

Recording Start Date
12/22/2008

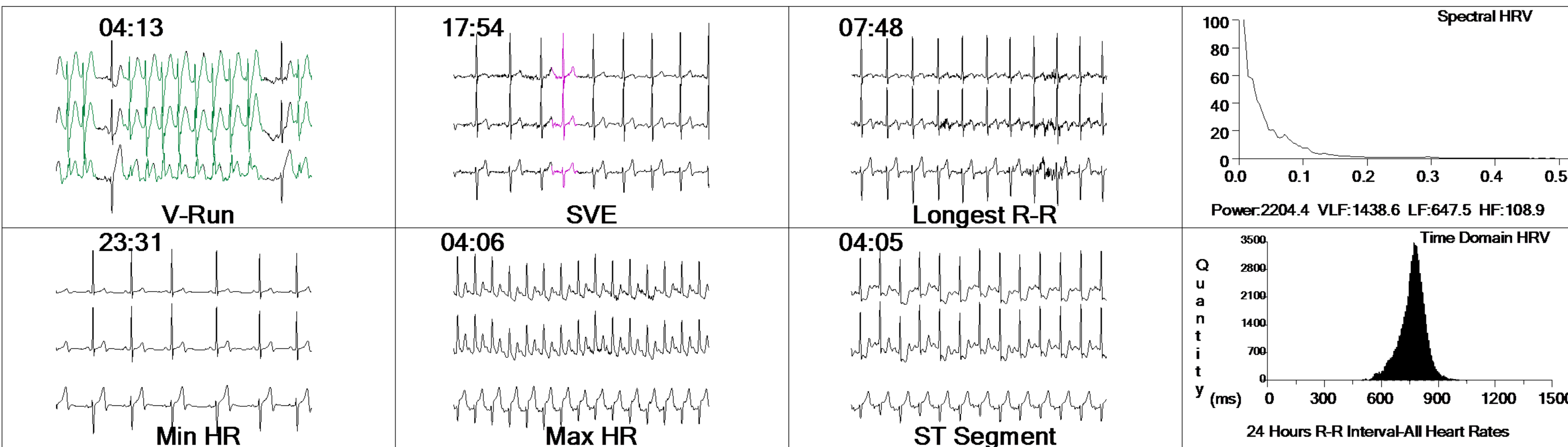
HOLTER ECG REPORT SUMMARY

Recording Start Time
17:04

| | |
|---|--|
| Patient Name: Frey Evan | ID#: 444-44-4444 |
| Address: SAMPLE HOLTER REPORT | Age: 40 year DOB: 9/12/1965 Sex: Male |
| Pacemaker: None | Weight: 220 lb Height: 78 in |
| Supervising Physician: Thomas Jones MD | Referring Physician or Facility: Mark Smith MD |
| Indications: Chest Pain | |
| Medications: | |

| HEART RATE | VENTRICULAR ECTOPY | HEART RATE VARIABILITY |
|--|------------------------------------|--------------------------------------|
| Minimum HR-4 Intervals: 52 bpm at 23:31 | VE Total: 83 | SDNN-24 Hour: 80 |
| Maximum HR-4 Intervals: 128 bpm at 4:06 | V-Pair Total: 17 | SDANN Index: 61 |
| Average HR-24 Hours: 77 bpm | V-Run Total: 12 | SDNN Index: 46 |
| Minimum HR-Hourly: 68 bpm at 23:00 | Longest V-Run: 8 beats at 04:13 | rMSSD: 21 |
| Maximum HR-Hourly: 91 bpm at 4:00 | Maximum HR V-Run: 160 bpm at 04:19 | pNN50: 2 |
| Analyzed Beats: 68592 | Minimum HR V-Run: 118 bpm at 04:19 | Spectral Power-24 Hour: 2204.4 |
| Analyzed Minutes: 889 | VE's per 1000/per Hour: 2/6 | Min Spectral Power Hour: 794.8 |
| ECG Monitoring Period: 14 hours 49 minute | Ventricular R on T: N/A | Max Spectral Power Hour: 3913.6 |
| ST SEGMENT ANALYSIS | SUPRAVENTRICULAR ECTOPY | PAUSES |
| Total ST Minutes CH1: 22 | SVE Total: 7 | Pauses in Excess of 2.5 sec: 0 |
| Total ST Minutes CH2: 10 | SVE Pair Total: 0 | Max Pause: N/A |
| Total ST Minutes CH3: 0 | SV-Run Total: 0 | QT |
| Max Abs. ST Depression: -3.7 at 04:05@CH 1 | Longest SV-Run: N/A | Max QT: 455 ms (Ch. 2) |
| Max Abs. ST Elevation: +0.7 at 04:08@CH 2 | Maximum HR SV-Run: N/A | Max QTc: 467 ms |
| Max ST Episode: 6 Minutes at 4:01 | SVE's per 1000/per hour: 1/1 | Time of Max QT: at 17:06. HR 88 bpm. |
| Max HR In ST Episode: 126 | Total Aberrant Beats/Runs: 0/0 | BBB: N/A |
| | Atrial Fib/Flutter: 0.0% | |

SIGNIFICANT ECG EVENTS



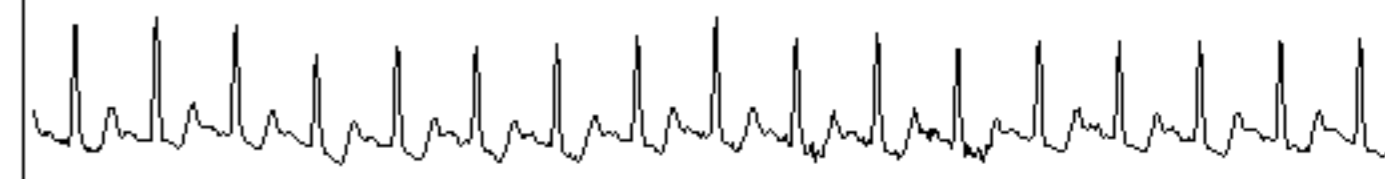
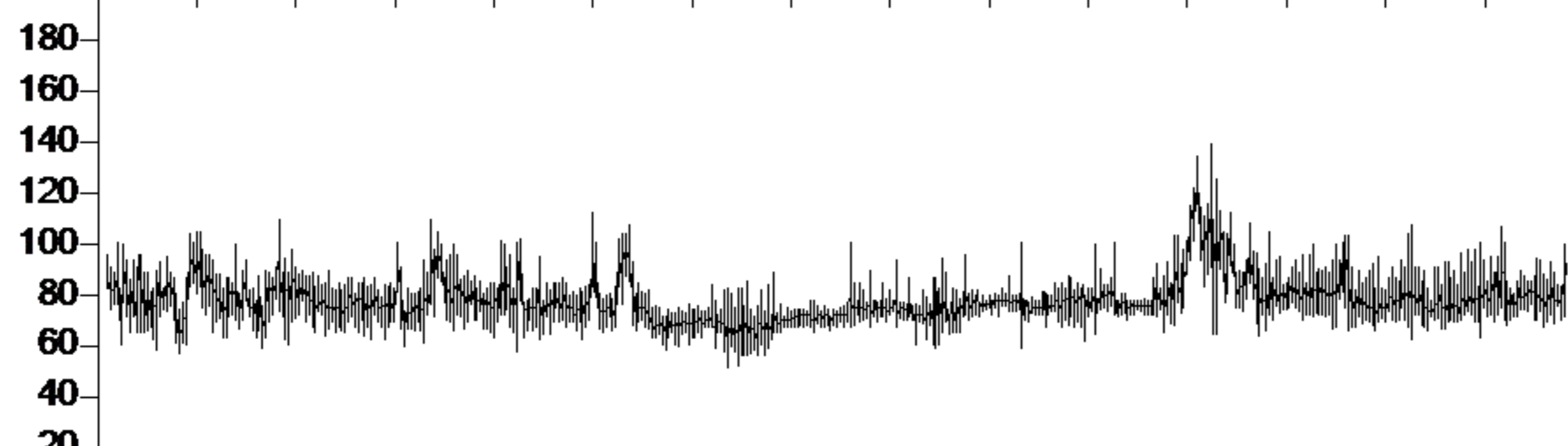
CONCLUSIONS

The average heart rate was 77. The minimum heart rate was 52 at 23:31. The maximum heart rate was 128 at 04:06. Pauses greater than 2.5 seconds were 0. Ventricular ectopy was 83, with 12 V-Runs and 17 V-Pairs, Ventricular Bigeminy events were 0 and Ventricular Trigeminy events were 1. Supraventricular ectopy was 7, with 0 SV-Runs, Supraventricular Bigeminy events were 0 and Supraventricular Trigeminy events were 0. Total A-Fib(Flu) were 0 Minute 0 Seconds. ST episode minutes totaled 24. The maximum Absolute ST change was -3.7 and occurred at 04:05. The patient pressed the symptom event button 1 times on the Holter recorder.

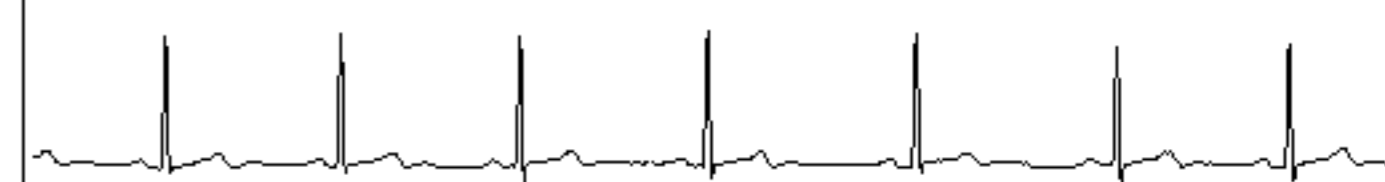
Physician Signature: _____

17 18 19 20 21 22 23 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

Heart Rate
(Max/Avg/Min)



Maximum Heart Rate 128



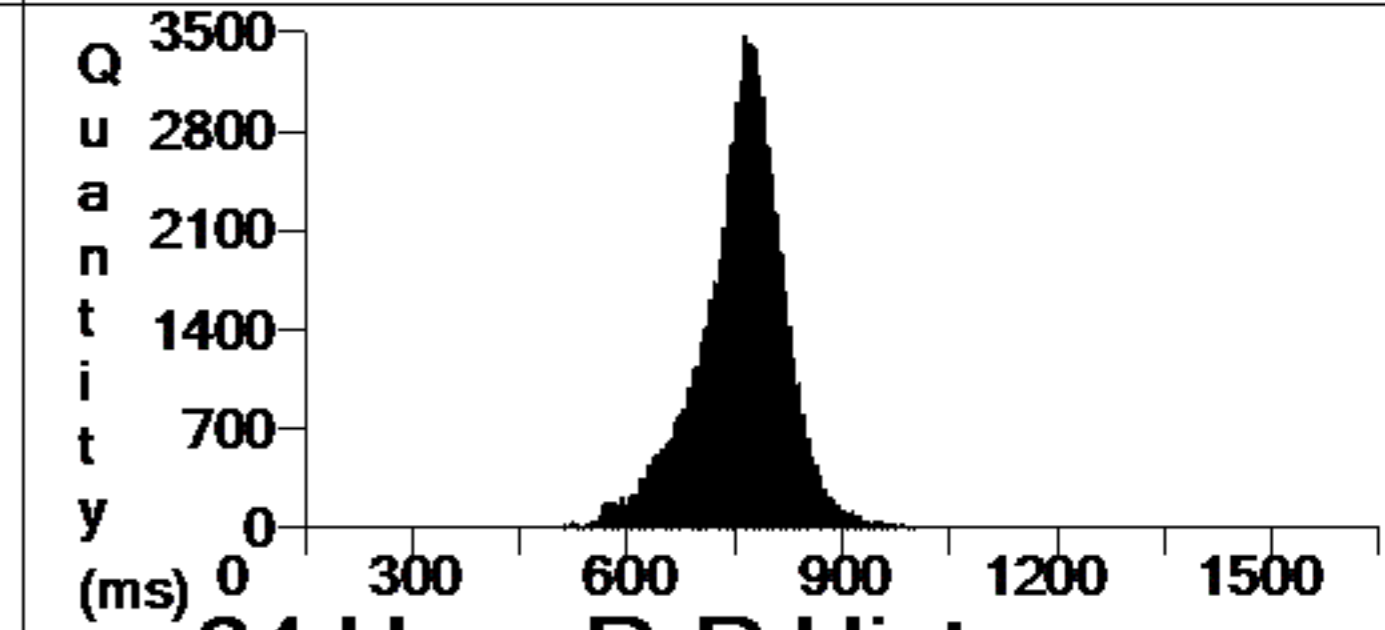
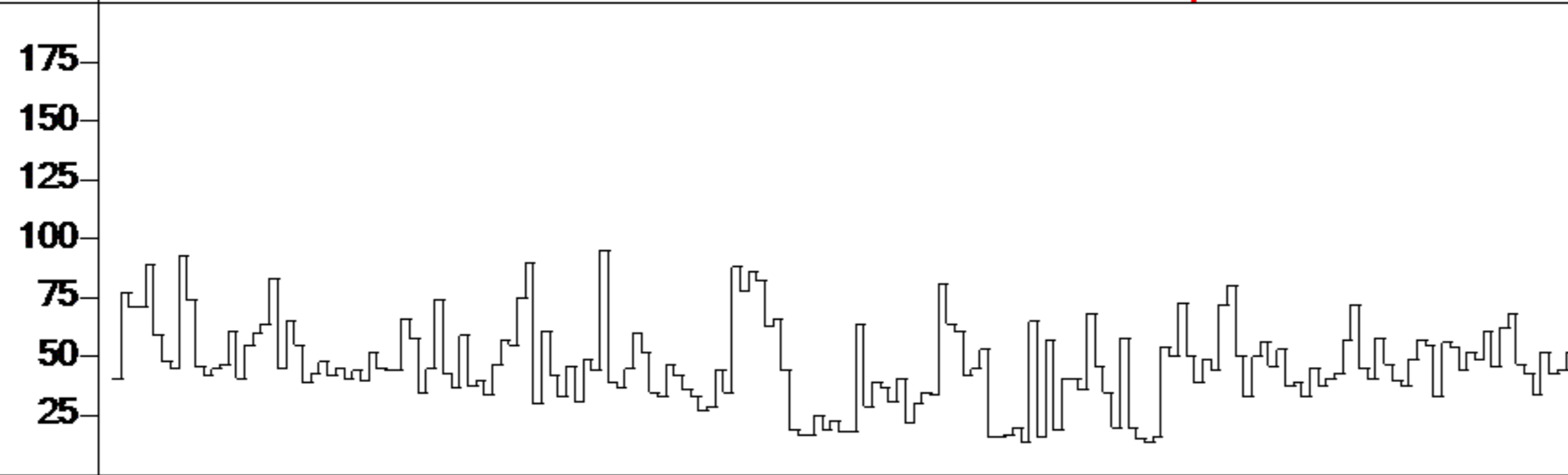
Minimum Heart Rate 52

Max Absolute
ST Deviation
CH1



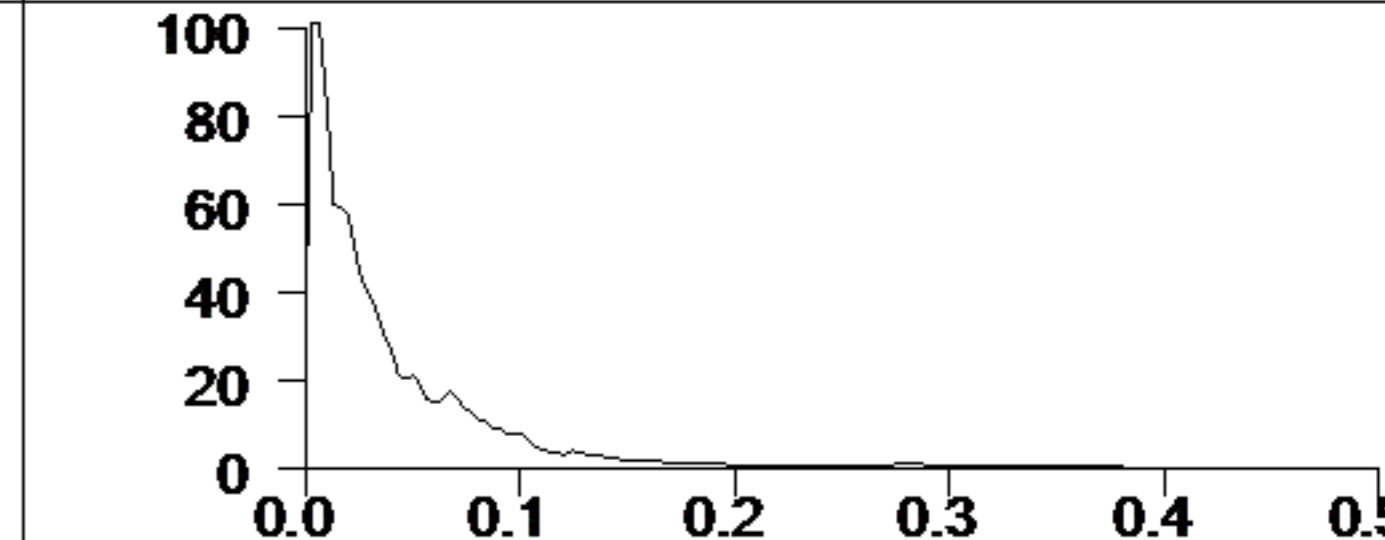
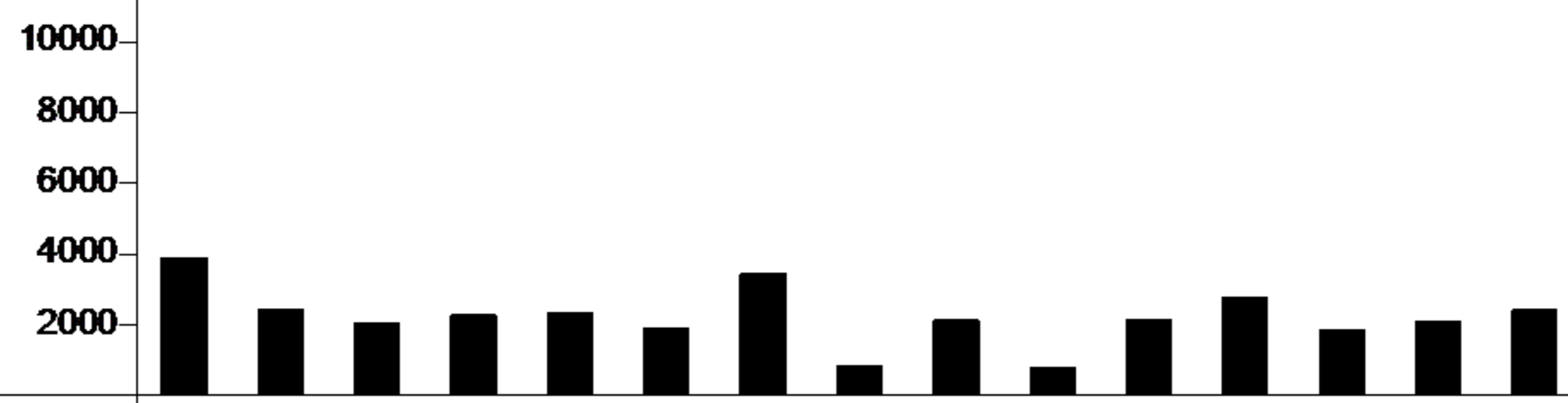
CH1
Absolute ST Level -3.7 mm

Heart Rate
Variability
SDNN 80



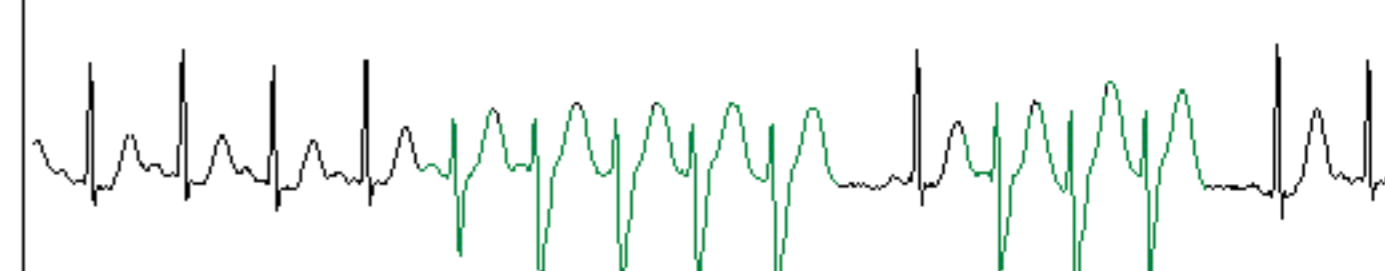
24 Hour R-R Histogram

Spectral
Power
2204.4



24 Hour Spectral Power

VE Beats
per Hour



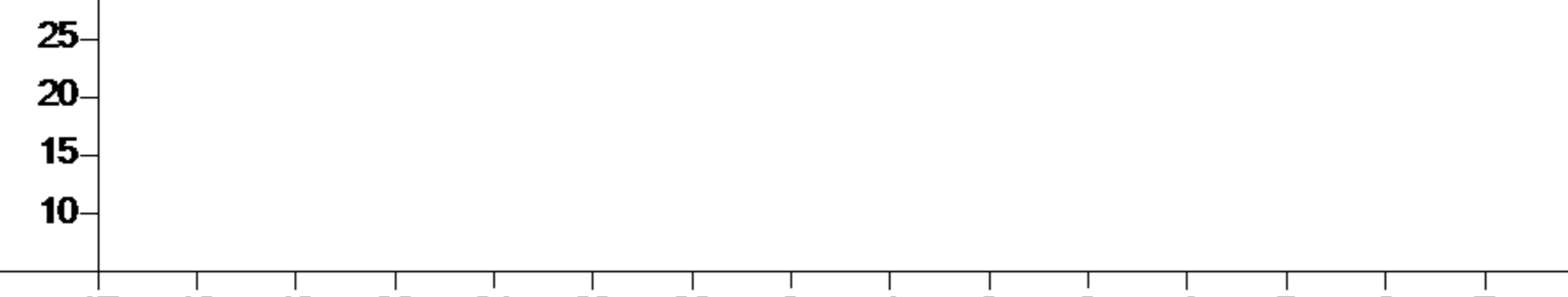
V-Run Event

SVE Beats
per Hour



SV-Run Event

Pause
per Hour

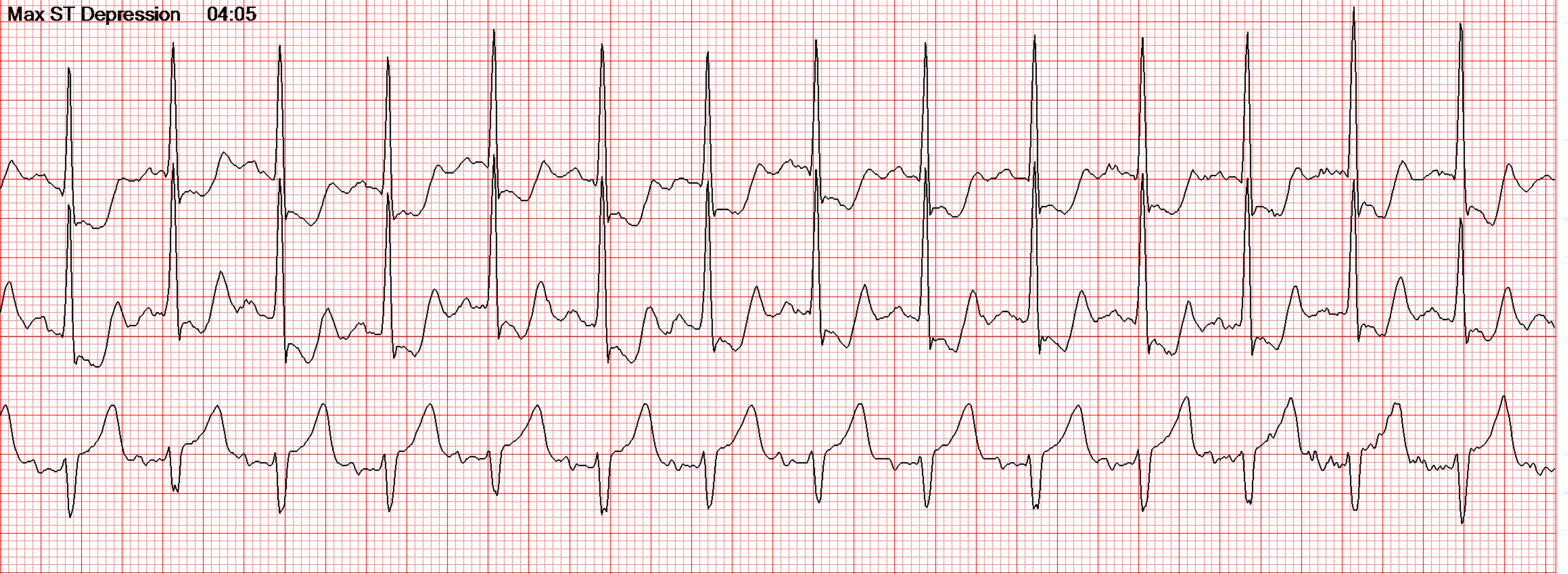


Pause

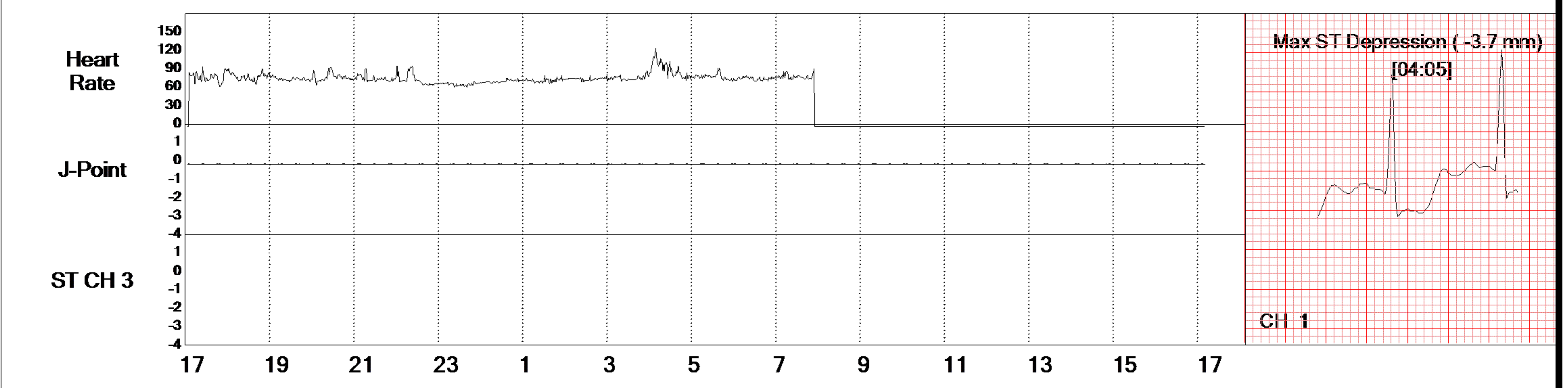
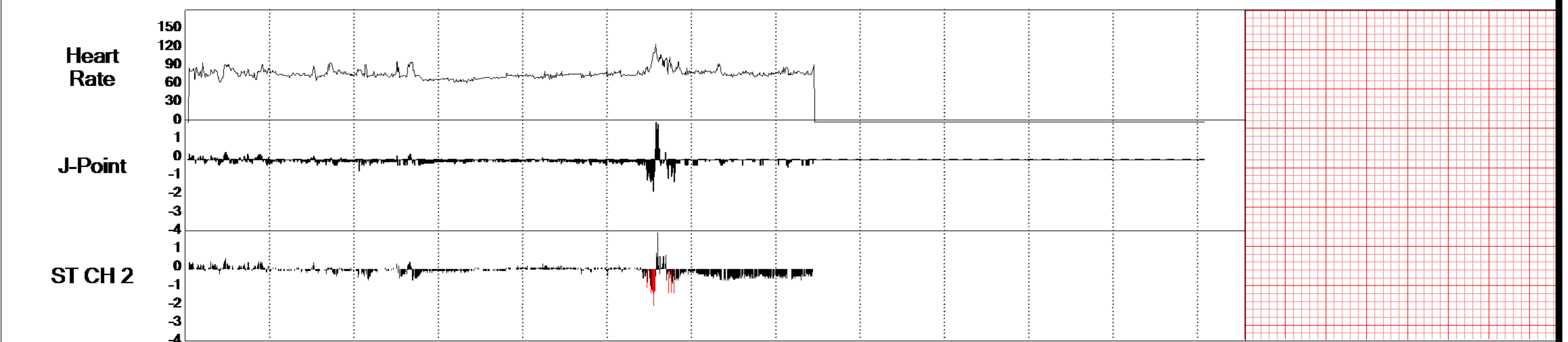
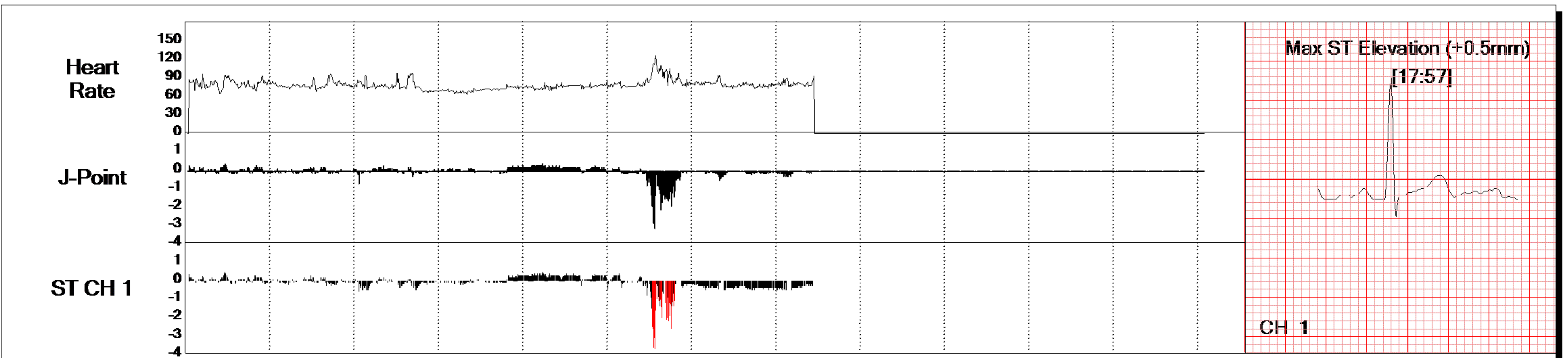
17 18 19 20 21 22 23 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

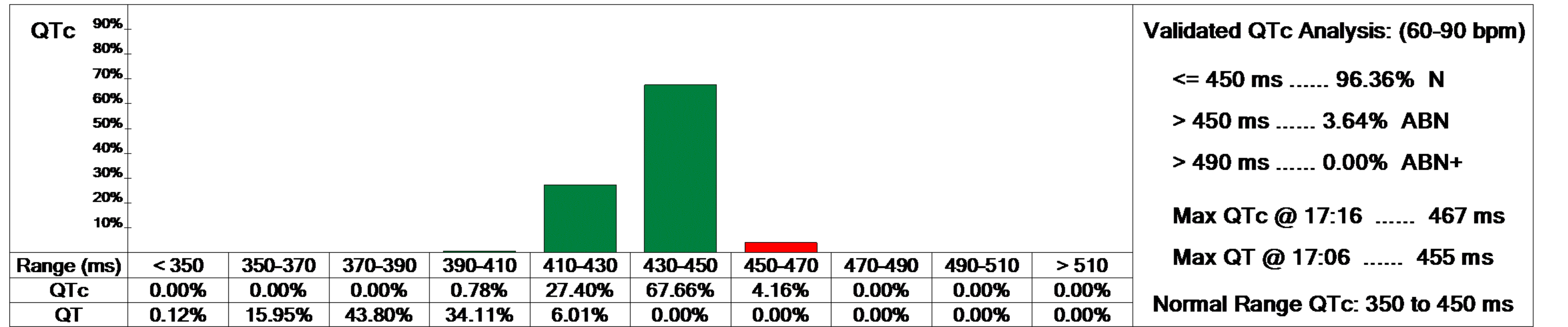
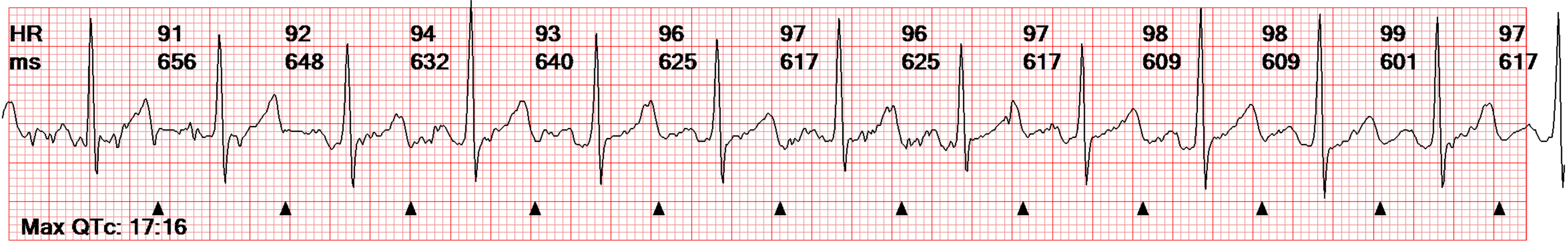
| Time | Total Beats | Avg HR | Min HR | Max HR | SDNN | Spectral Power | Absolute ST CH 1 | Absolute ST CH 2 | Absolute ST CH 3 | VE | V-Pair | V-Run | SVE | SV Run > 2.5 sec | SV-Bi | SV-Tri | V-Big | V-Tri | BBB | |
|--------|-------------|--------|--------|--------|------|----------------|------------------|------------------|------------------|------|--------|-------|-----|------------------|-------|--------|-------|-------|-----|---|
| 17:04 | 4365 | 79 | 65 | 96 | 85 | 3913.6 | 0 | -0.1 | 0 | 0.0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 18:00 | 4821 | 80 | 68 | 94 | 71 | 2420.5 | 0 | -0.2 | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 19:00 | 4586 | 77 | 72 | 85 | 49 | 2040.8 | 0 | -0.2 | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 20:00 | 4766 | 79 | 67 | 96 | 70 | 2272.0 | 0 | -0.3 | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 21:00 | 4650 | 77 | 72 | 94 | 62 | 2363.8 | 0 | -0.6 | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 22:00 | 4468 | 75 | 66 | 98 | 99 | 1929.5 | 0 | -0.5 | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 23:00 | 4083 | 68 | 63 | 73 | 63 | 3453.9 | 0 | -0.2 | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 0:00 | 4363 | 73 | 70 | 79 | 37 | 839.1 | 0 | -0.1 | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 1:00 | 4450 | 74 | 69 | 82 | 50 | 2136.2 | 0 | +0.1 | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2:00 | 4595 | 76 | 72 | 84 | 41 | 794.8 | 0 | -0.5 | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3:00 | 4718 | 78 | 73 | 90 | 51 | 2165.6 | 3 | -0.9 | 5 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:00 | 5423 | 91 | 75 | 126 | 92 | 2782.5 | 19 | -3.7 | 5 | 0.0 | 83 | 17 | 12 | 6 | 0 | 0 | 0 | 1 | 0 | |
| 5:00 | 4781 | 80 | 73 | 94 | 59 | 1855.5 | 0 | -0.5 | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 6:00 | 4636 | 77 | 73 | 83 | 53 | 2118.3 | 0 | -0.5 | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 7:00 | 3887 | 80 | 76 | 93 | 55 | 2425.7 | 0 | -0.5 | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8:00 | 0 | N/A | N/A | N/A | 0 | N/A | 0 | 0.0 | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9:00 | 0 | N/A | N/A | N/A | 0 | N/A | 0 | 0.0 | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10:00 | 0 | N/A | N/A | N/A | 0 | N/A | 0 | 0.0 | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11:00 | 0 | N/A | N/A | N/A | 0 | N/A | 0 | 0.0 | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 12:00 | 0 | N/A | N/A | N/A | 0 | N/A | 0 | 0.0 | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 13:00 | 0 | N/A | N/A | N/A | 0 | N/A | 0 | 0.0 | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 14:00 | 0 | N/A | N/A | N/A | 0 | N/A | 0 | 0.0 | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 15:00 | 0 | N/A | N/A | N/A | 0 | N/A | 0 | 0.0 | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 16:00 | 0 | N/A | N/A | N/A | 0 | N/A | 0 | 0.0 | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 17:00 | 0 | N/A | N/A | N/A | 0 | N/A | 0 | 0.0 | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Totals | 68592 | 77 | 63 | 126 | 80 | 2204.4 | 22 | -3.7 | 10 | -2.0 | 0 | 0.0 | 83 | 17 | 12 | 7 | 0 | 0 | 1 | 0 |

Max ST Depression 04:05



| Total ST Minutes(Absolute) | 22@CH 1 | ST Episode | #1 | #2 | #3 | QT |
|----------------------------------|---------------------|-----------------|-------|-------|-------|--------------------------|
| Total ST Episodes(Absolute) | 11@CH 1 | Length | 6 | 5 | 3 | |
| Max Abs. ST Depression: | -3.7@CH 1 | On-set Minute | 04:01 | 04:24 | 04:13 | Max QT 455 ms (Ch. 2) |
| Max Abs. ST Elevation:(ST Point) | +0.5@CH 1 | Max ST | -3.7 | -2.0 | +0.0 | Max QTc 467 ms |
| ST Analysis Criteria | 1 mm change in ST&J | Max Heart Rate | 126 | 105 | 110 | % of Max QTc>=450ms 3.6% |
| | | VE's PER MINUTE | 0 | 0 | 12 | |





Validated QTc Analysis: (60-90 bpm)

<= 450 ms 96.36% N

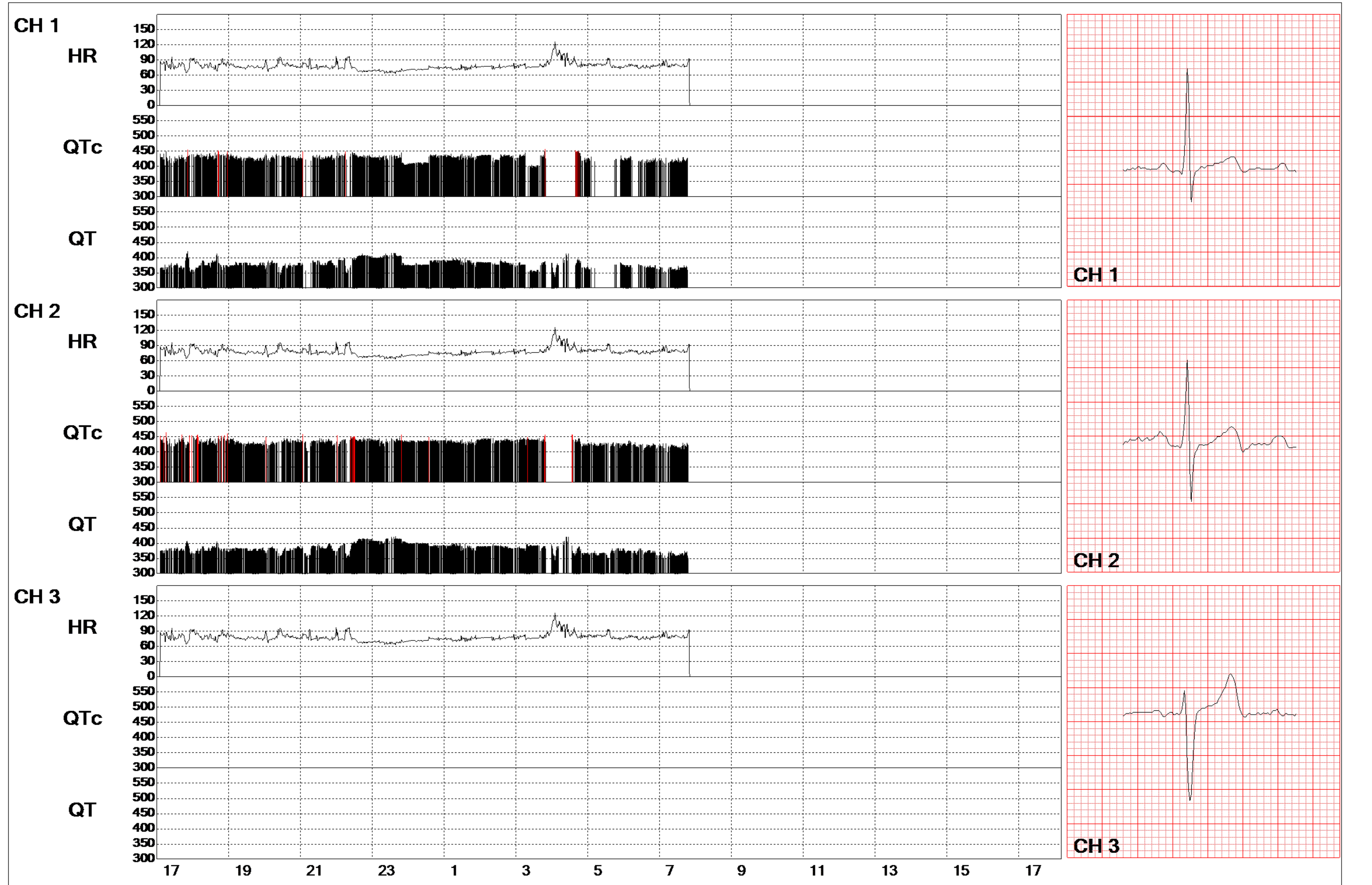
> 450 ms 3.64% ABN

> 490 ms 0.00% ABN+

Max QTc @ 17:16 467 ms

Max QT @ 17:06 455 ms

Normal Range QTc: 350 to 450 ms

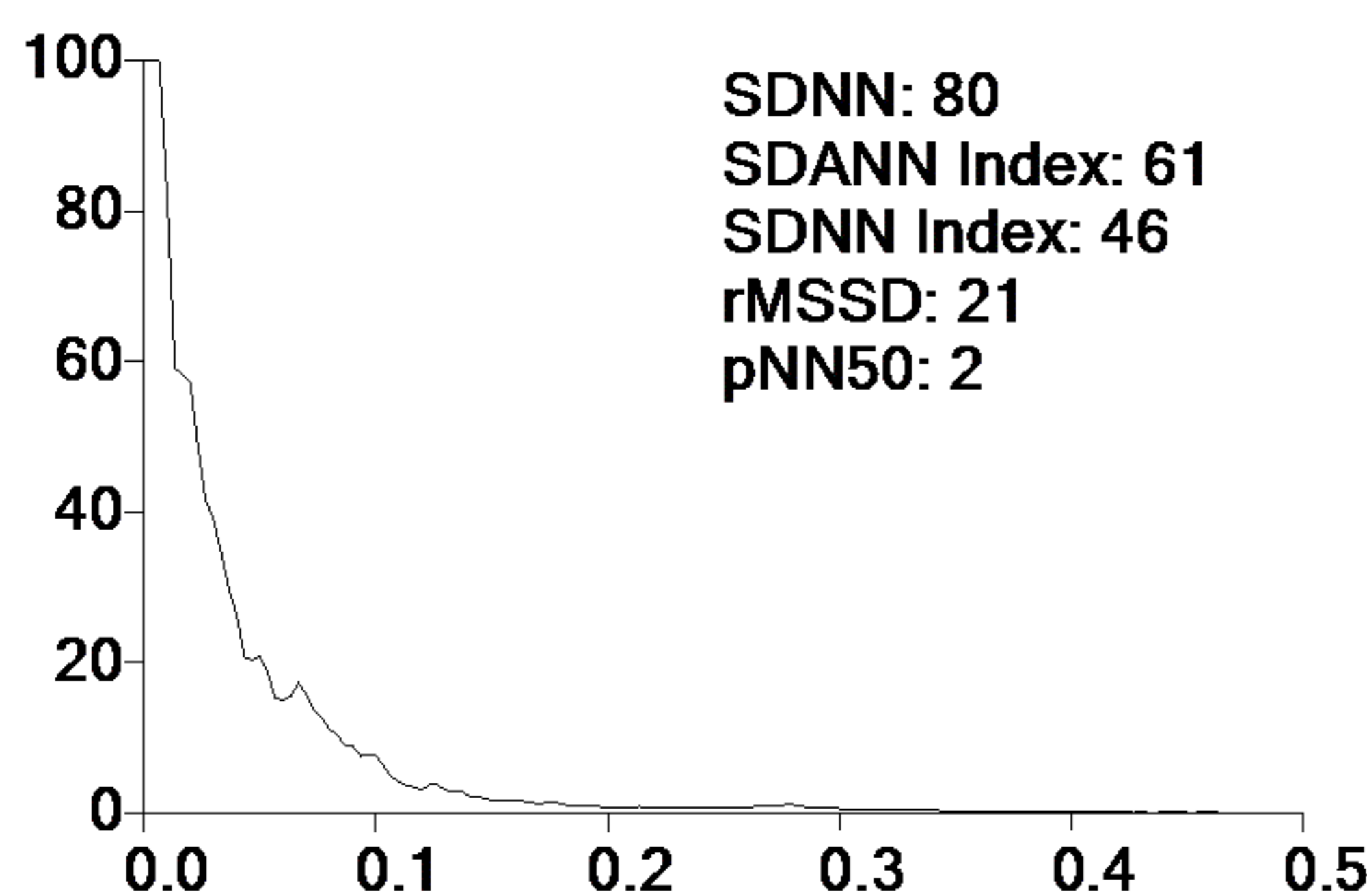


Comments

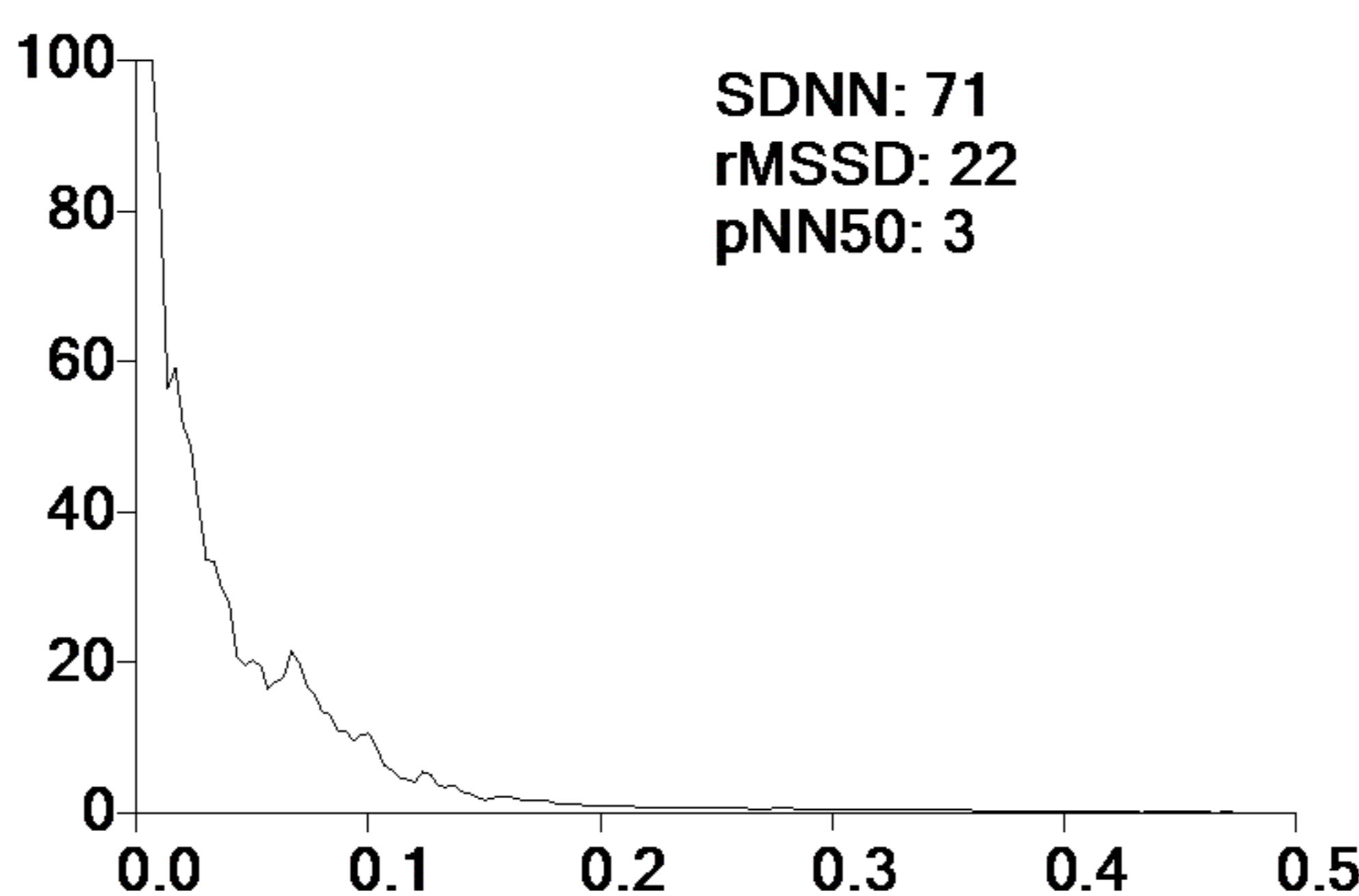
Physician Signature: _____

SPECTRAL POWER

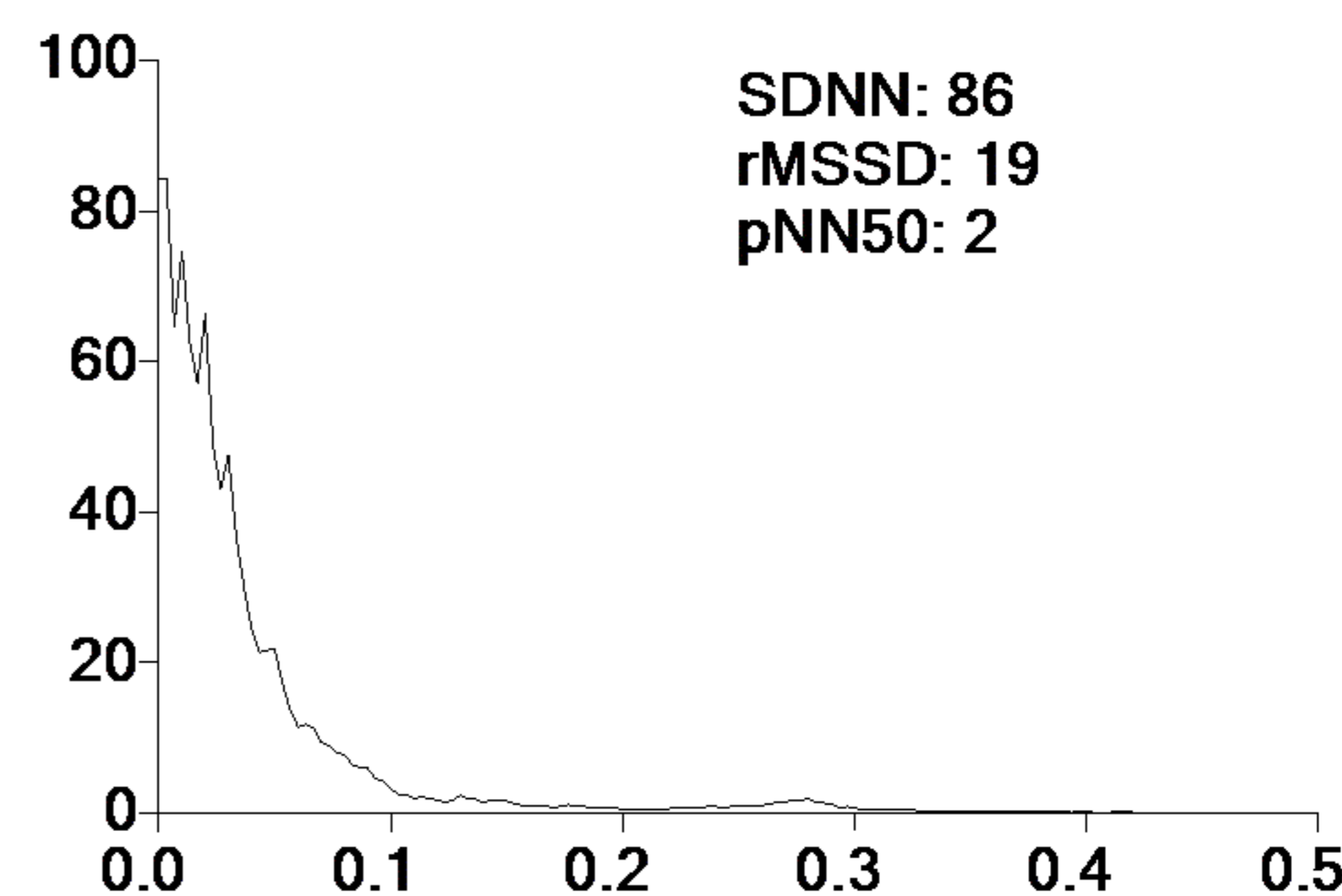
24 HOURS



AWAKE: 04:15 - 22:30



ASLEEP: 22:30 - 04:15



Power:2204.4 VLF:1119.7 LF:647.5 HF:108.9

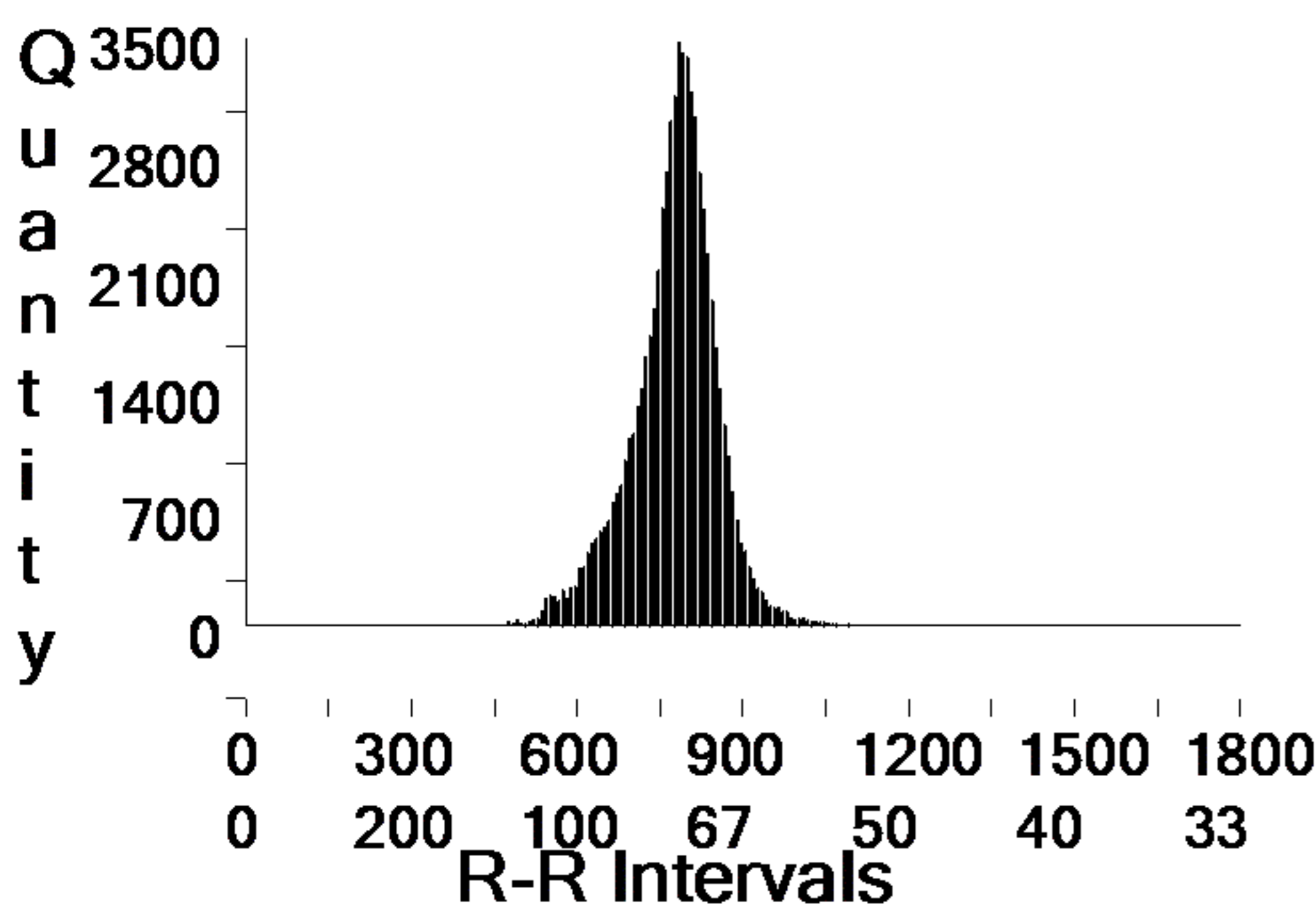
Power:2445.2 VLF:1149.0 LF:753.4 HF:113.0

Power:1838.7 VLF:1064.3 LF:493.8 HF:103.9

TIME DOMAIN

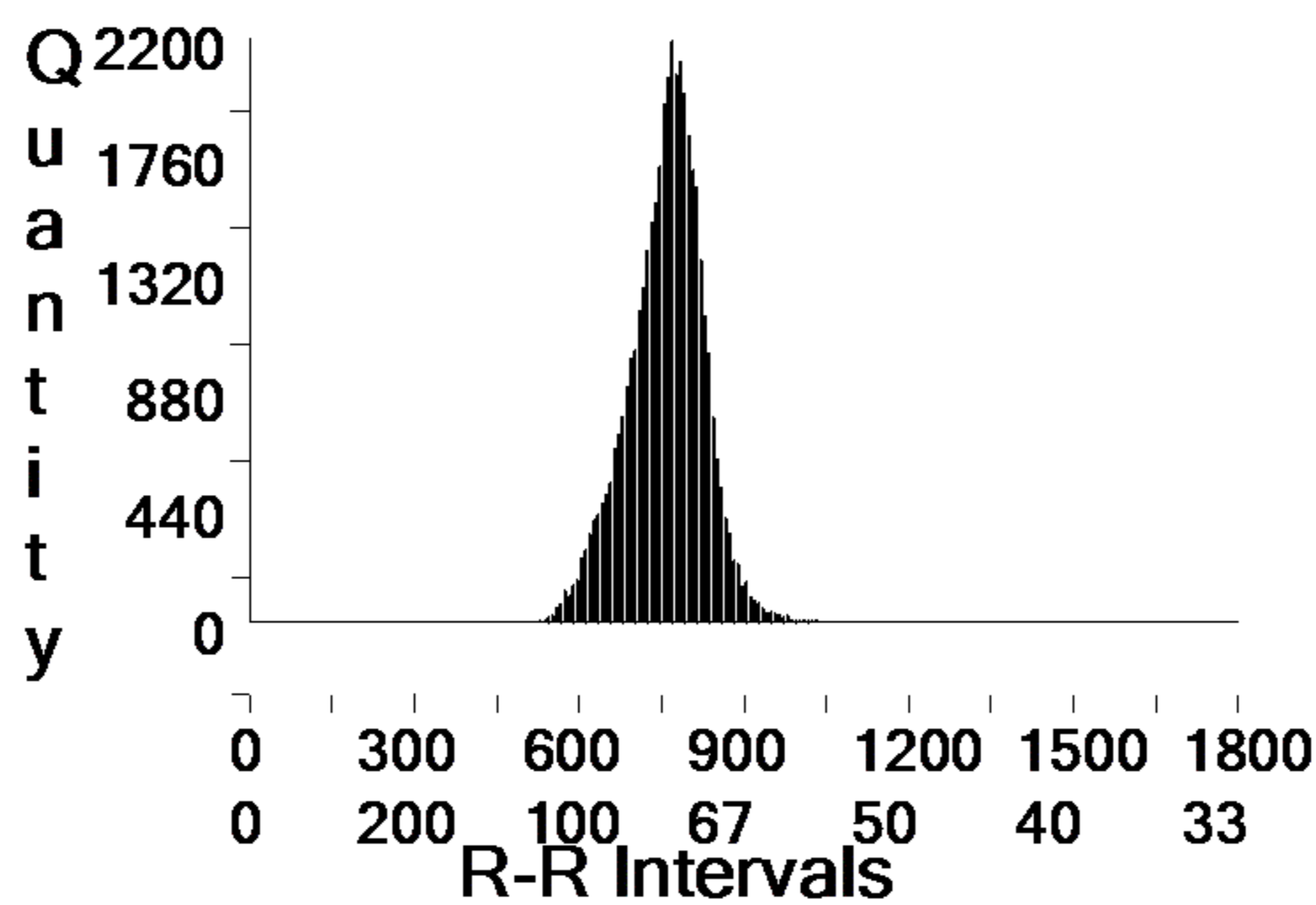
ALL HEART RATES

Time: 24 Hours



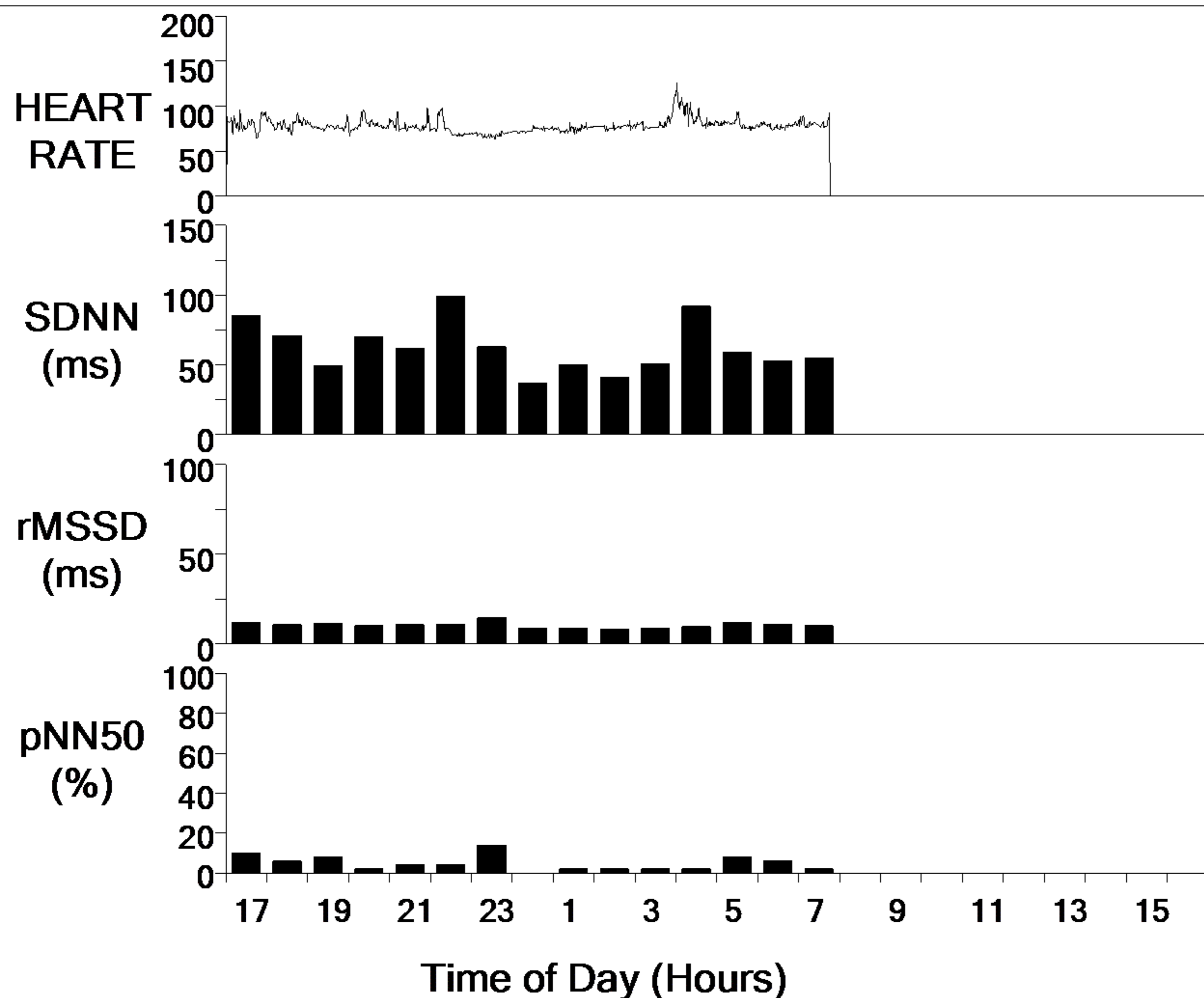
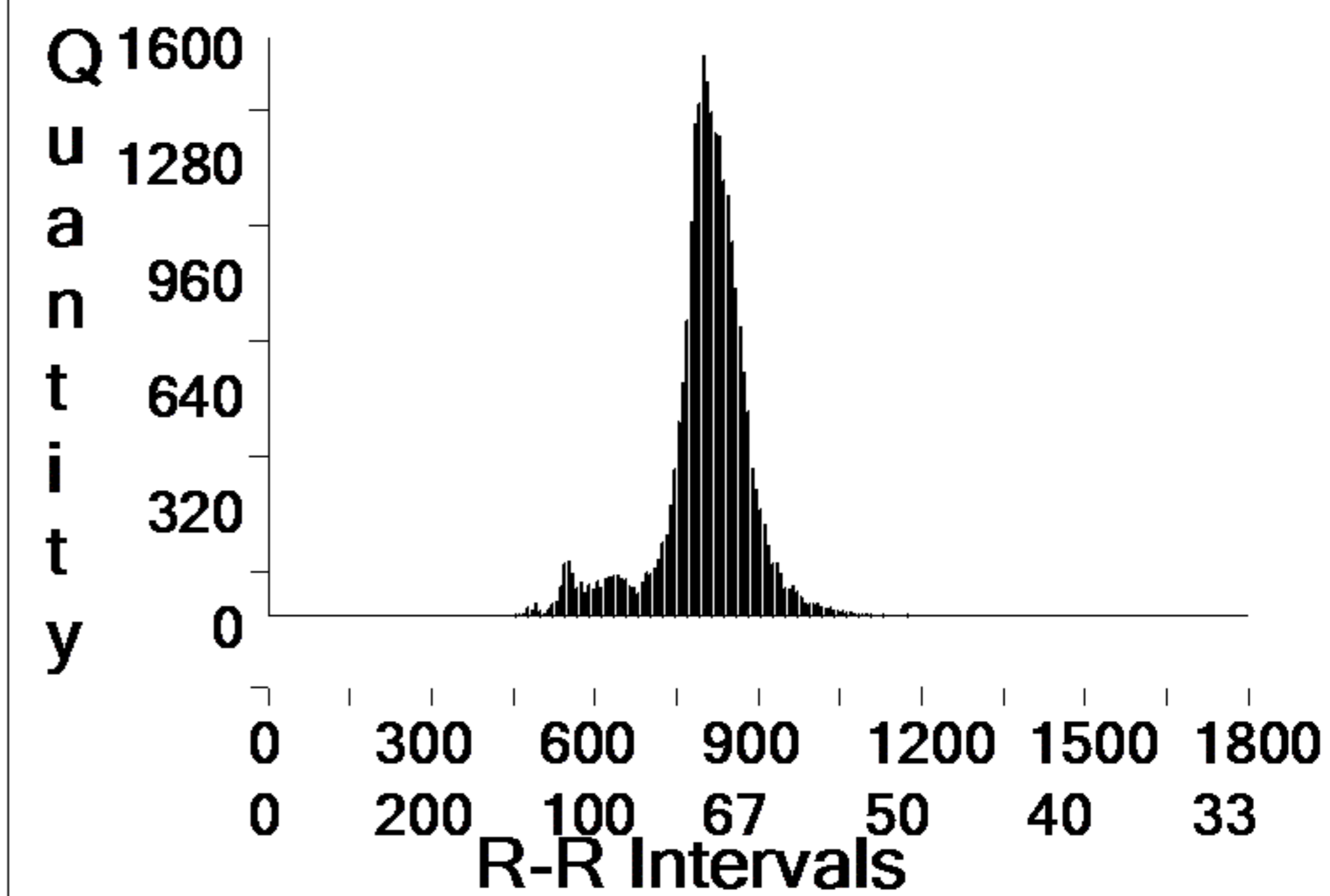
ALL HEART RATES

AWAKE: 04:15 - 22:30



ALL HEART RATES

ASLEEP: 22:30 - 04:15



HEART RATE RELATED HRV

| 5-Min QTY | HEART RATE | SDNN |
|-----------|------------|------|
| 0 | >= 170 | 0 |
| 0 | 140 - 169 | 0 |
| 0 | 110 - 139 | 0 |
| 5 | 80 - 109 | 49 |
| 250 | 50 - 79 | 161 |
| 0 | <= 49 | 0 |

PATIENT RISK (*)

24 HOUR SDNN 80



SPECTRAL POWER

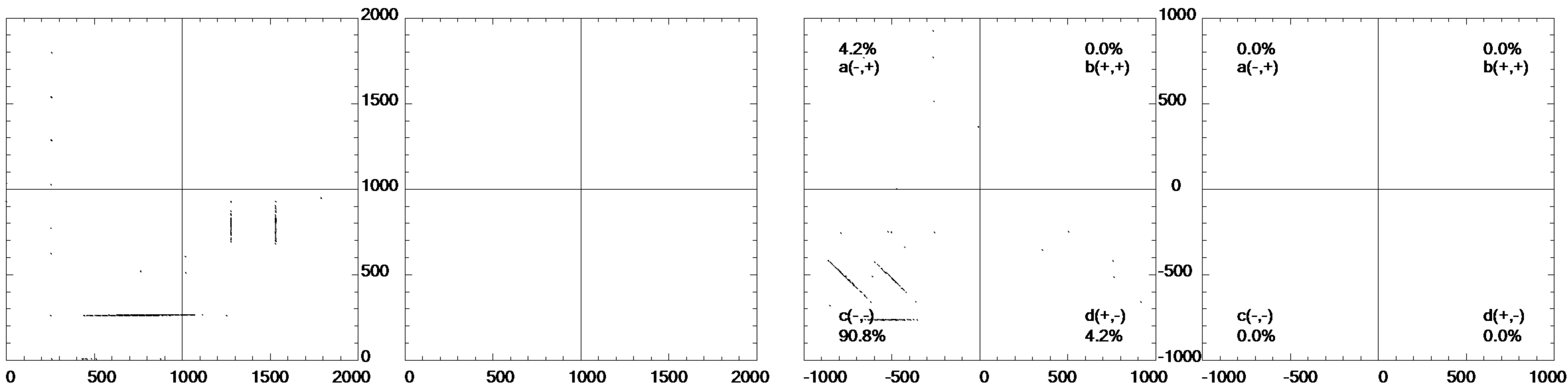
| TOTAL POWER | VERY LOW FREQUENCY | LOW FREQUENCY | HIGH FREQUENCY | | | |
|-------------------|--------------------|-------------------|--------------------|-------------------|--------------|-----------|
| 0.000 to 0.500 Hz | 0.007 to 0.040 Hz | 0.040 to 0.150 Hz | 0.150 to 0.401 Hz | | | |
| 2204.4 | 1119.7 | 647.5 | 108.9 | | | |
| TIME DOMAIN | Qualified Beats | Mean RR (mSec) | SDANN INDEX (mSec) | SDNN INDEX (mSec) | rMSSD (mSec) | pNN50 (%) |
| Time: 24 Hours | 67883 | 771.5 | 80 | 61 | 46 | 21 |

Lorenz Plot - All Beats

Lorenz Plot - Normal Beats

Modified Plot - All Beats

Modified Plot - Normal Beats

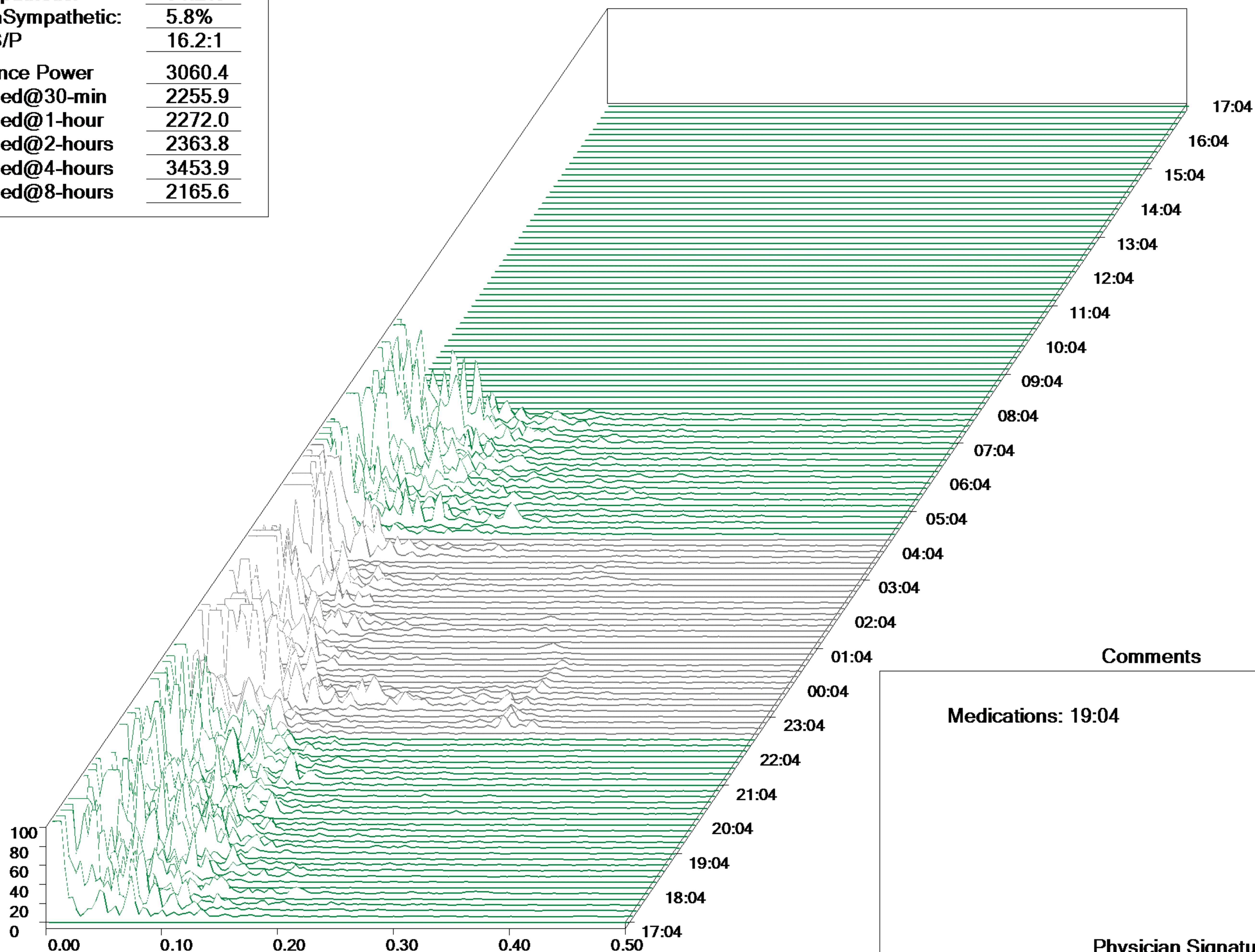


24 Hours 3D Power Graph

| | Actual | Normal |
|--------------|--------|-----------|
| Total Power: | 2204.4 | 750-12000 |
| VLF Power: | 1119.7 | 400-1750 |
| LF Power: | 647.5 | 300-1750 |
| HF Power: | 108.9 | 50-120 |
| LF/HF Ratio: | 5.9:1 | 1-3 |
| SDNN: | 80 | 102-180 |
| pNN50: | 2 | |

| | |
|--------------------|--------|
| % Sympathetic: | 94.2% |
| % ParaSympathetic: | 5.8% |
| Ratio S/P | 16.2:1 |

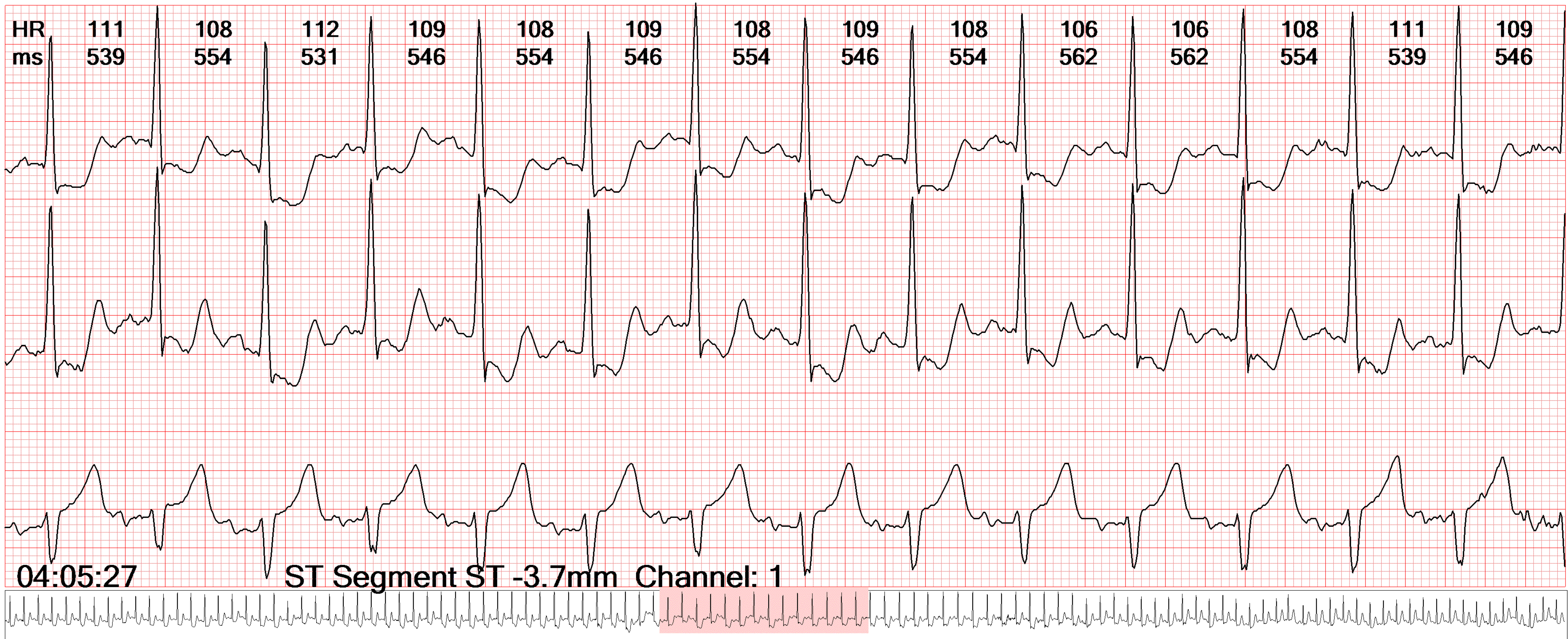
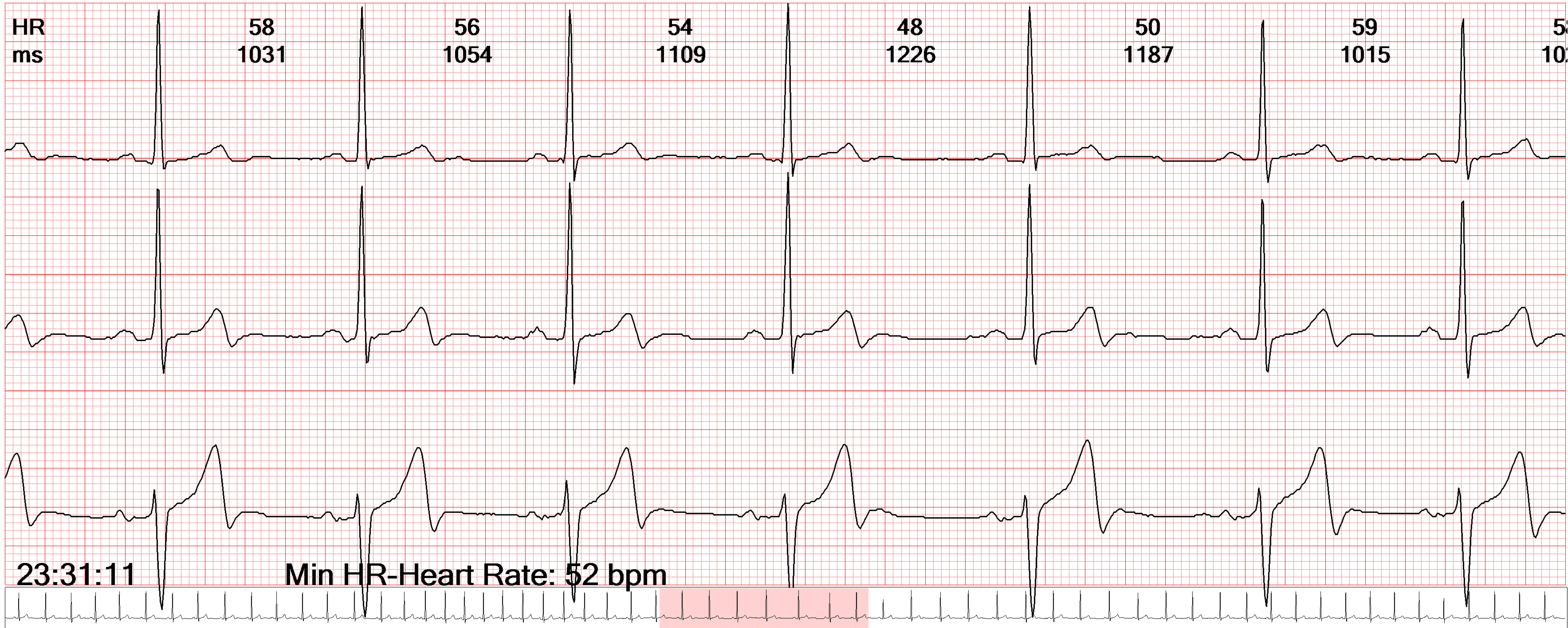
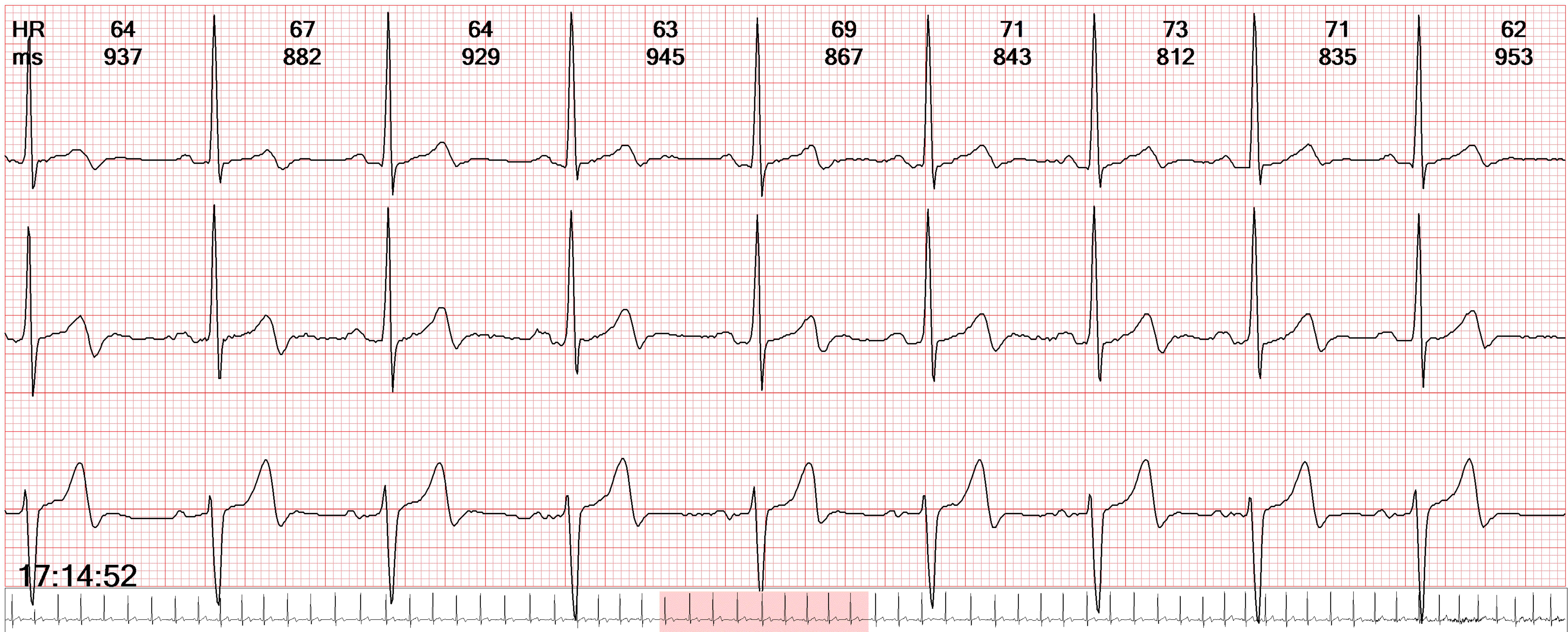
| | |
|------------------|--------|
| Reference Power | 3060.4 |
| Post-Med@30-min | 2255.9 |
| Post-Med@1-hour | 2272.0 |
| Post-Med@2-hours | 2363.8 |
| Post-Med@4-hours | 3453.9 |
| Post-Med@8-hours | 2165.6 |

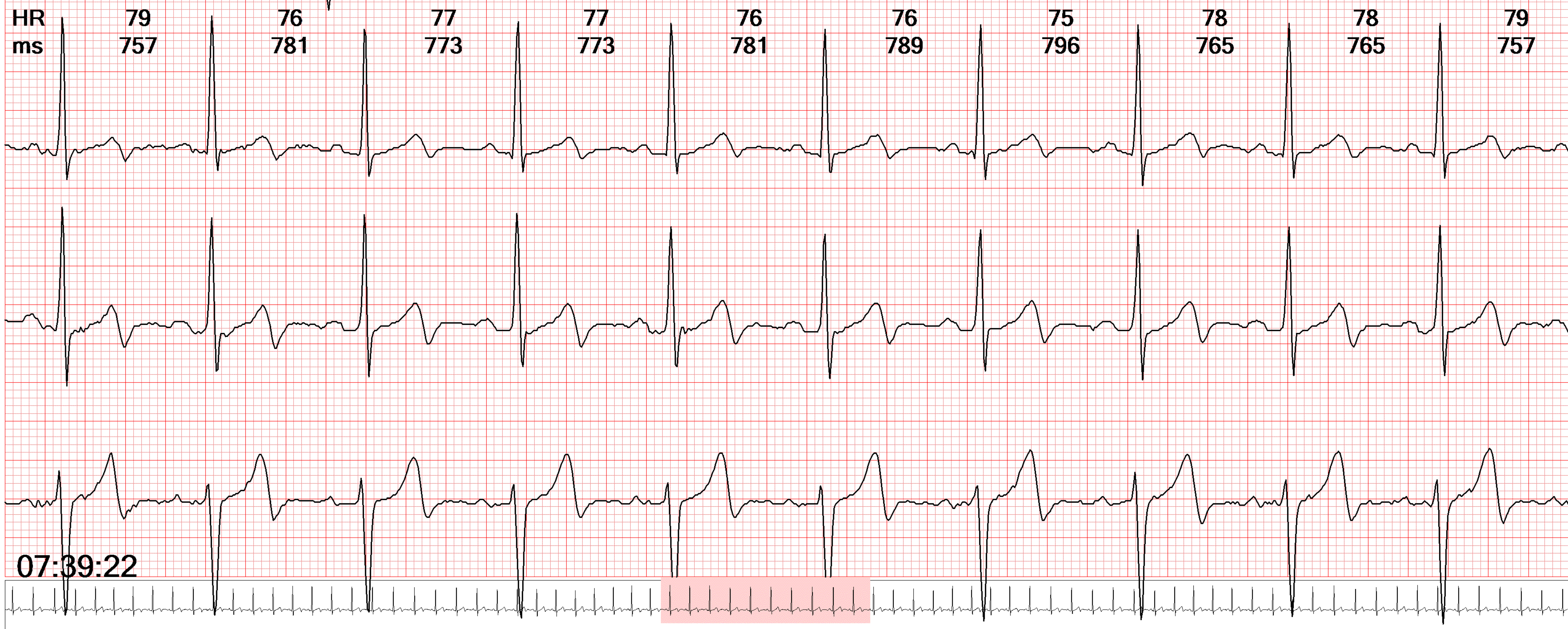
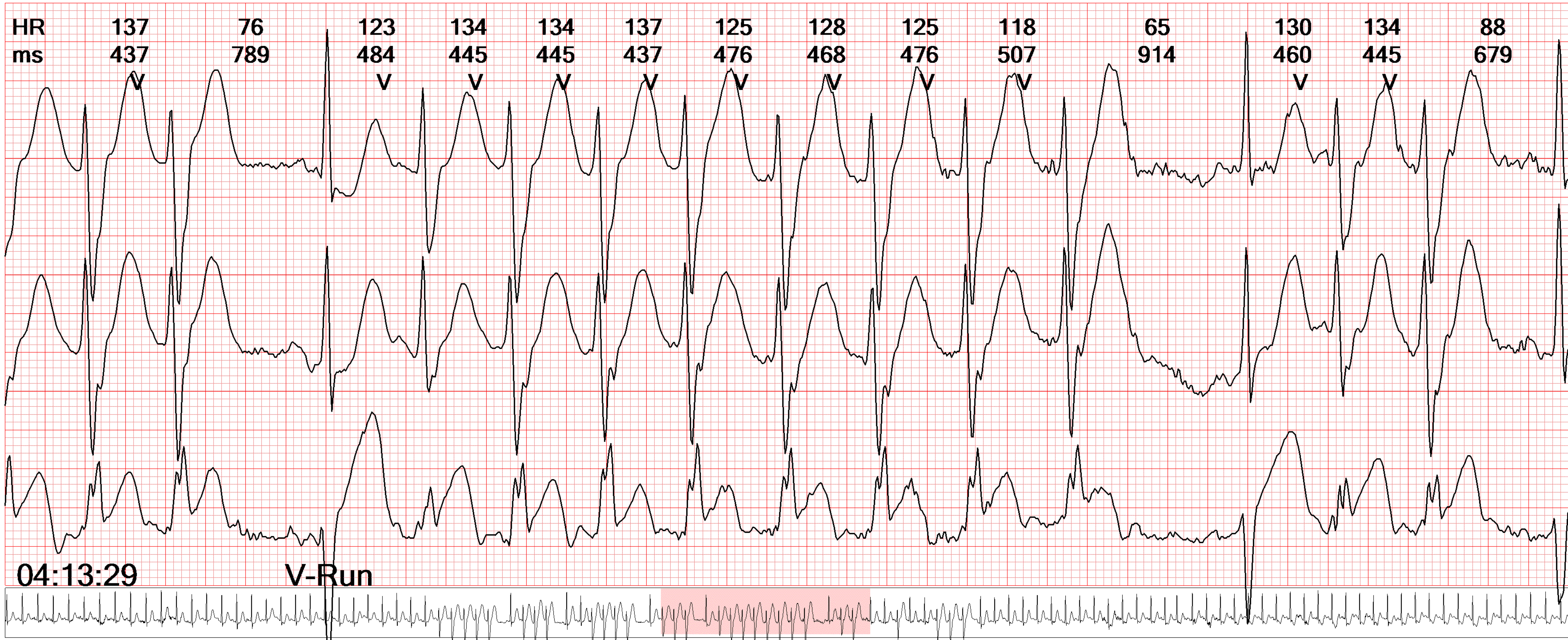
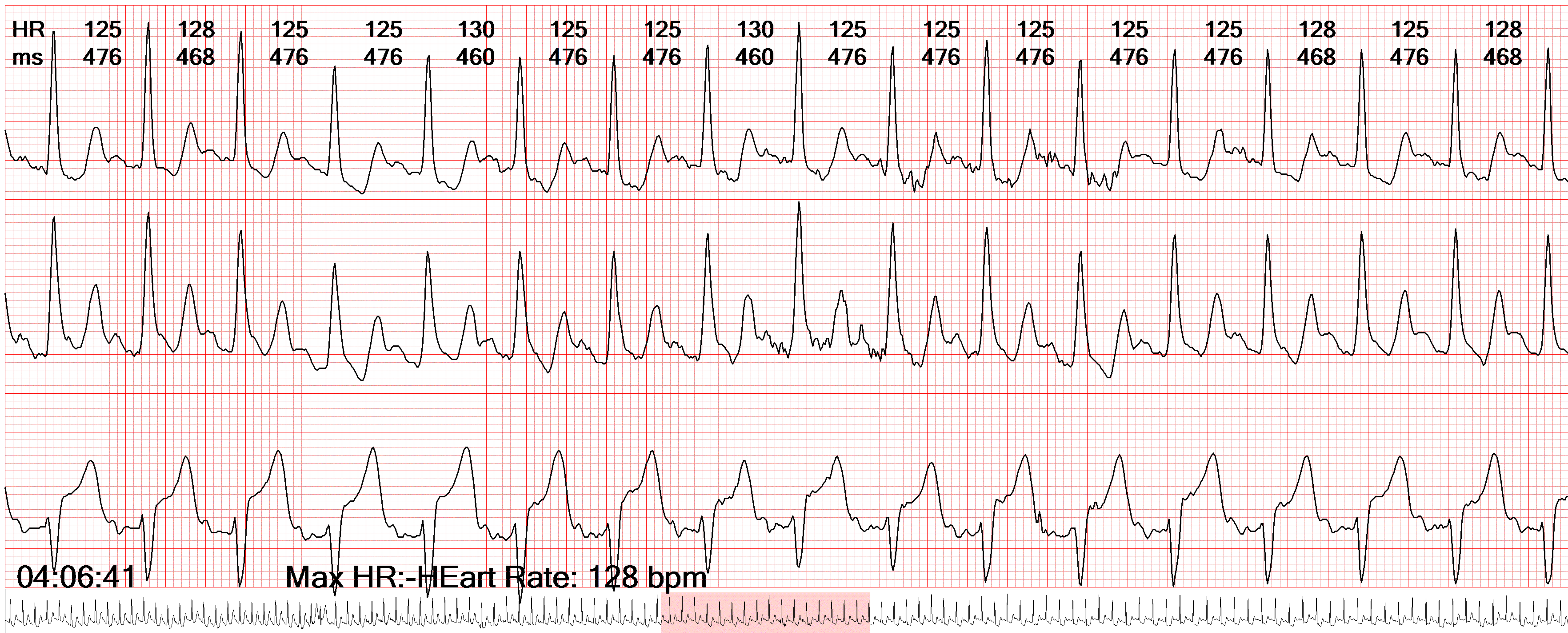


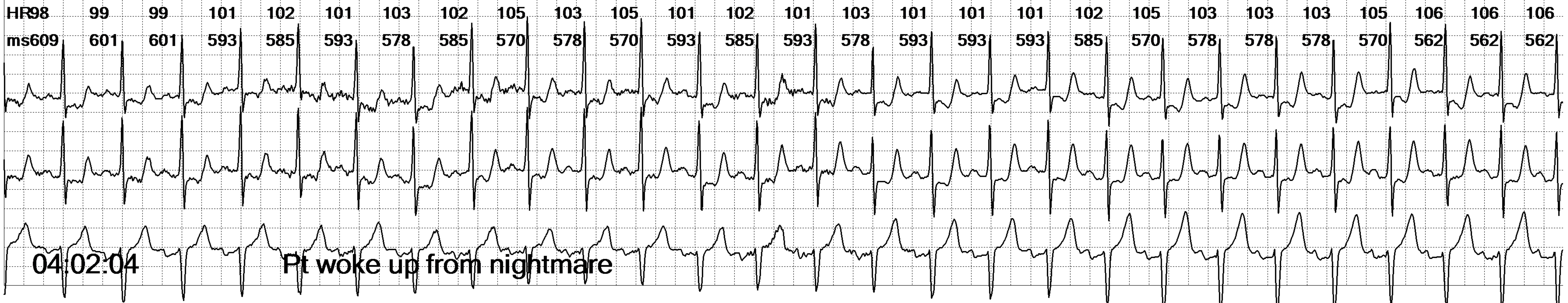
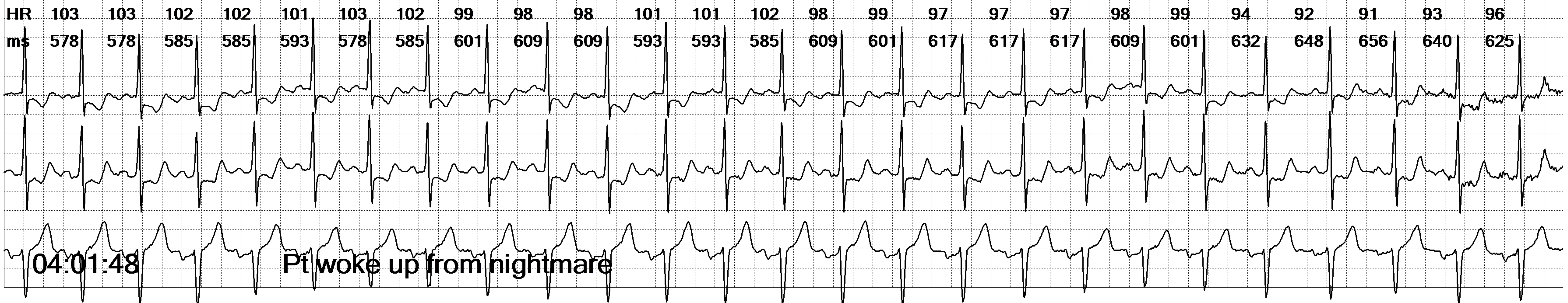
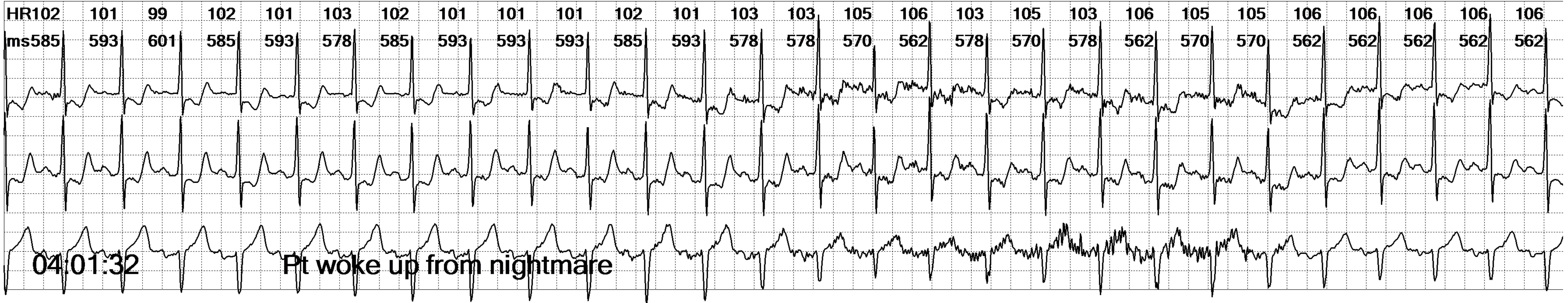
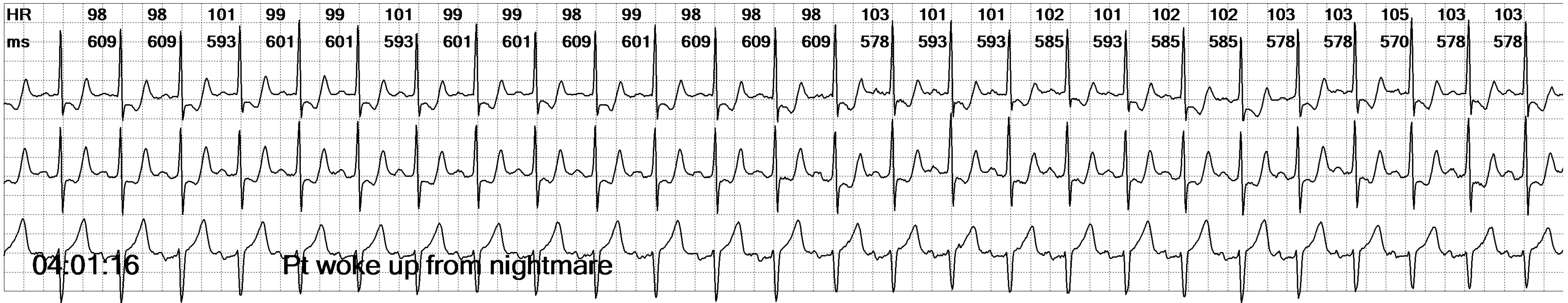
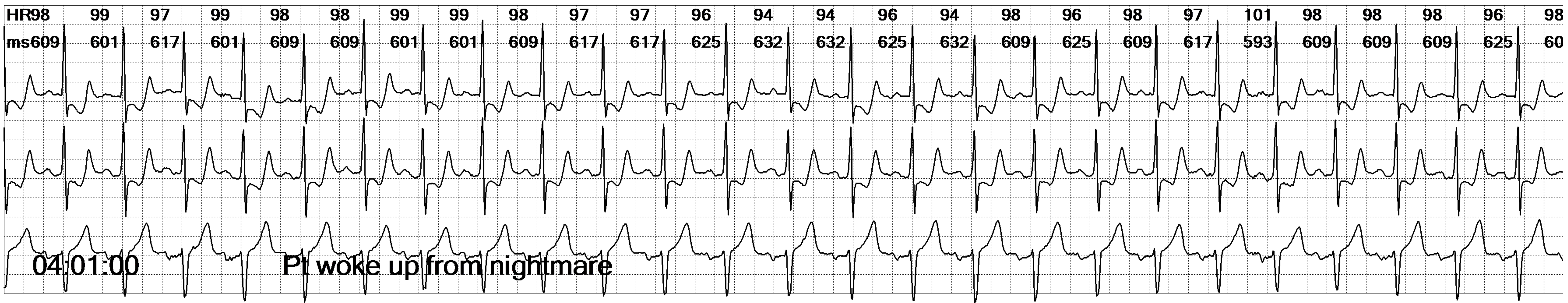
Comments

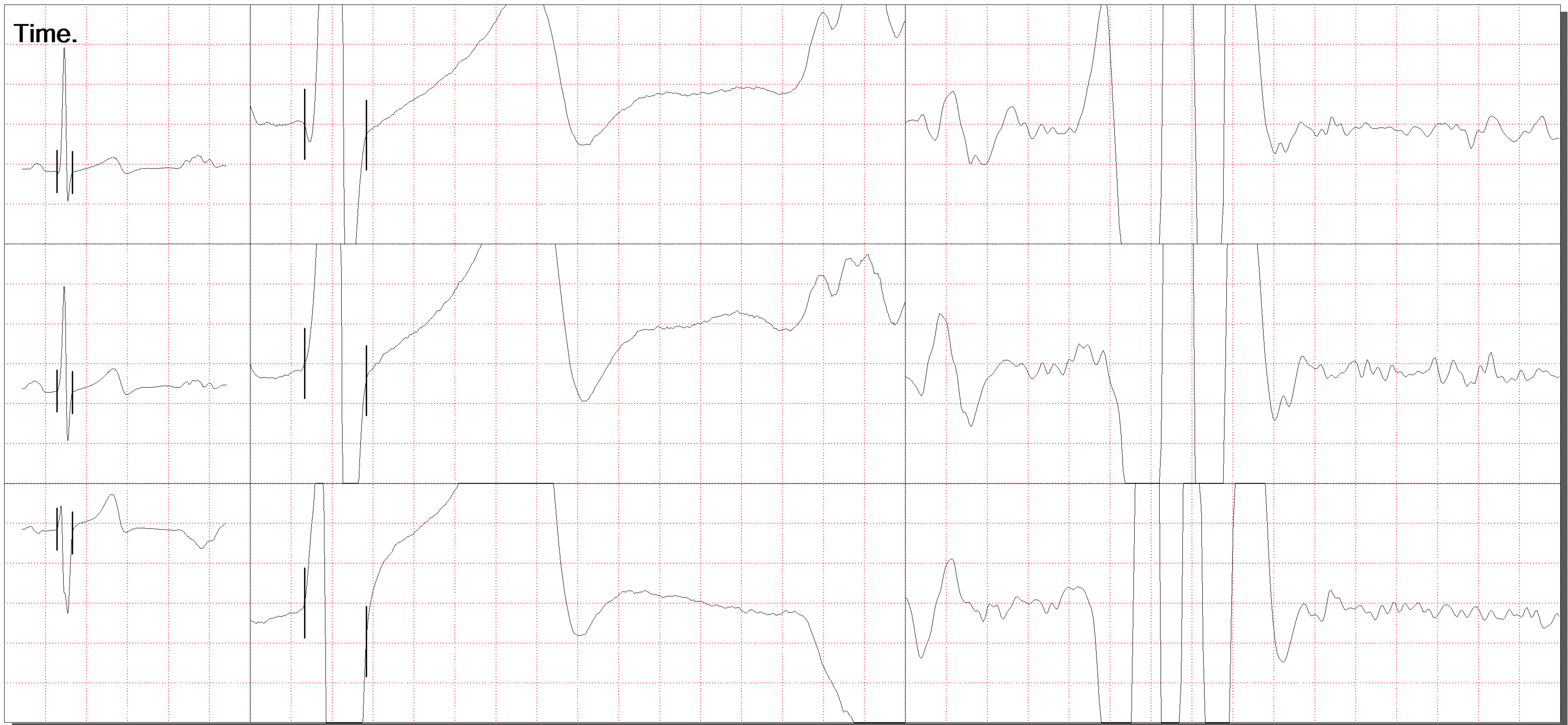
Medications: 19:04

Physician Signature: _____





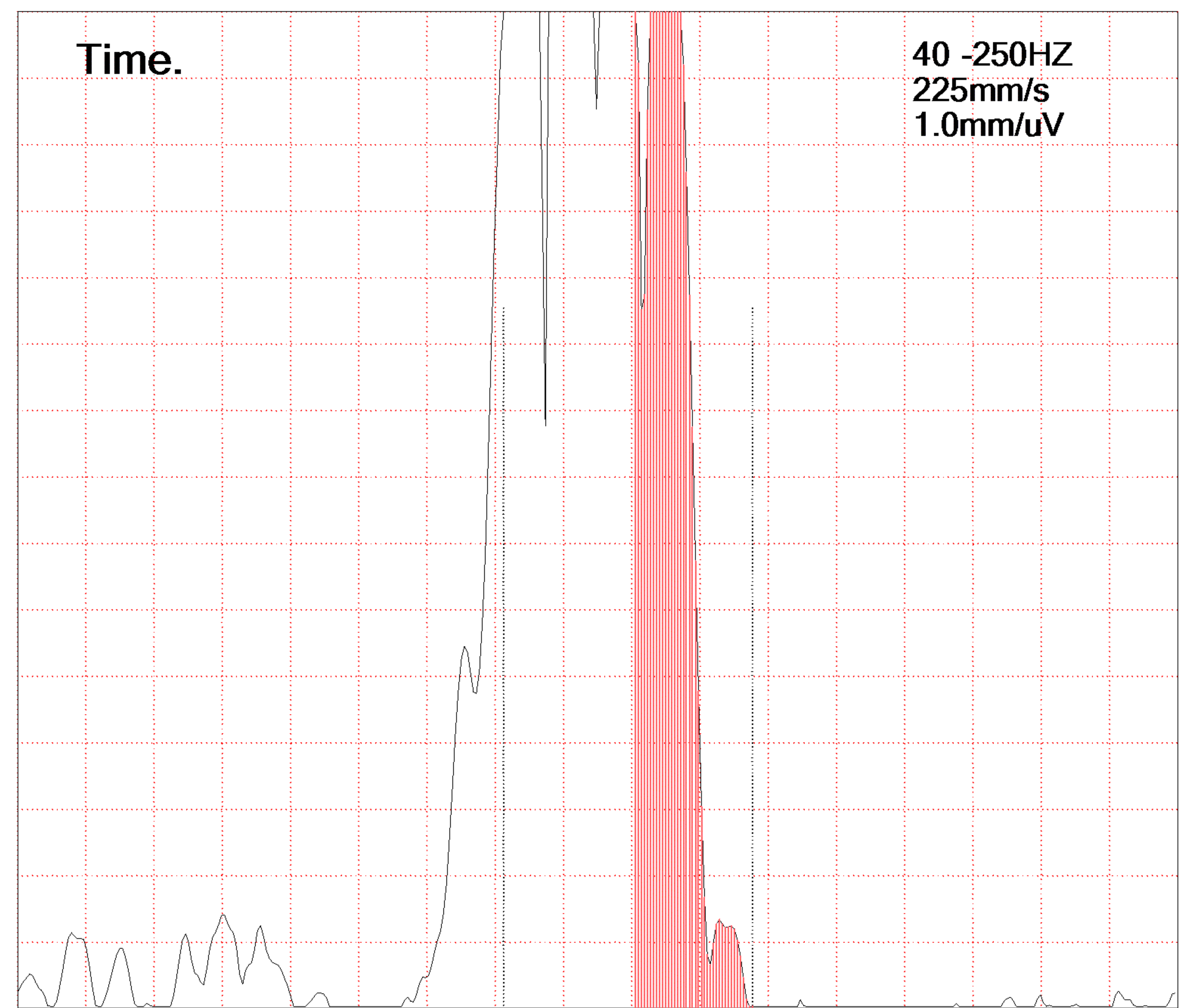
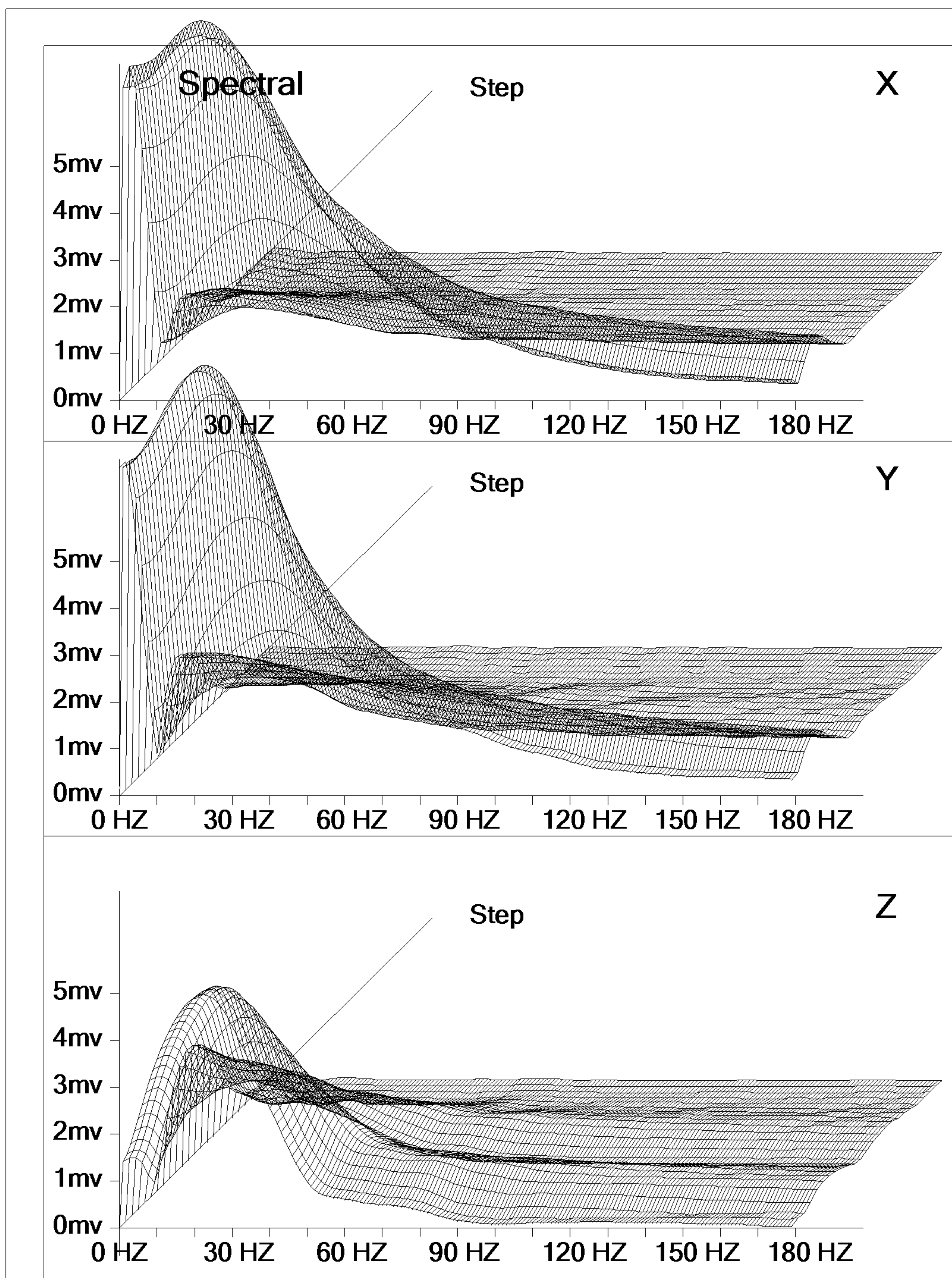




DC-250HZ
25mm/s
10mm/mv

DC-250HZ
100mm/s
0.1mm/uV

40 -250HZ
250mm/s
1.0mm/uV



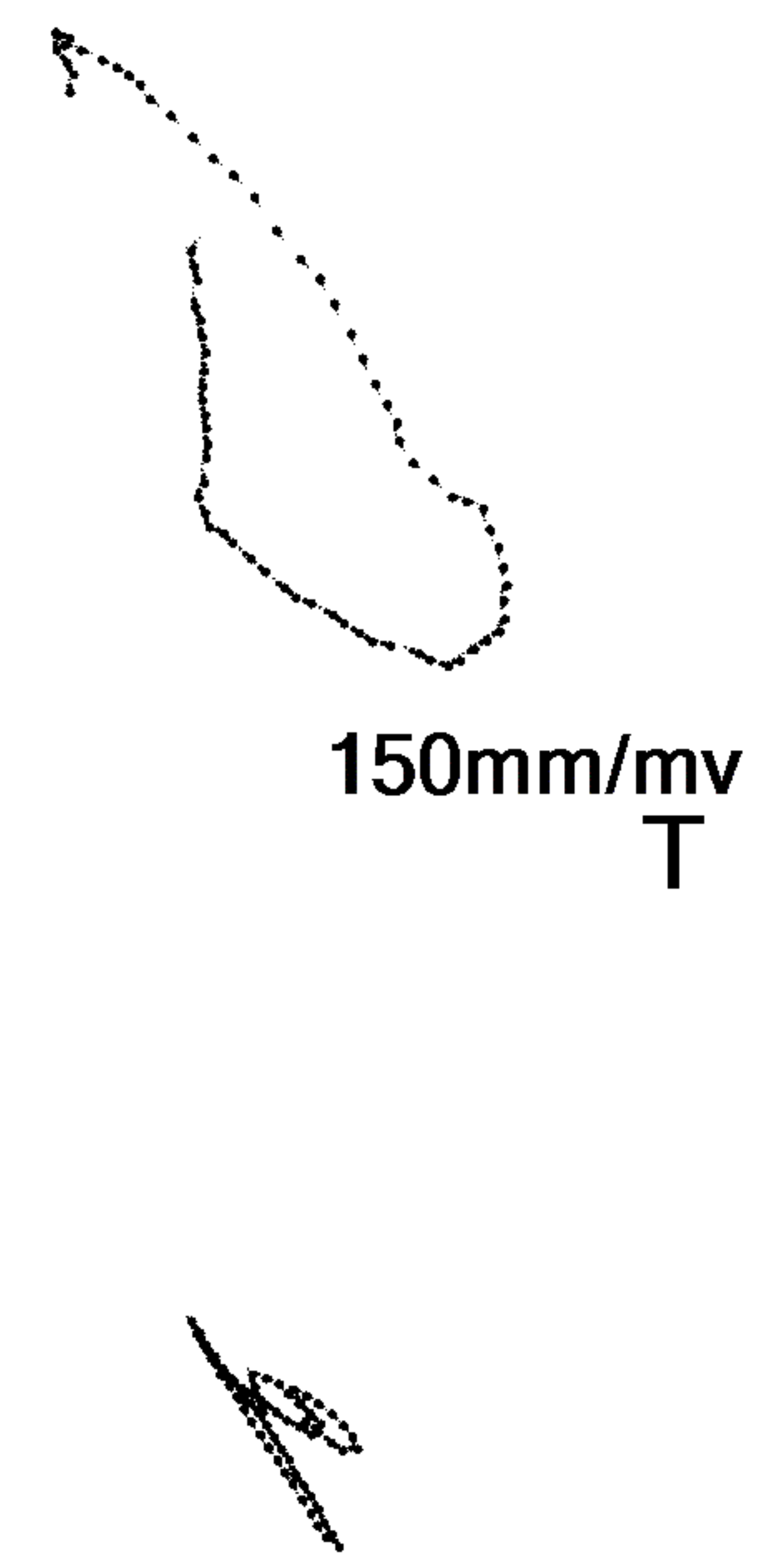
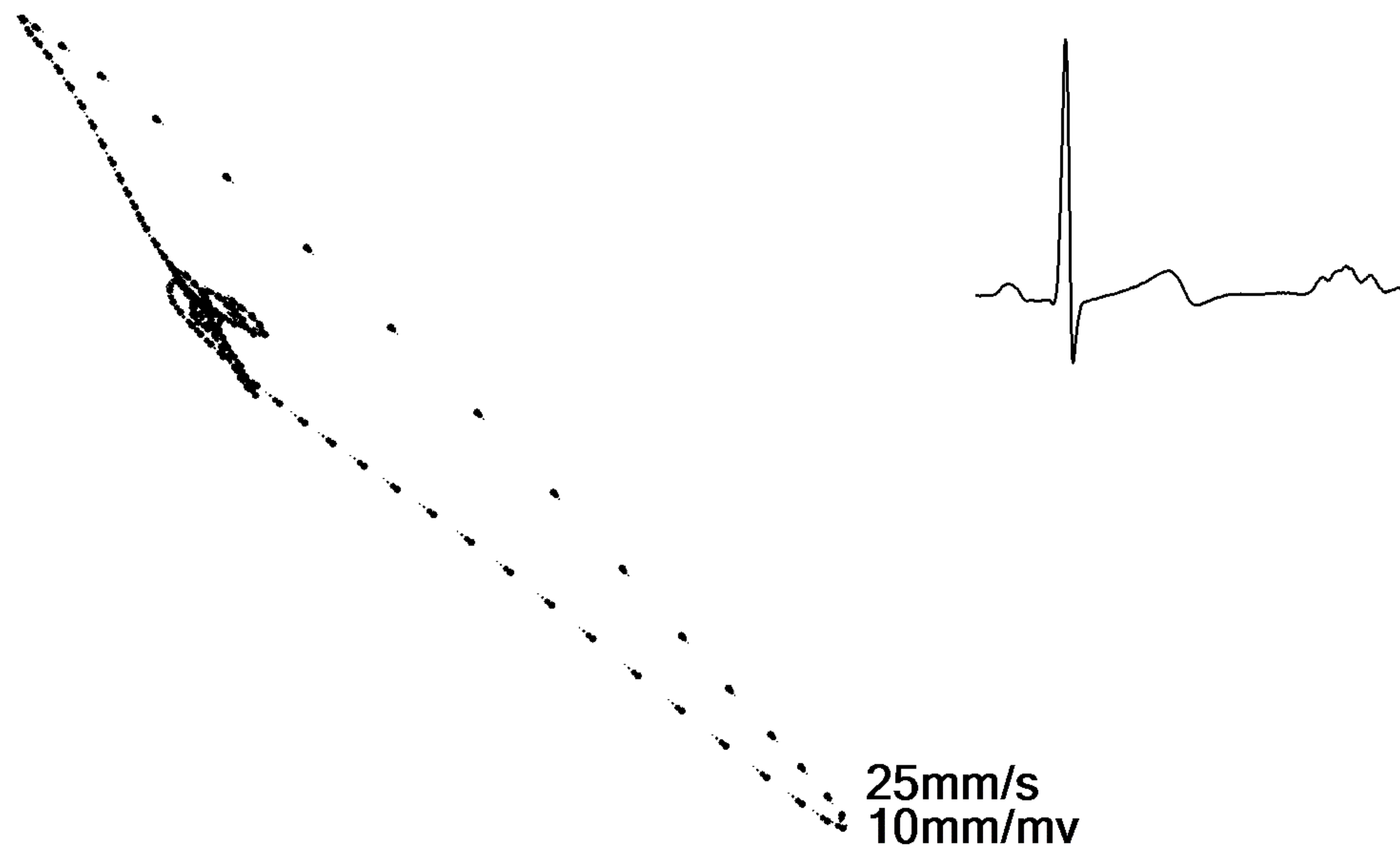
40 -250HZ
225mm/s
1.0mm/uV

| COMMON | | Duration(ms) | RMS Voltages (uV) | |
|----------|----------|--------------|-------------------|---------------------|
| Filter : | 40-250Hz | Std QRS | 77 | Last 40ms 194 |
| Cycle : | 511 | Total QRS | 83 | SD of Noise 0.20 uV |
| | | LAS<40 uV | 19 | |

Frontal Plane (X - Y)

X

P

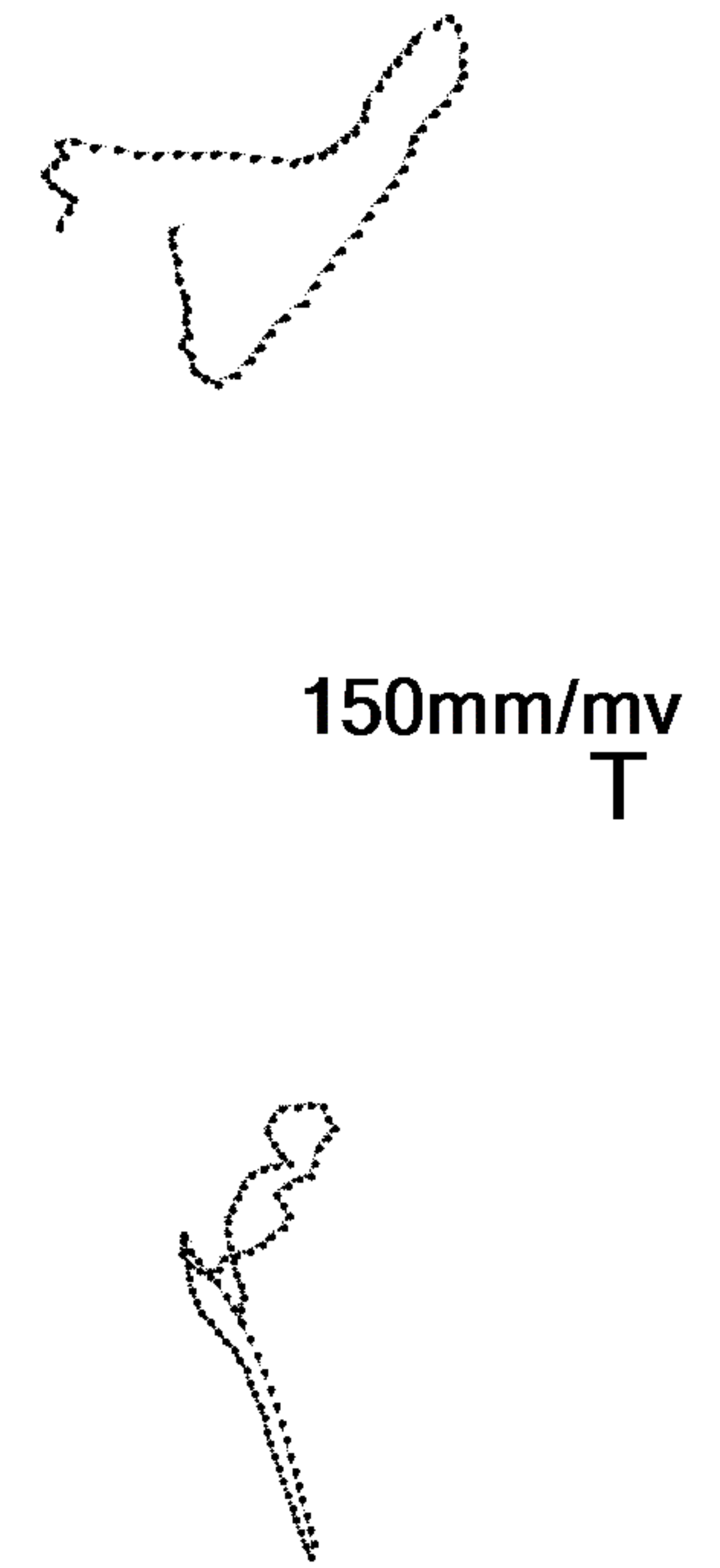
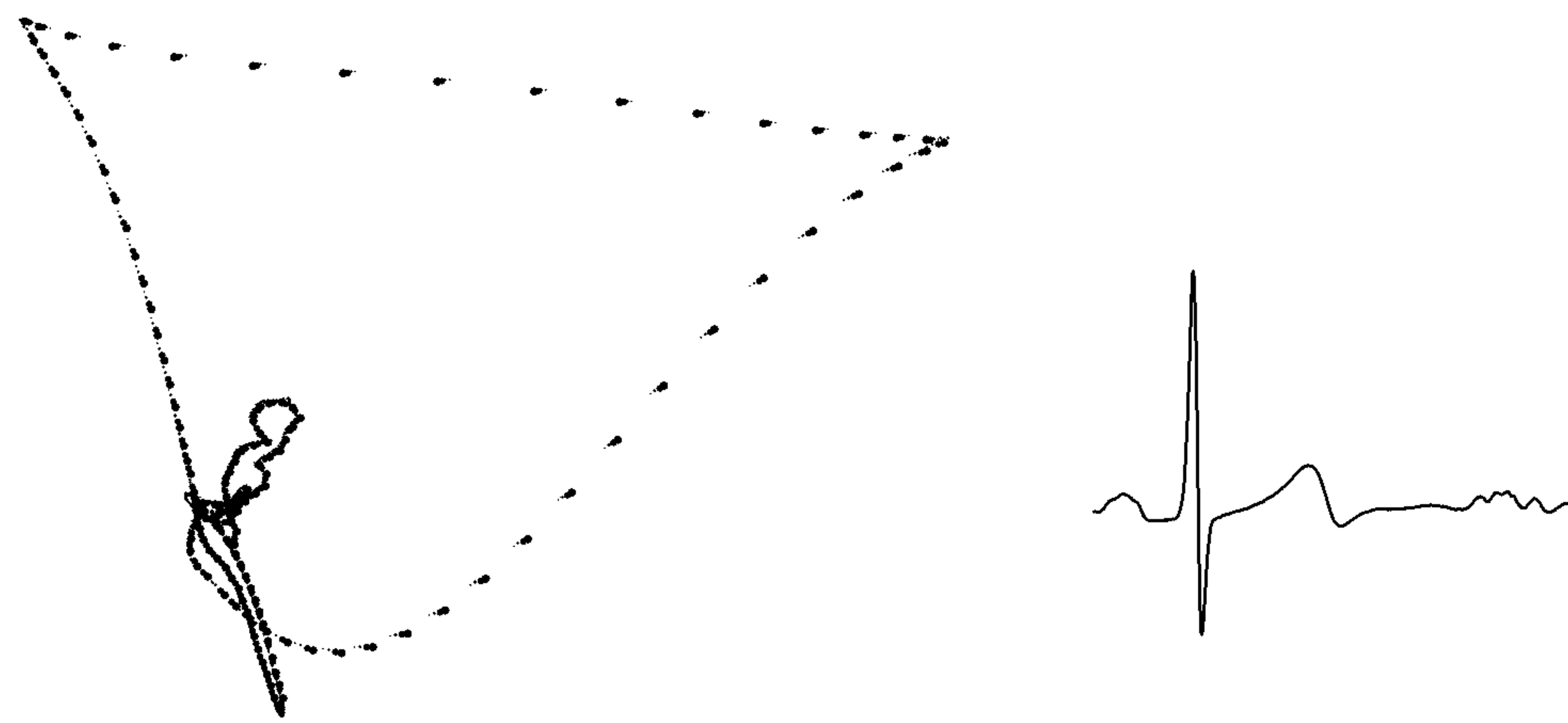


25mm/mv

Horizontal Plane (X - Z)

Y

P

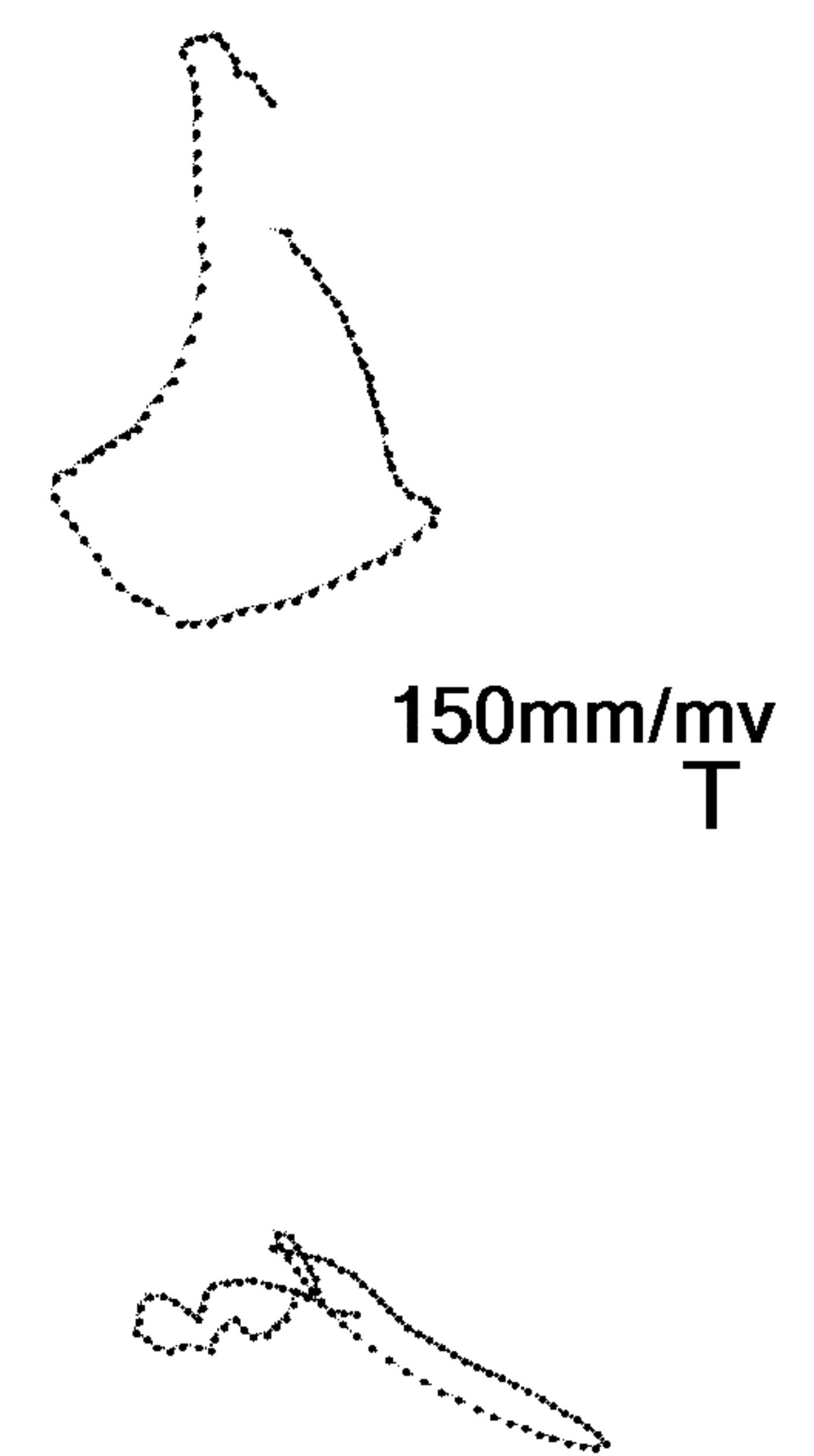
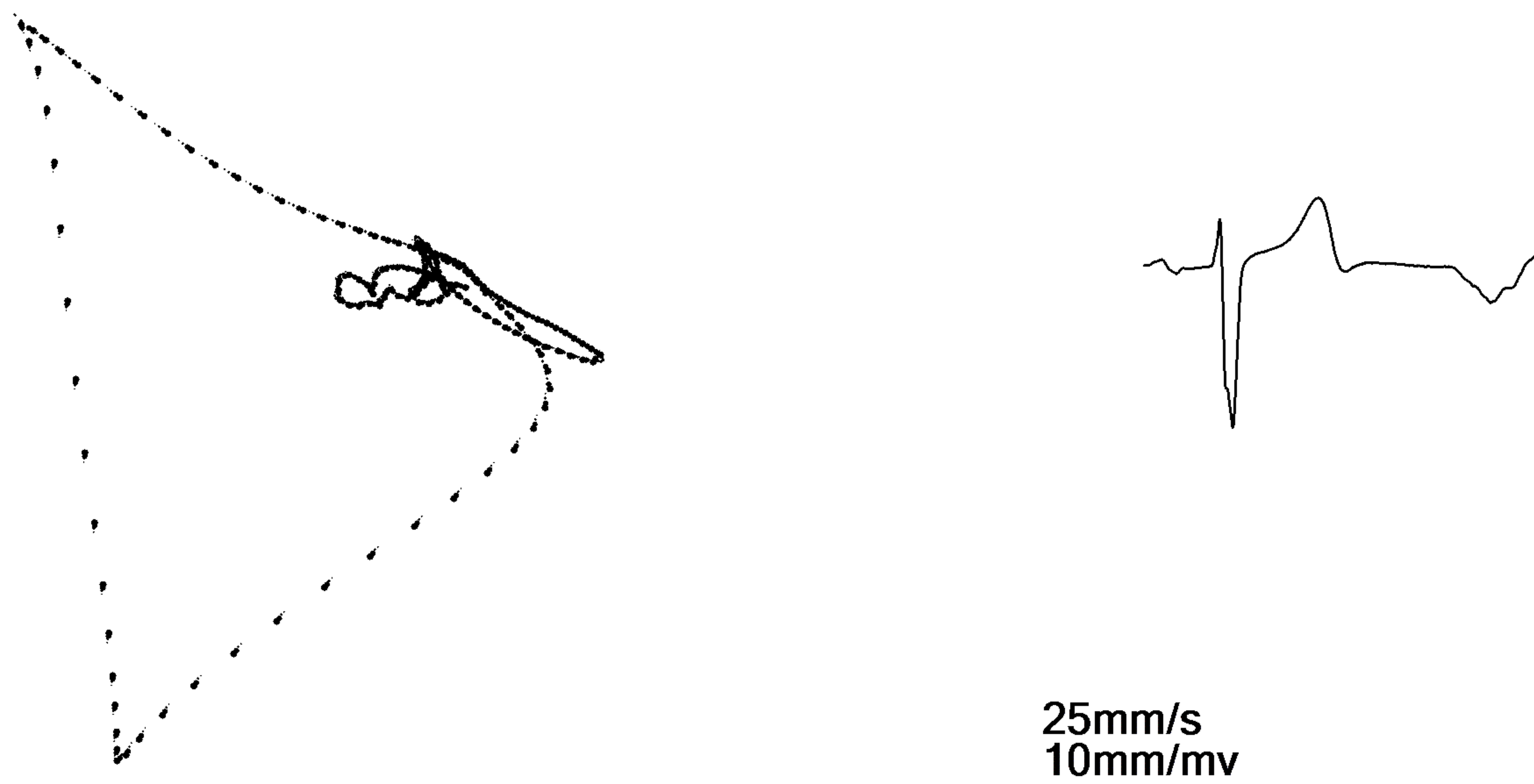


25mm/mv

Right Saggital Plane (Z - Y)

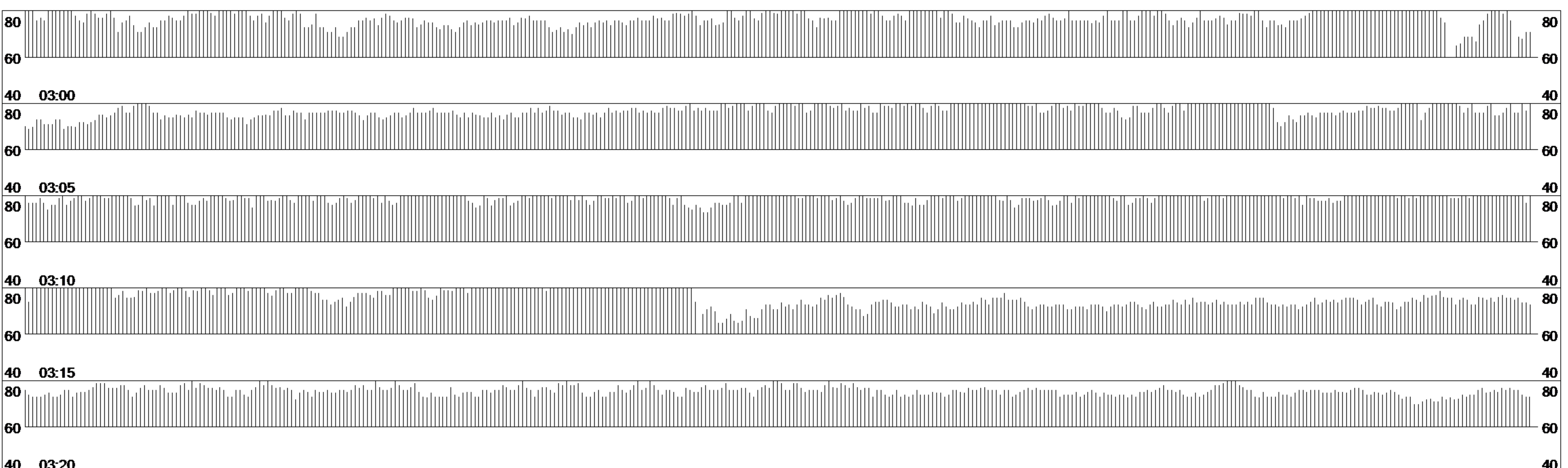
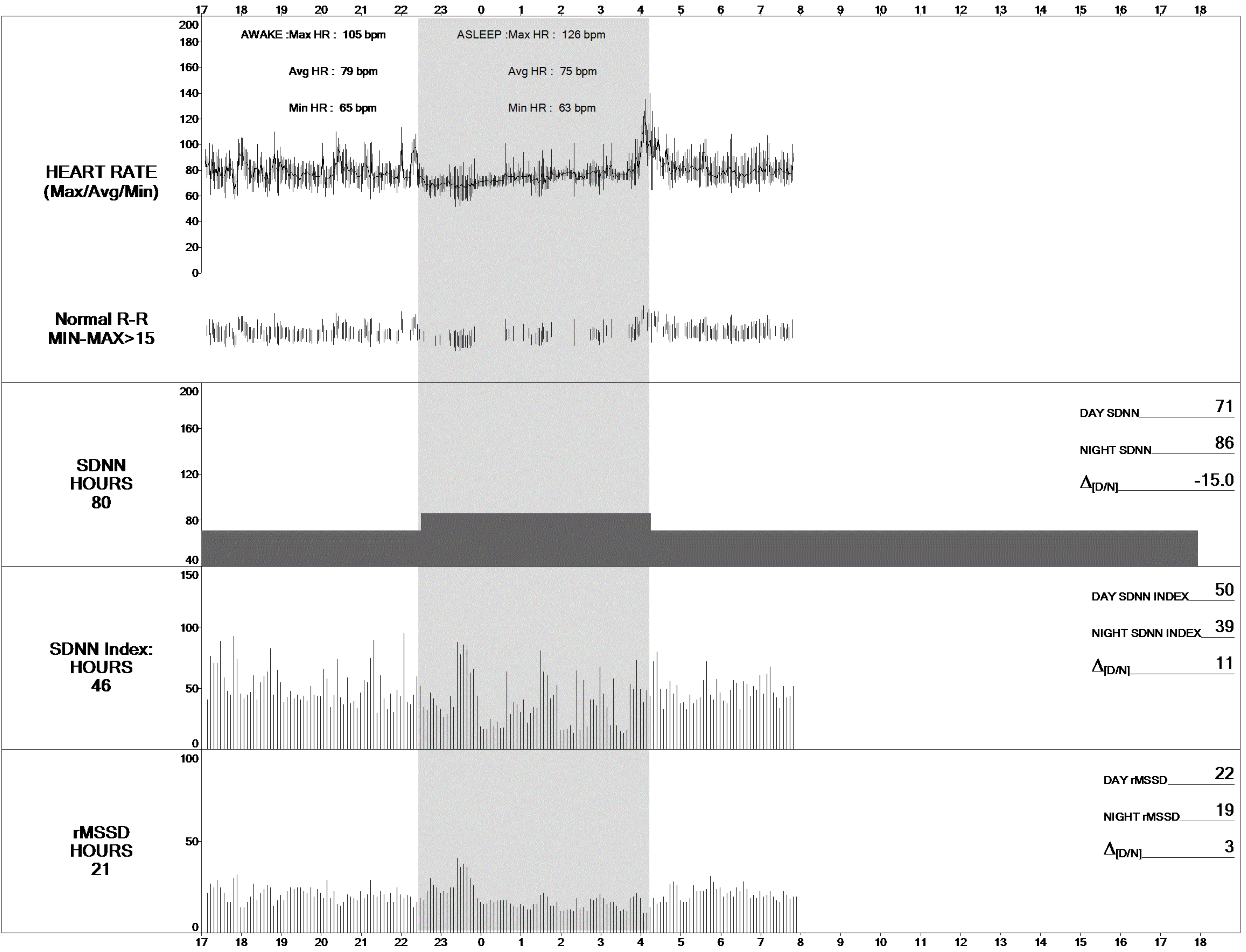
Z

P



25mm/mv

25mm/mv



| $\Delta_{[D/N]}$ SDNN: | | | $\Delta_{[D/N]}$ SDNN IND: | | | $\Delta_{[D/N]}$ rMSSD: | | | PUBLISHED MEDICAL REFERENCES |
|------------------------|----------|--|----------------------------|----------|--|-------------------------|----------|--|------------------------------|
| DAY SDNN | 71 | | DAY SDNN IND | 50 | | DAY rMSSD | 22 | | |
| NIGHT SDNN | 86 | | NIGHT SDNN IND | 39 | | NIGHT rMSSD | 19 | | |
| $\Delta_{[D/N]}$ | -15.0 | | $\Delta_{[D/N]}$ | 11 | | $\Delta_{[D/N]}$ | 3 | | |
| $\Delta_{[D/N]}$ NORM | 12 to -8 | | $\Delta_{[D/N]}$ NORM | -20 to 2 | | $\Delta_{[D/N]}$ NORM | -12 to 4 | | |

