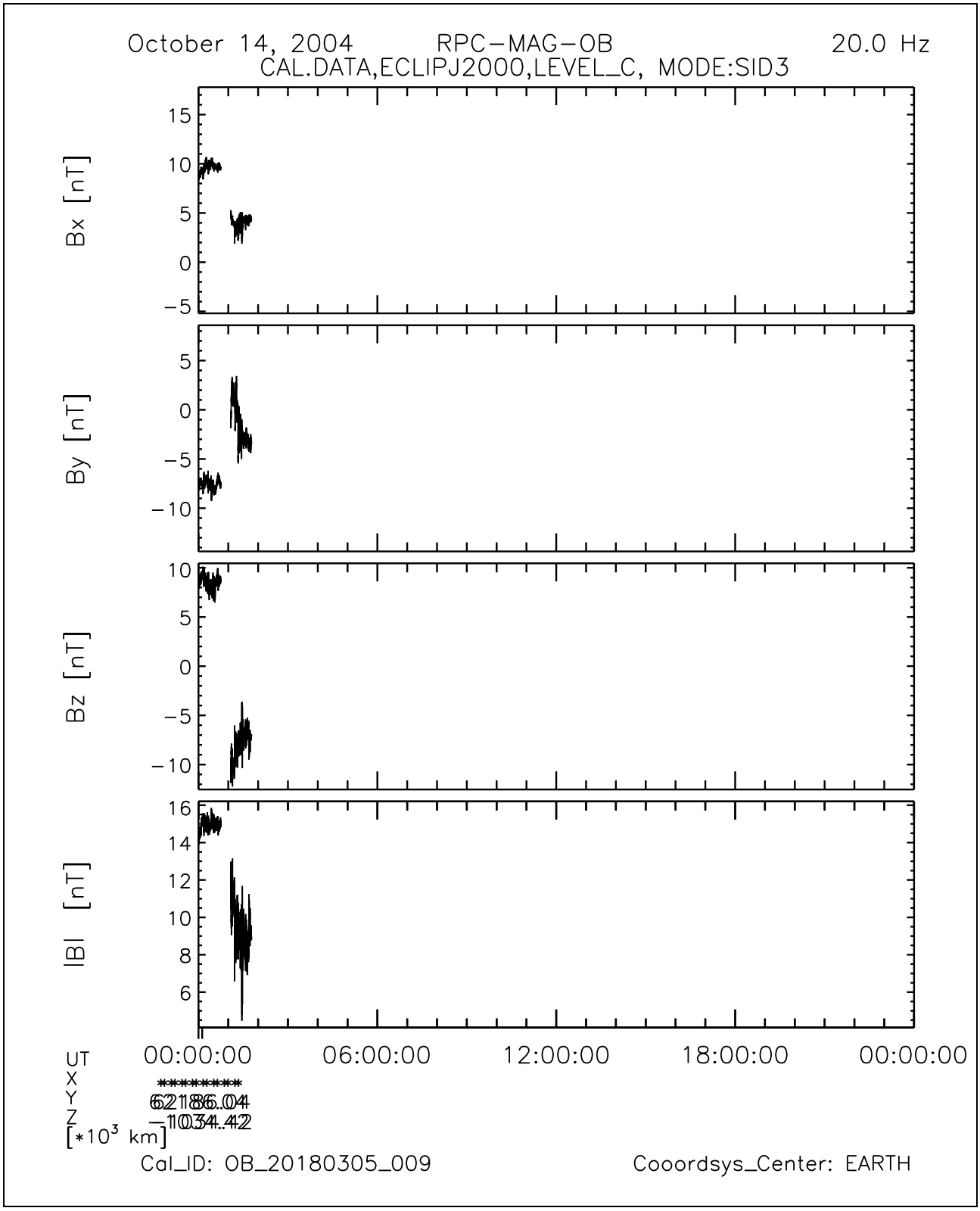

Figure 160: File: RPCMAG041014T0000_CLC_OB_M3_T0000_2400_009

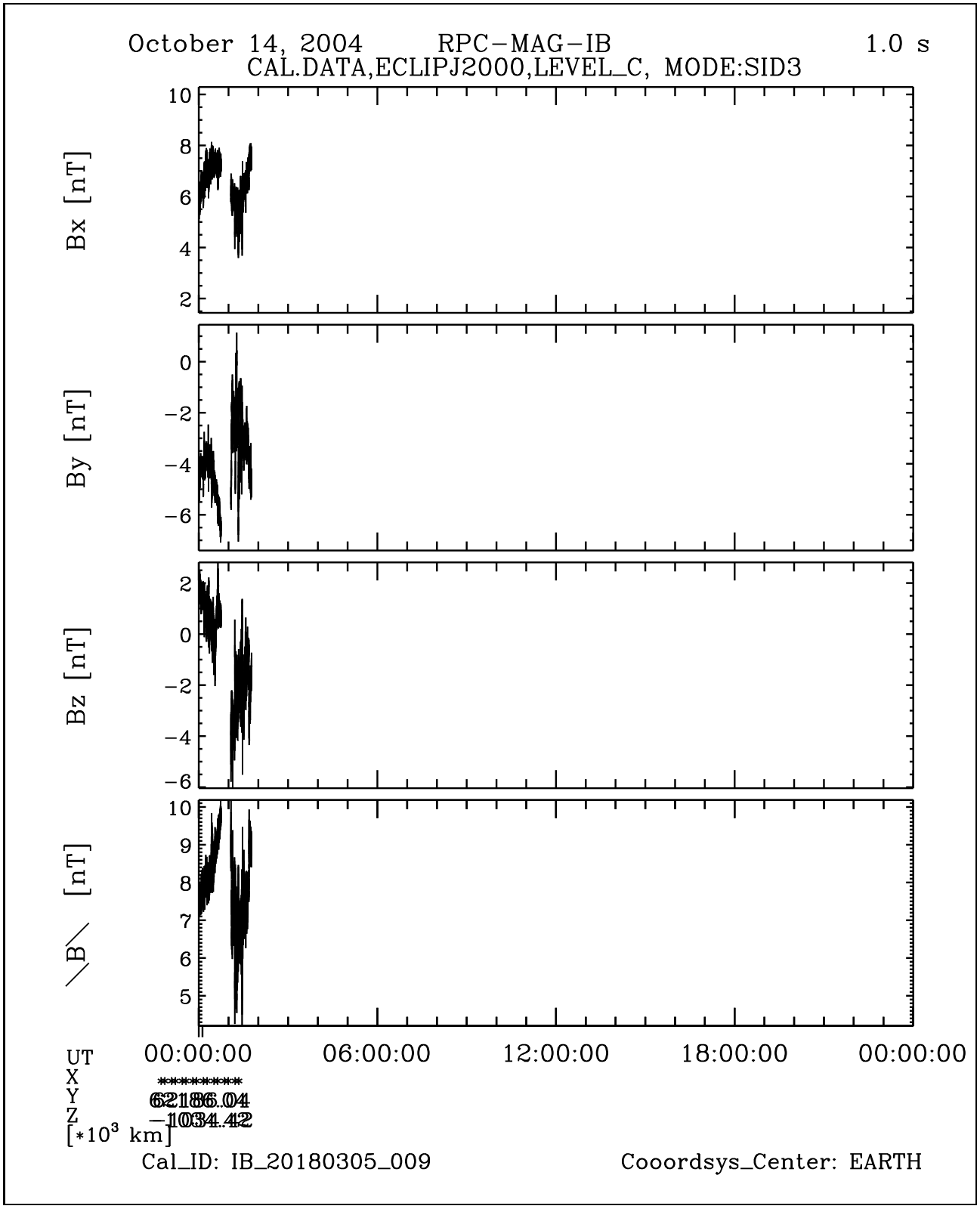

Figure 161: File: RPCMAG041014T0000_CLC_IB_M3_T0000_2400_009

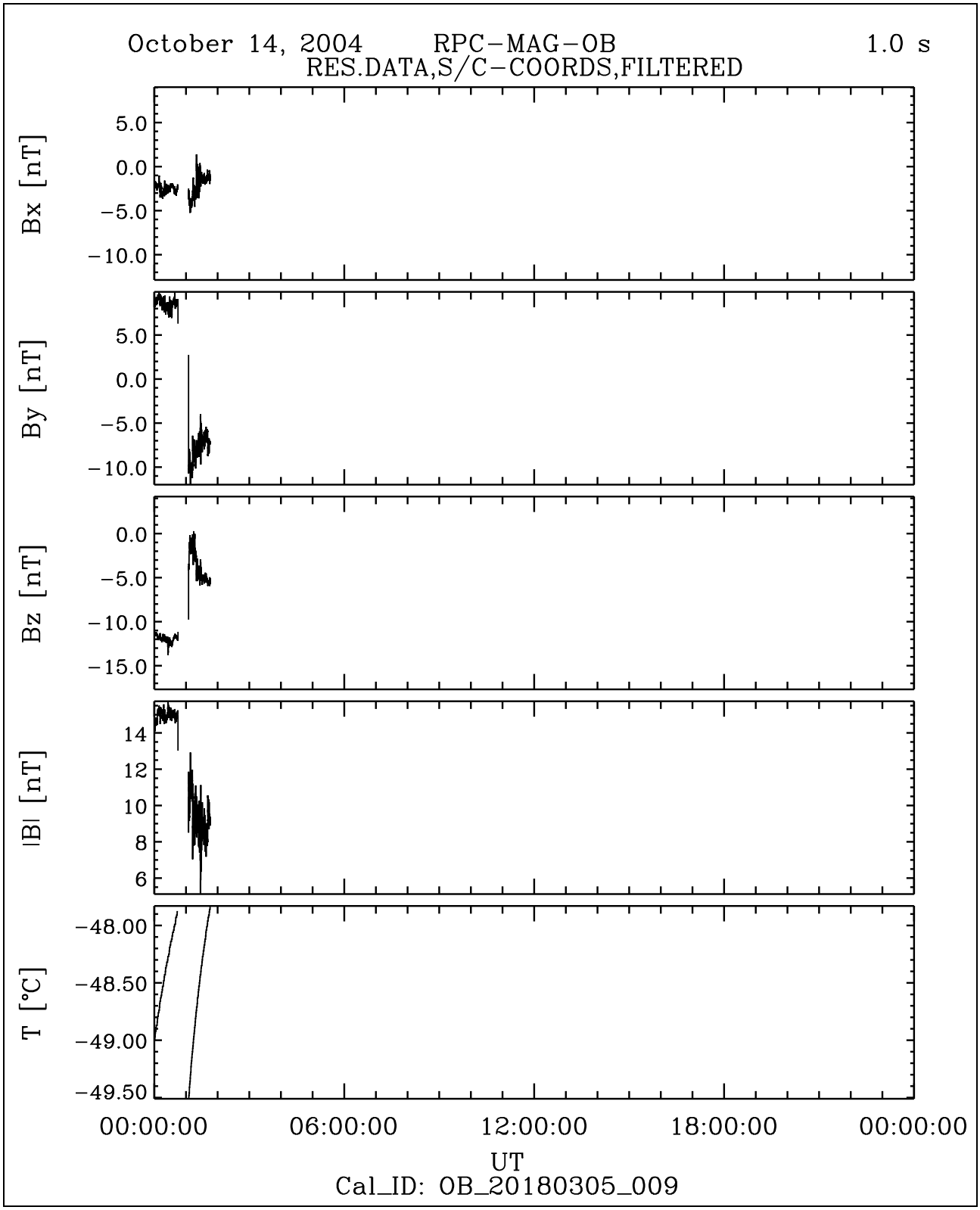

Figure 162: File: RPCMAG041014_CLF_OB_A1_T0000_2400_009

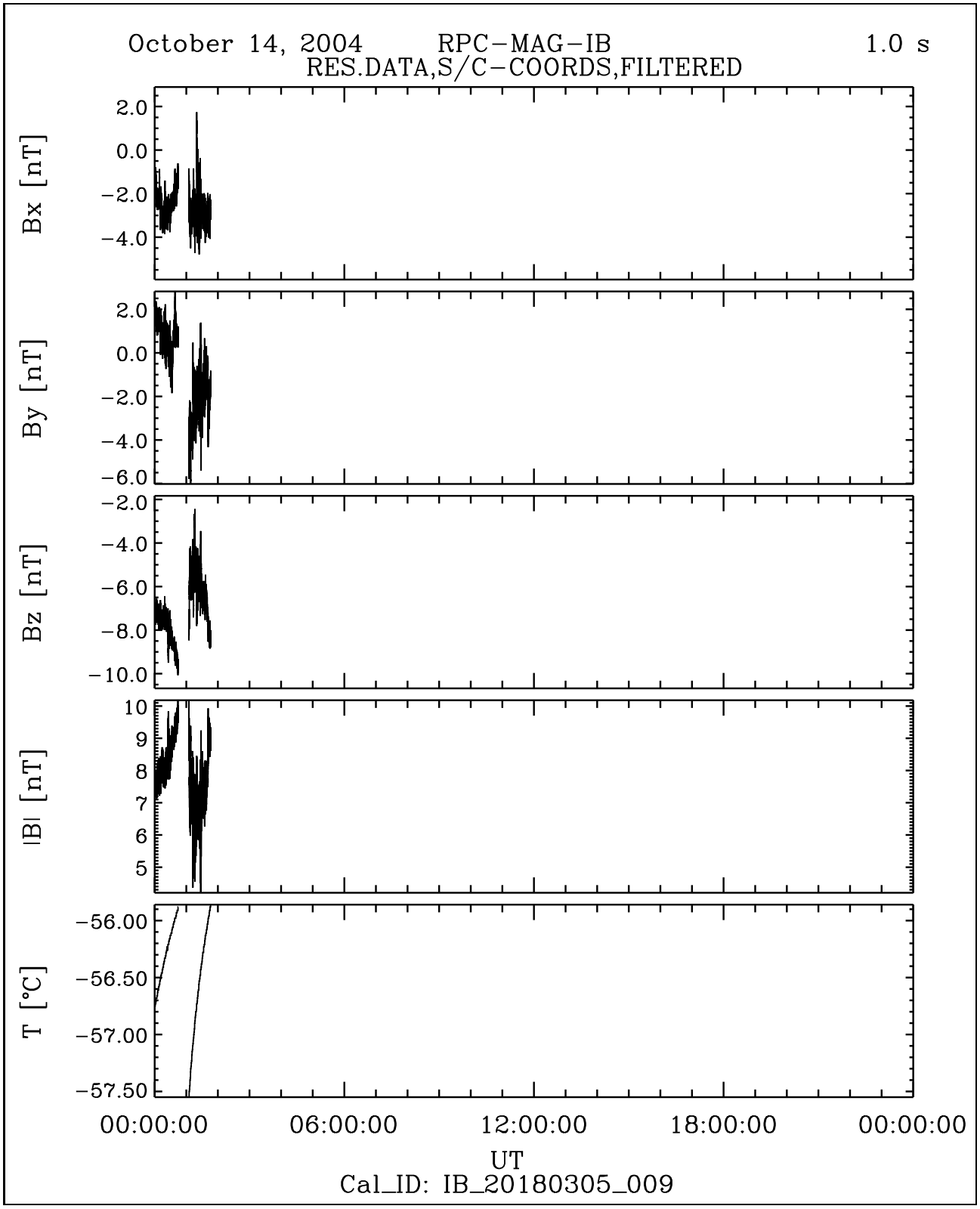

Figure 163: File: RPCMAG041014_CLF_IB_A1_T0000_2400_009

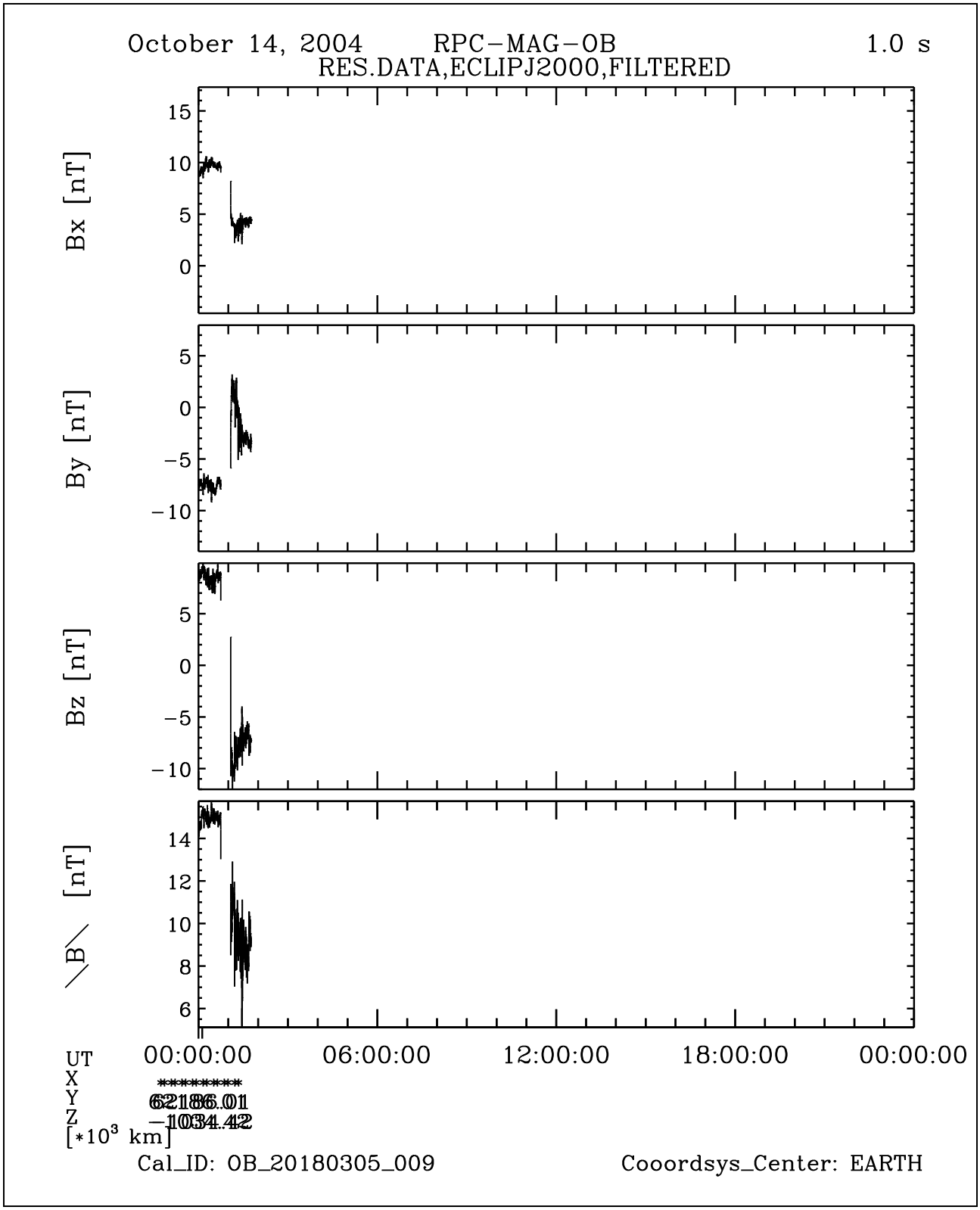

Figure 164: File: RPCMAG041014_CLG_OB_A1_T0000_2400_009

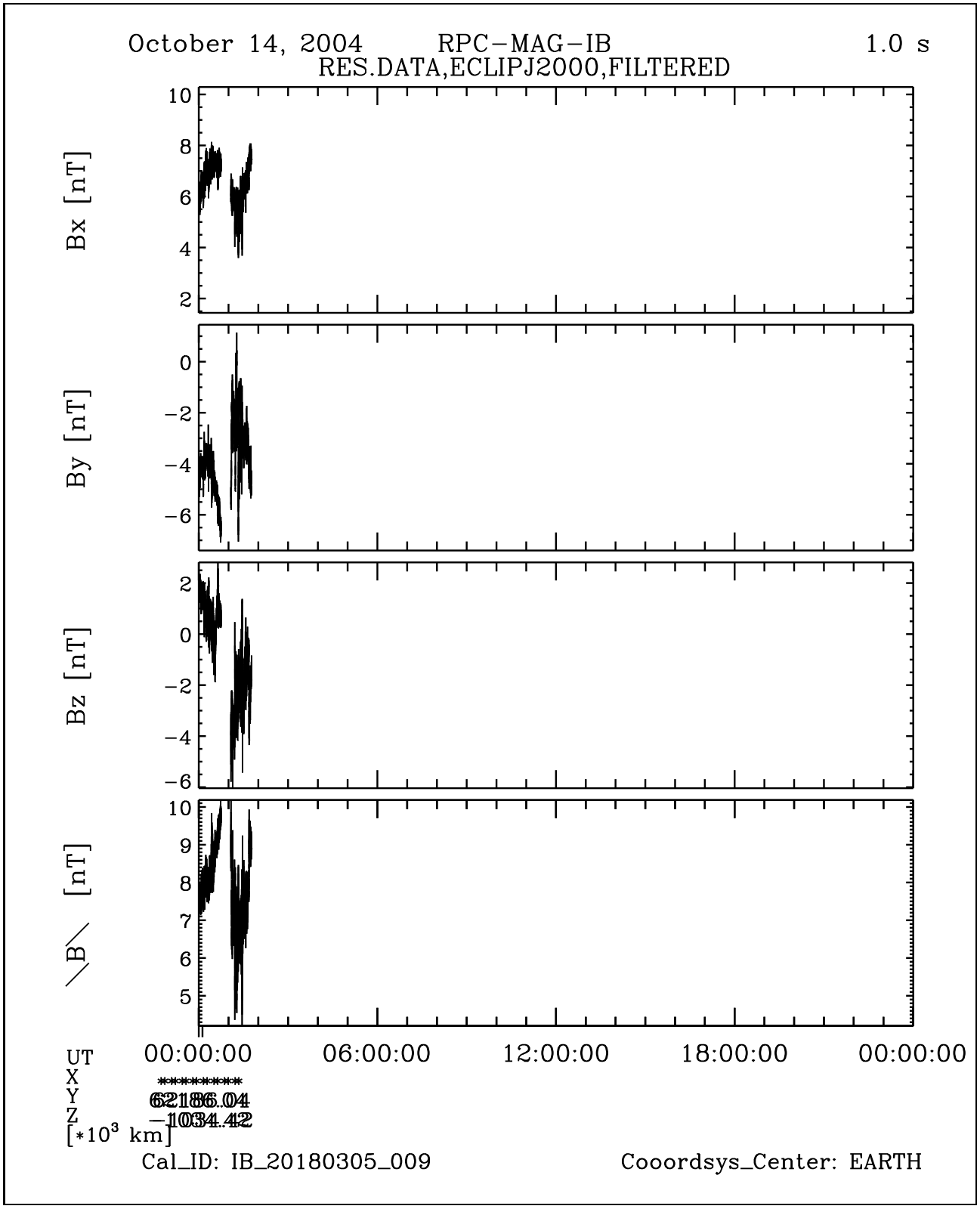

Figure 165: File: RPCMAG041014_CLG_IB_A1_T0000_2400_009

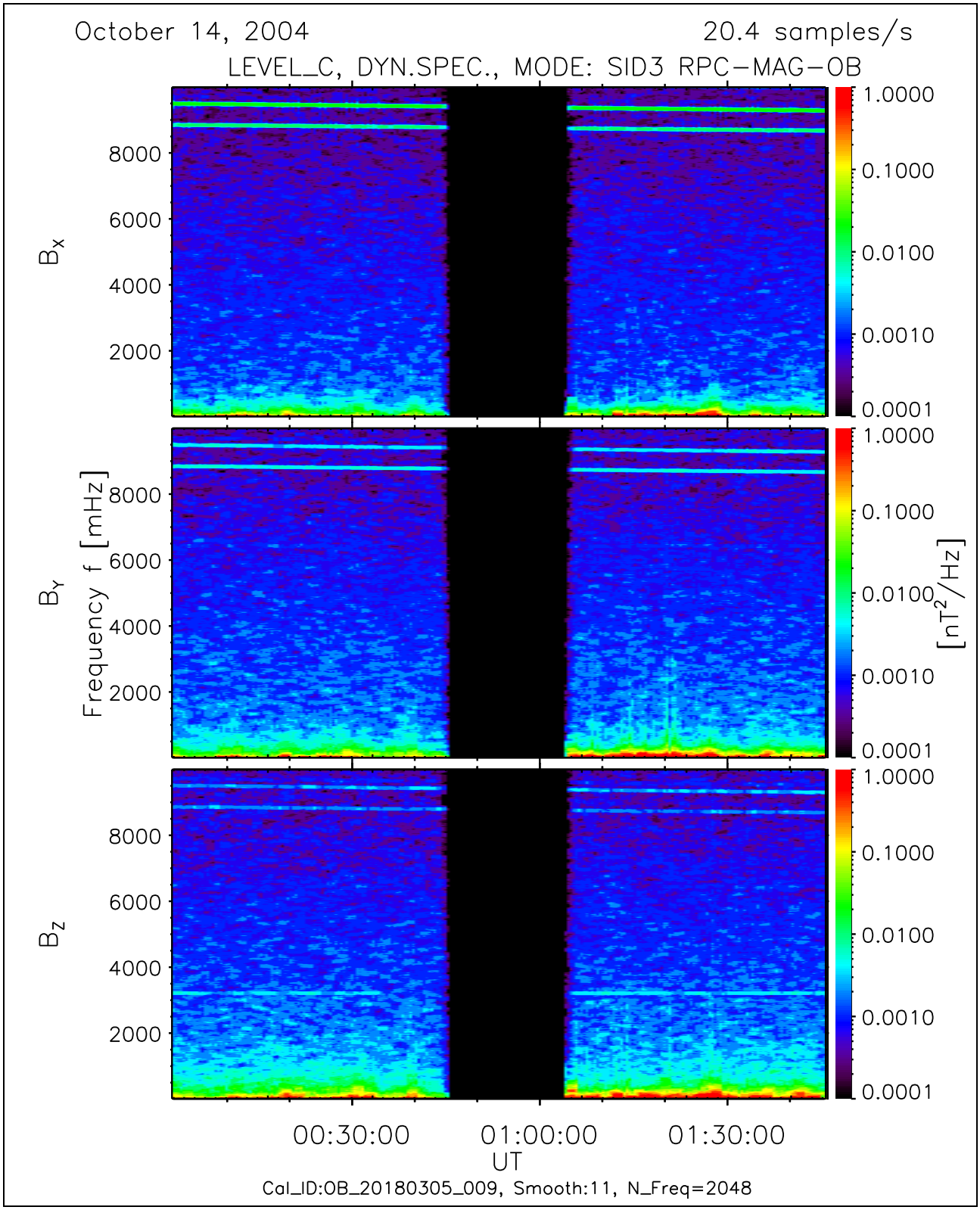

Figure 166: File: RPCMAG041014T0000_CLC_OB_M3_DS0_10000_009

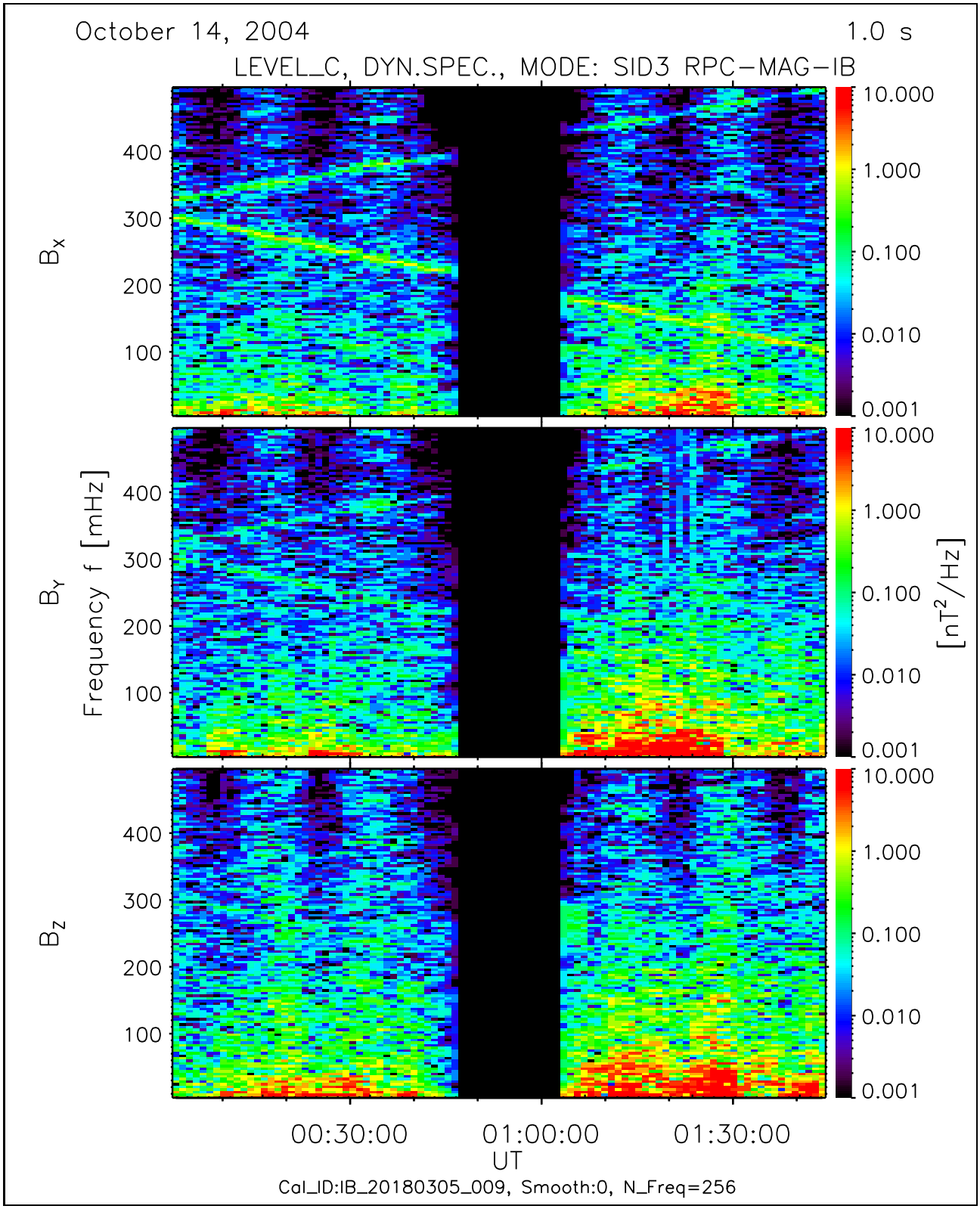

Figure 167: File: RPCMAG041014T0000_CLC_IB_M3_DS0_500_009

10.3 Plots of ROSETTA's Reaction Wheels Speeds

The following plots show the time series of the revolutions of the 4 reaction wheels. Two kinds of data are shown:

- The original reaction wheel data as they are stored in the DDS.
- The theoretical response of the wheels impact seen by an instrument sampling with different frequencies. Here the response at 20 Hz and 1 Hz sampling frequency is plotted.

A comparison with the dynamic spectra of the MAG data gives an impressive accordance between the reaction wheel frequencies and the spectral lines observed in the dynamic MAG spectra.

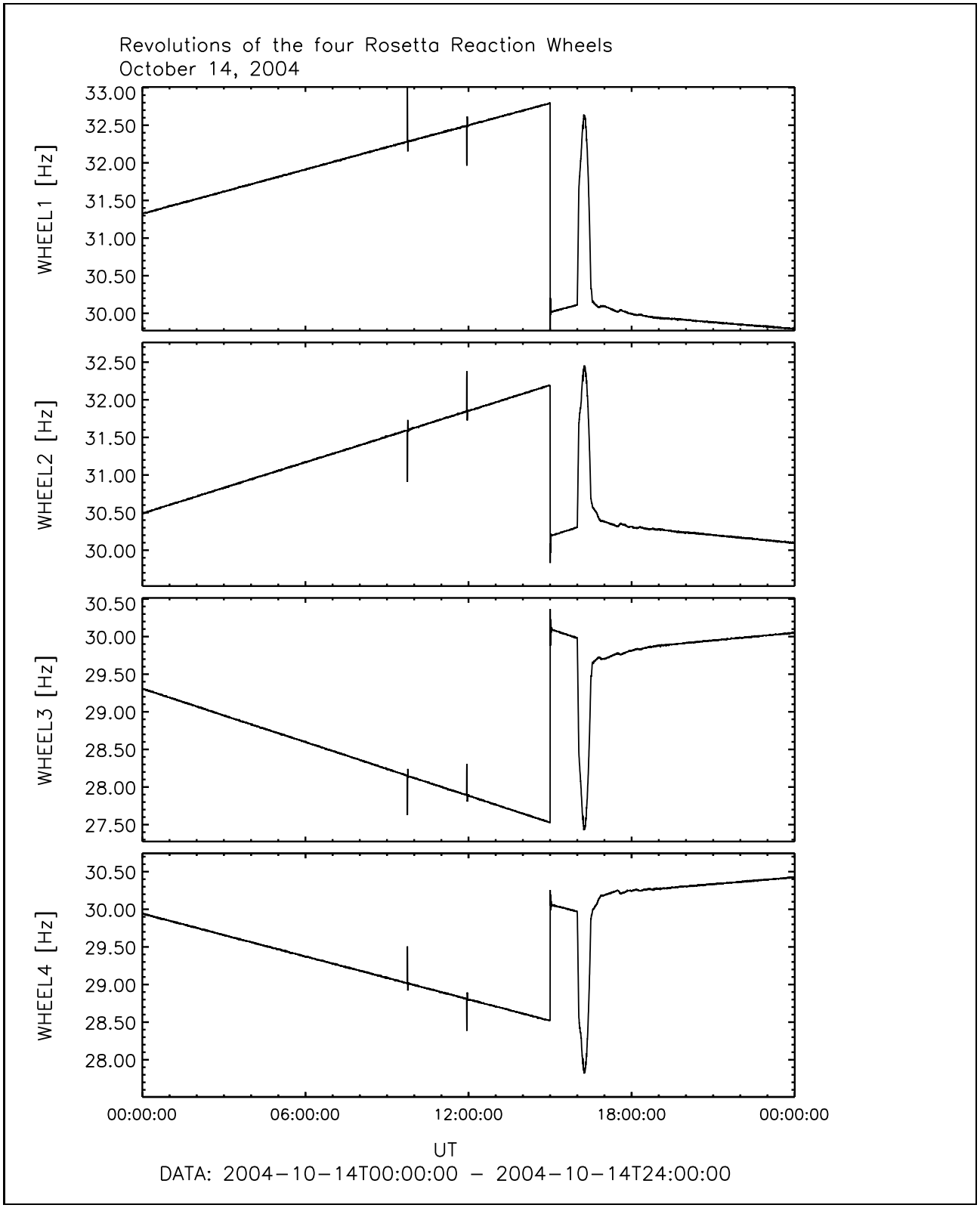

Figure 168: File: wheels_Hz2004-10-14T00-00

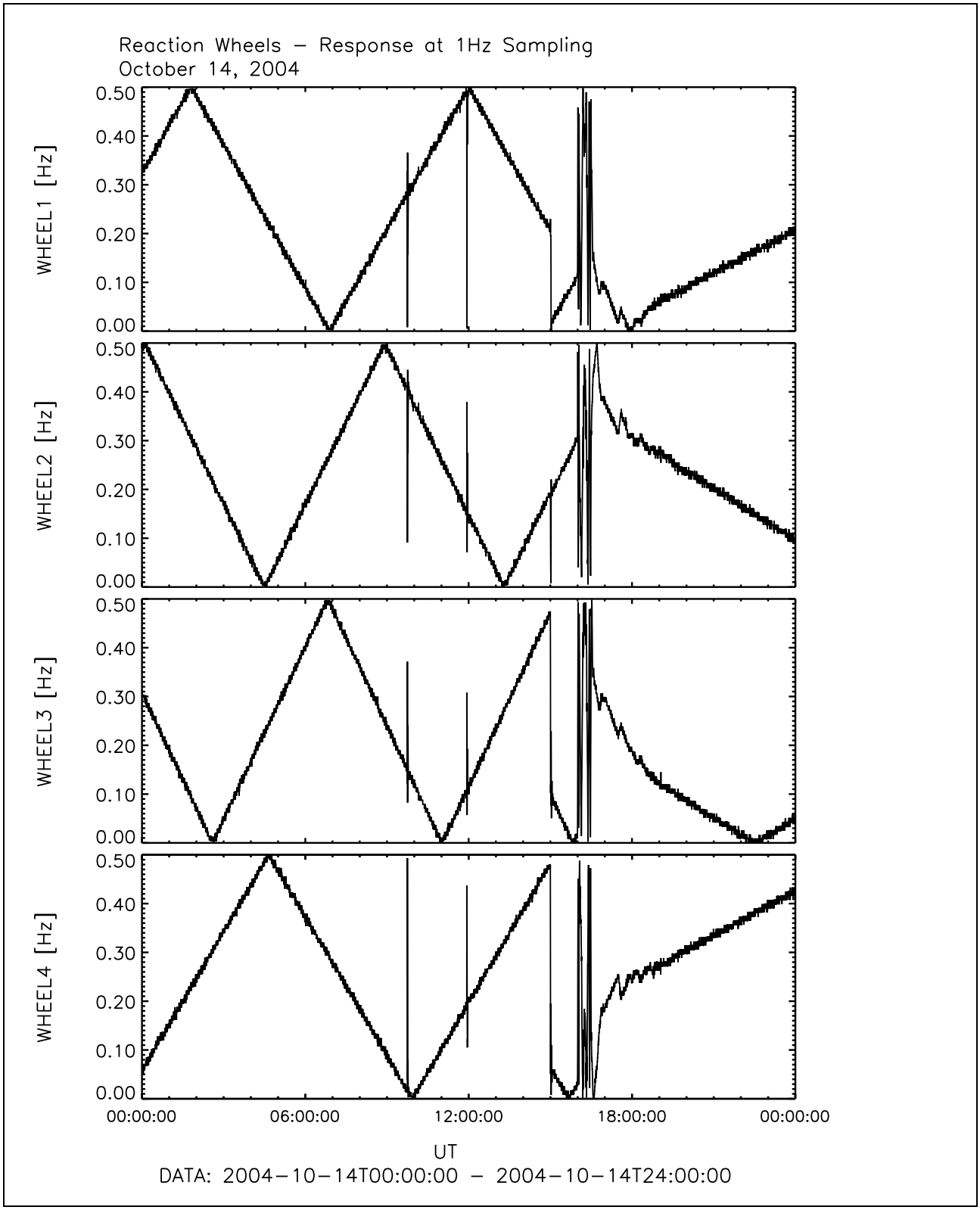

Figure 169: File: wheels_1Hz_Sampling2004-10-14T00-00

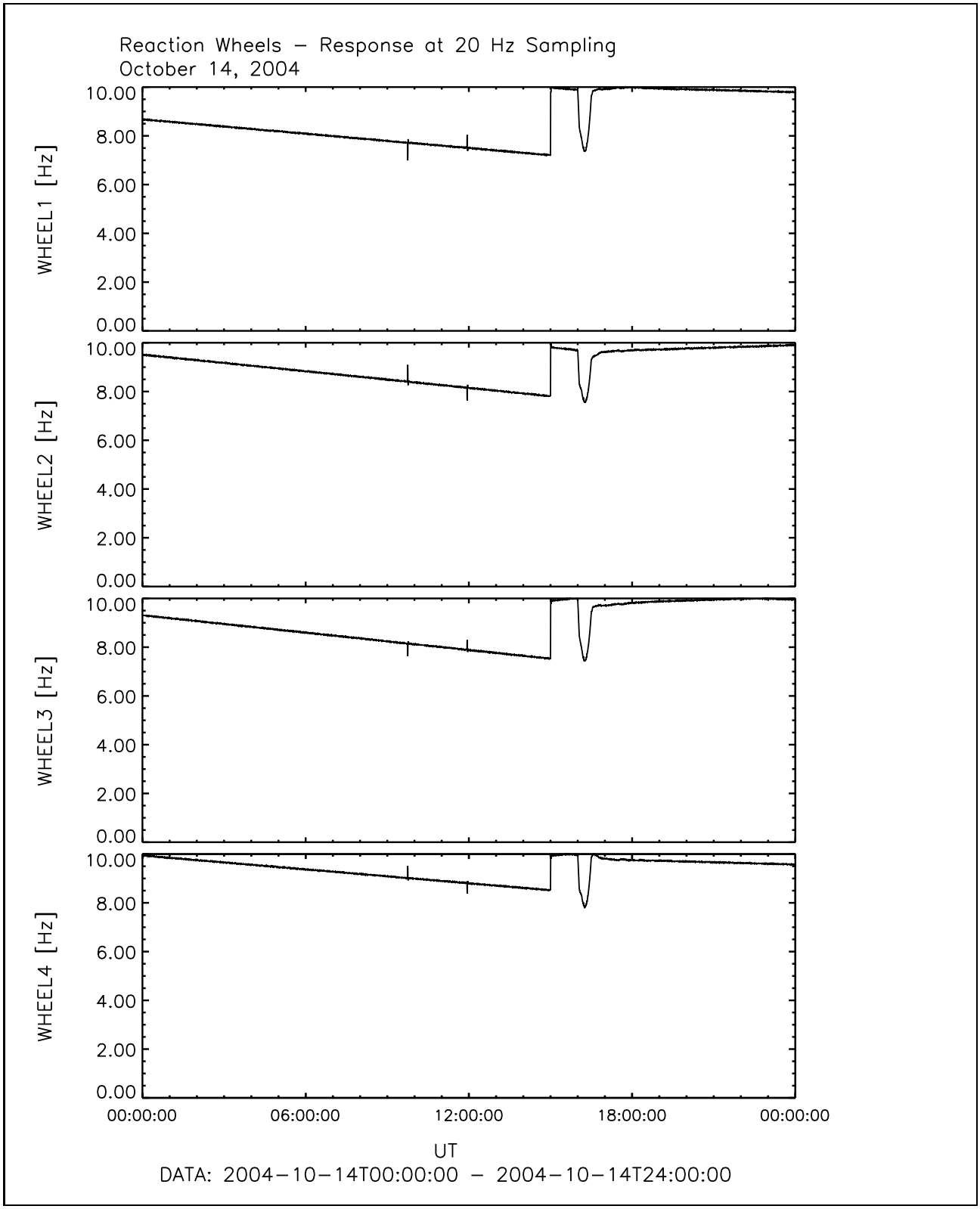

Figure 170: File: wheels_20Hz_Sampling2004-10-14T00-00

10.4 Plots of Reaction Wheel and LAP Disturbance corrected Data

The following plots show the dynamic spectra of the LEVEL_H data. These data have been purged from ROSETTAs reaction wheel disturbance and also from the disturbance of the LAP instrument. Plots are only shown for the primary sensor.

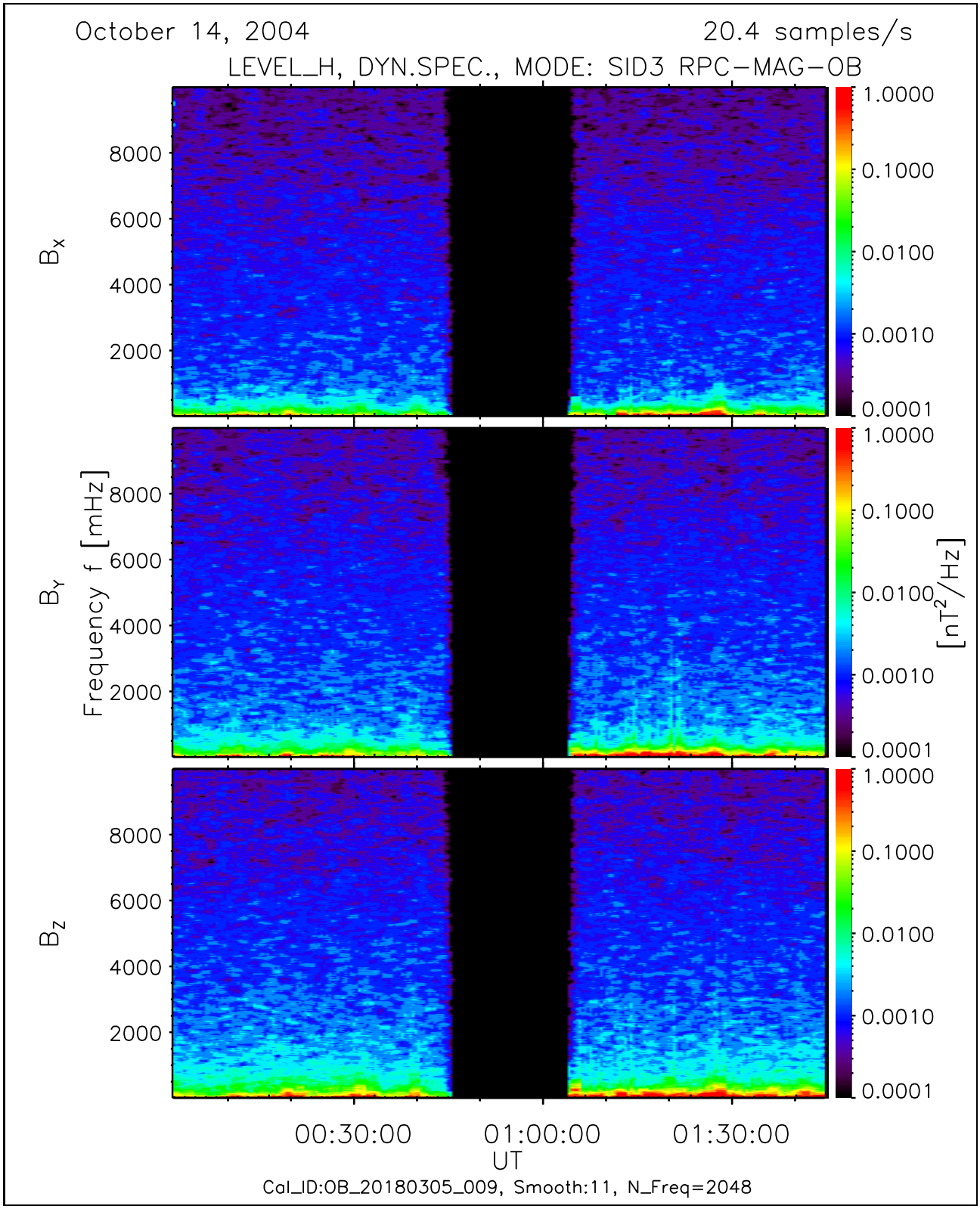

Figure 171: File: RPCMAG041014T0000_CLH_OB_M3_DS0_10000_009