

## Institute of HeartMath Autonomic Assessment Report

14700 West Park Avenue - Boulder Creek, CA 95006 - Tel (831) 338-8769 Fax (831) 338-1182

**Patient:** Abnormal Female  
**Sex:** F  
**Age:** 45  
**D.O.B.:**  
**Test Date:** 04/30/2013  
**Start Time:** 16:30  
**Medication:**

**Report Date:** 5/2/2013  
**Report ID#:** A

**Comments:**  
**File:**

### Time Domain Analysis

	Total Record	Reference Values	Day	Night	Night/Day Delta
HR (bpm)	83.1	(52.8 - 105.8)	88.9	72.2	-16.7
IBI (ms)	734.0	-----	680.8	834.3	153.6
SDNN (ms)	93.3	(58.5 - 197.5)	62.8	47.6	-15.1
SDANN (ms)	87.8	(46.1 - 184.1)	53.8	33.6	-20.2
SDNN index (ms)	31.5 *	(32.2 - 80.5)	31.9	30.9	-0.9
RMS-SD	15.4	-----	14.9	16.2	1.3
Ln RMS-SD	2.7	(2.7 - 3.9)			

### Frequency Domain Analysis of 5-Minute Segments

	Total Record	Ln Value	Reference Values	Day	Night	Night-Day Delta
5-min HF	55.6	4.0	(4.0 - 6.7)	49.8	64.6	14.8
5-min LF	178.5	5.2 *	(5.8 - 7.5)	190.8	159.3	-31.6
5-min VLF	693.4	6.5 *	(6.7 - 8.3)	657.7	749.1	91.4
5-min TP	927.5	6.8 *	(7.2 - 8.7)	898.3	973.0	74.7
LF/HF	4.0	1.4	(0.9 - 2.6)	4.7	2.8	-1.9
HF norm	28.7	-----	-----	24.5	35.2	10.7
LF norm	71.3	-----	-----	75.5	64.8	-10.7

### Frequency Domain Analysis of Total Record

<b>Total Power</b>	<b>8624.7</b>	<b>9.1</b>	<b>(8.7 - 10.4)</b>
<b>ULF</b>	<b>7751.6</b>	<b>9.0</b>	<b>(8.4 - 10.2)</b>

ms = milliseconds  
 HR = Heart Rate  
 HF = High frequency  
 LF = Low frequency  
 VLF = Very low frequency  
 Ln = Natural logarithm  
 ULF = Ultra low frequency  
 TP = Total power  
 LF/HF = Low frequency/High frequency Ratio  
 HF norm = Normalized High frequency  
 LF norm = Normalized Low frequency

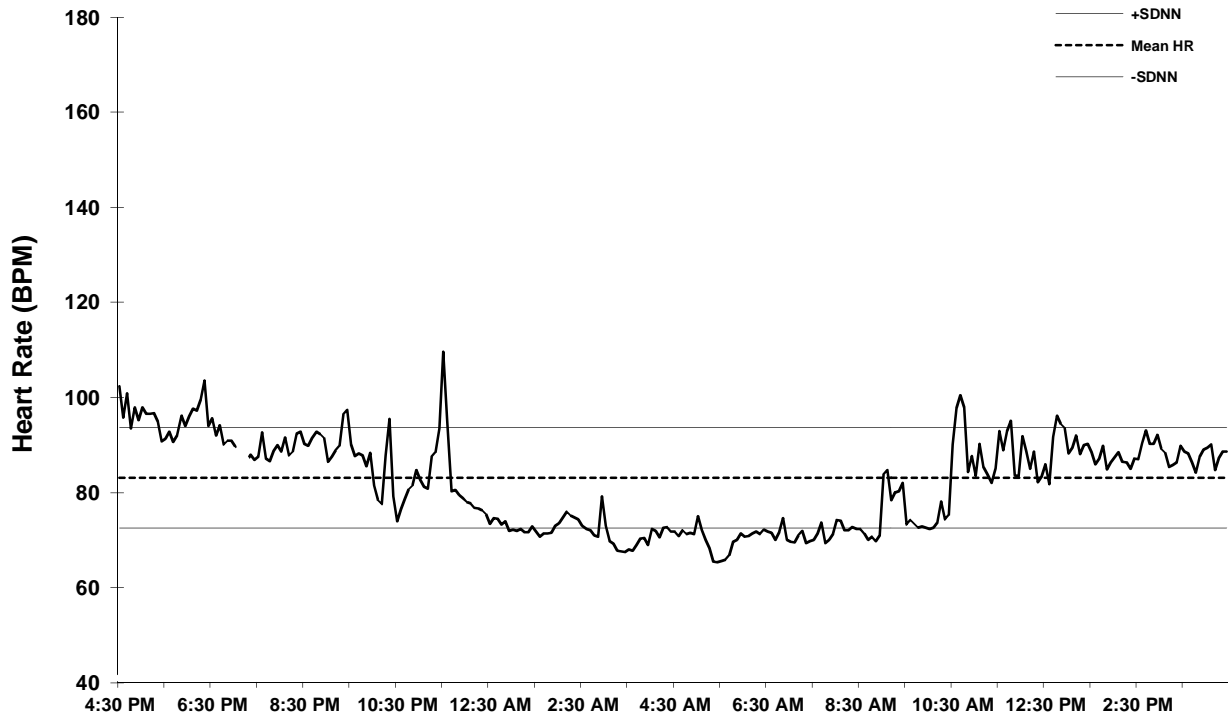
### **Impressions and Findings**

The following measures are below the reference range: SDNN index, LF power, VLF power, 5-min TP, .

Sleep cycle duration, hrs.: 9.3

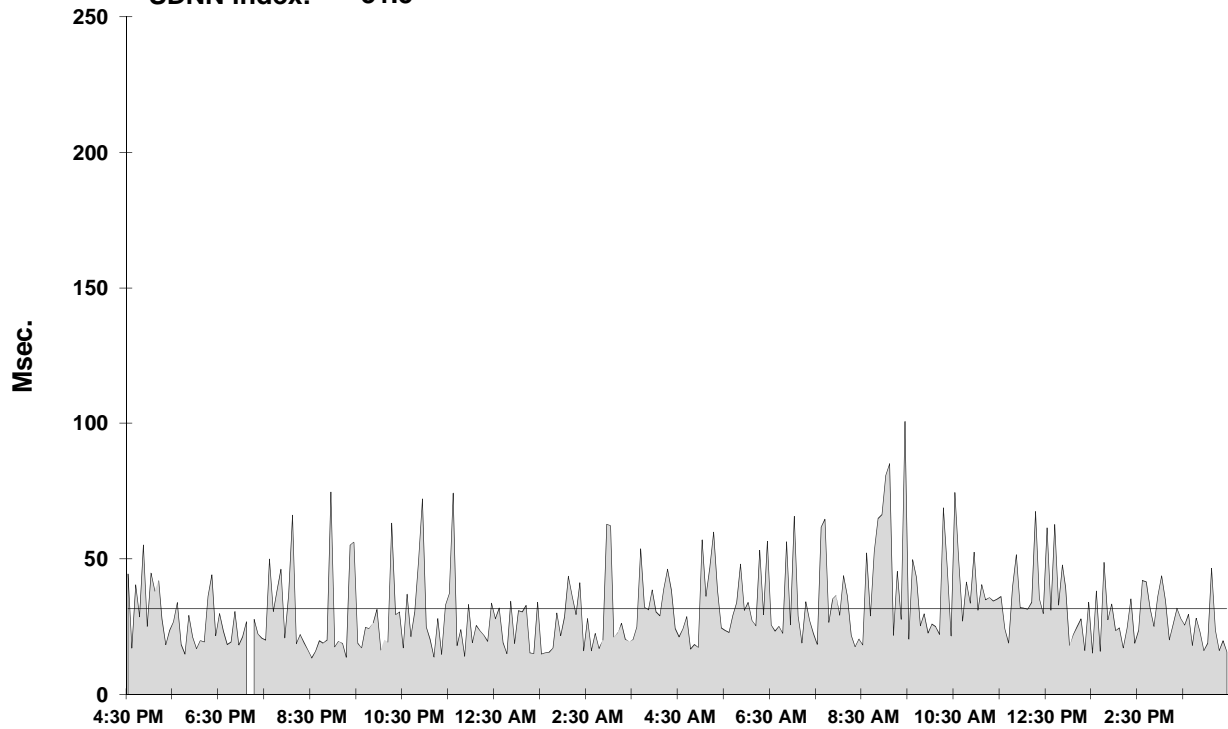
Mean HR (BPM): 83.1  
SDNN (Msec): 93.3

### 24-Hour Heart Rate Profile



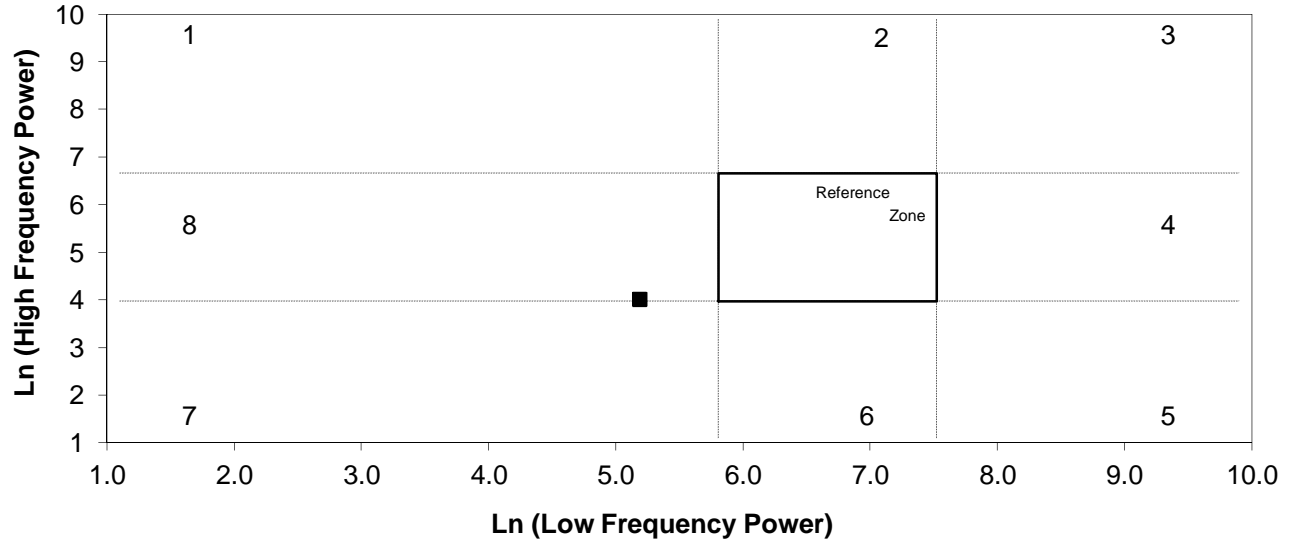
### Heart Rate Variability Index Standard Deviation of Each 5-Min. Epoch

SDNN index: 31.5

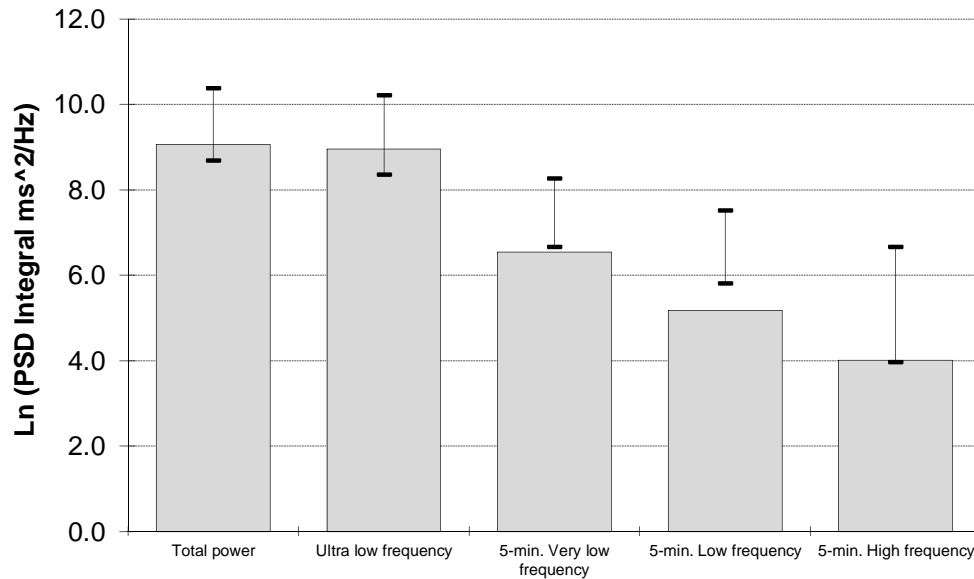


## 24-Hour Autonomic Balance Profile (Mean of All 5-Minute Segments)

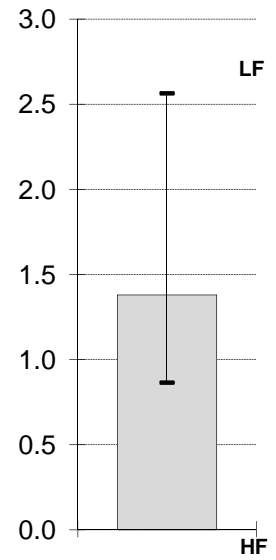
Patient Level = ■ **Low Frequency Power vs. High Frequency Power**



### Frequency Domain Analysis Summary



### LF/HF Ratio



	Absolute Values	Ln Values	Reference Values
<b>Total power</b>	8624.7	9.1	(8.7 - 10.4)
<b>Ultra low frequency</b>	7751.6	9.0	(8.4 - 10.2)
<b>5-min. Very low frequency</b>	693.4	6.5	(6.7 - 8.3)
<b>5-min. Low frequency</b>	178.5	5.2	(5.8 - 7.5)
<b>5-min. High frequency</b>	55.6	4.0	(4.0 - 6.7)
<b>LF/HF Ratio</b>	4.0	1.4	(0.9 - 2.6)

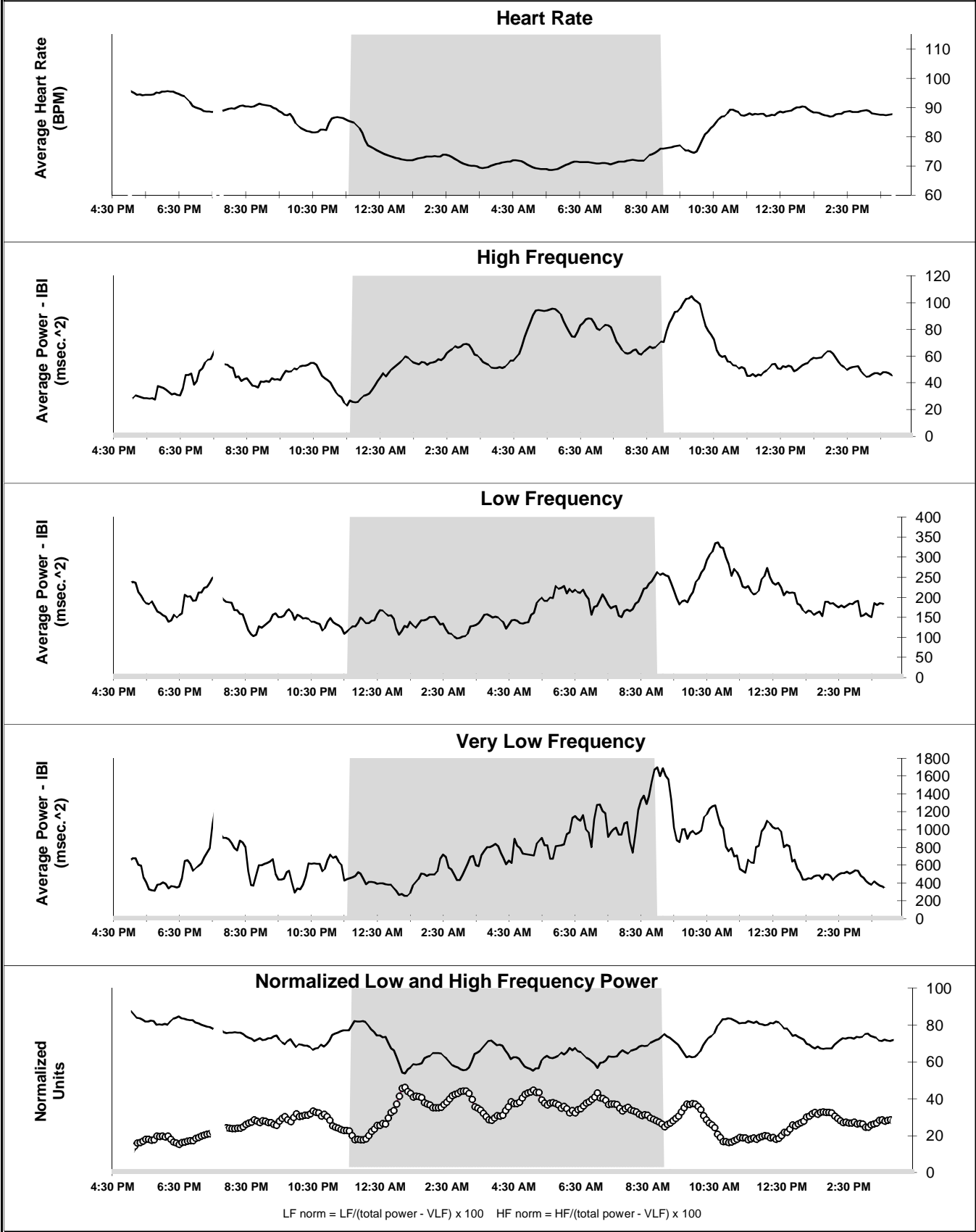
Test Date: 04/30/2013

Patient: Abnormal Female

page 3/4

## Circadian Rhythm Analysis (One Hour Moving Average of 5-Minute Segments)

Sleep cycle (hrs.): 9.3

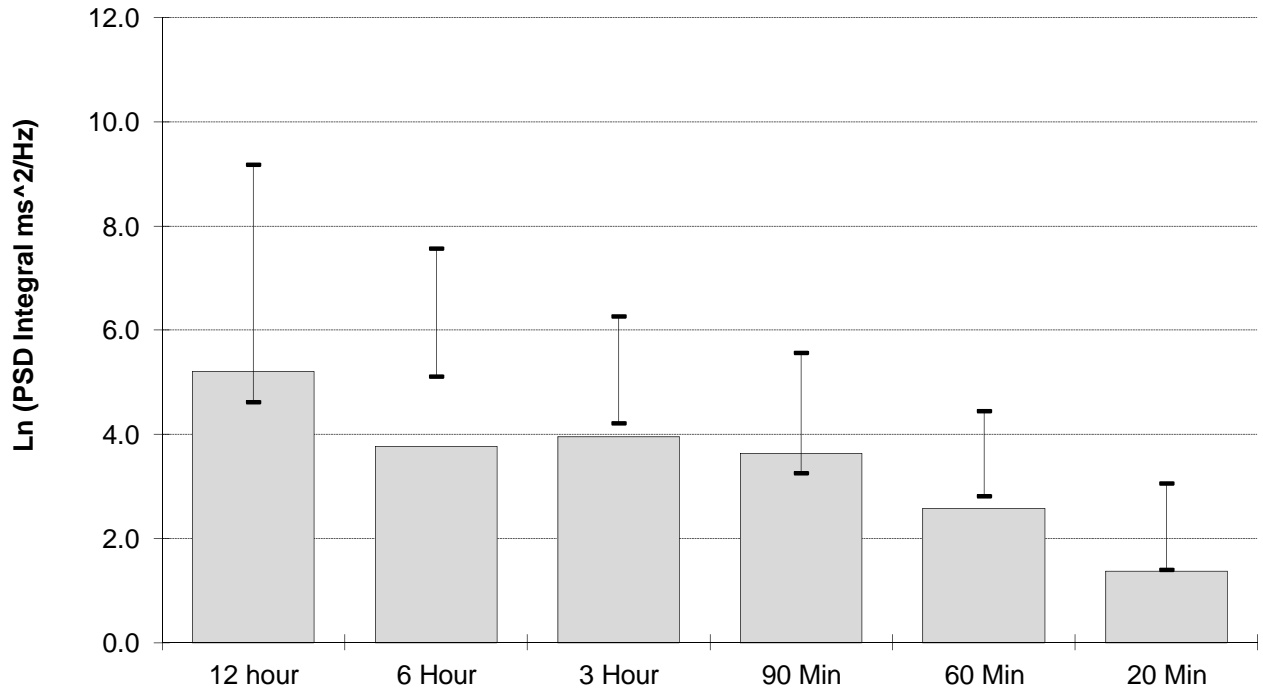


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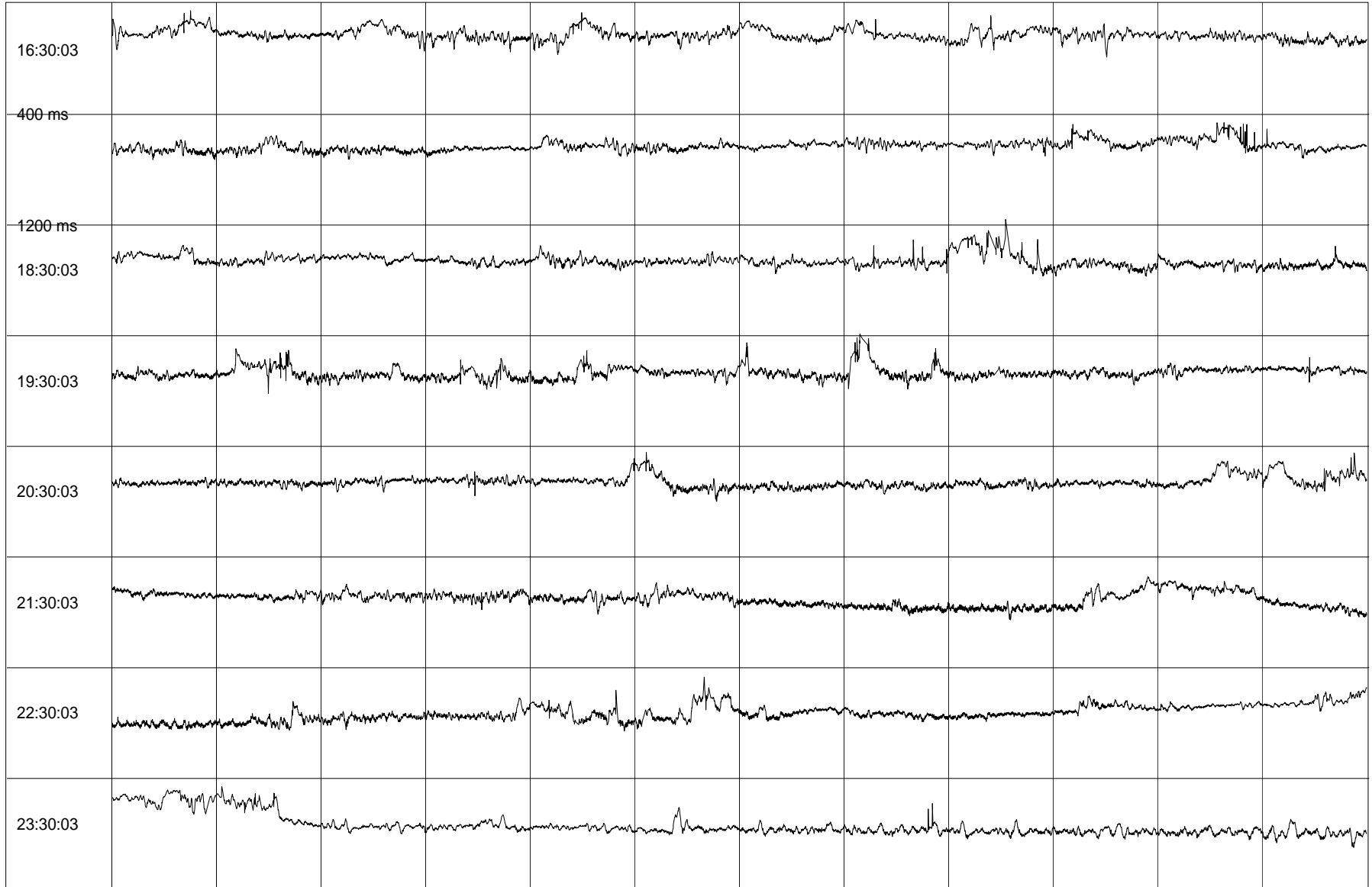
page 4/4

## ULF Power Spectrum Bands

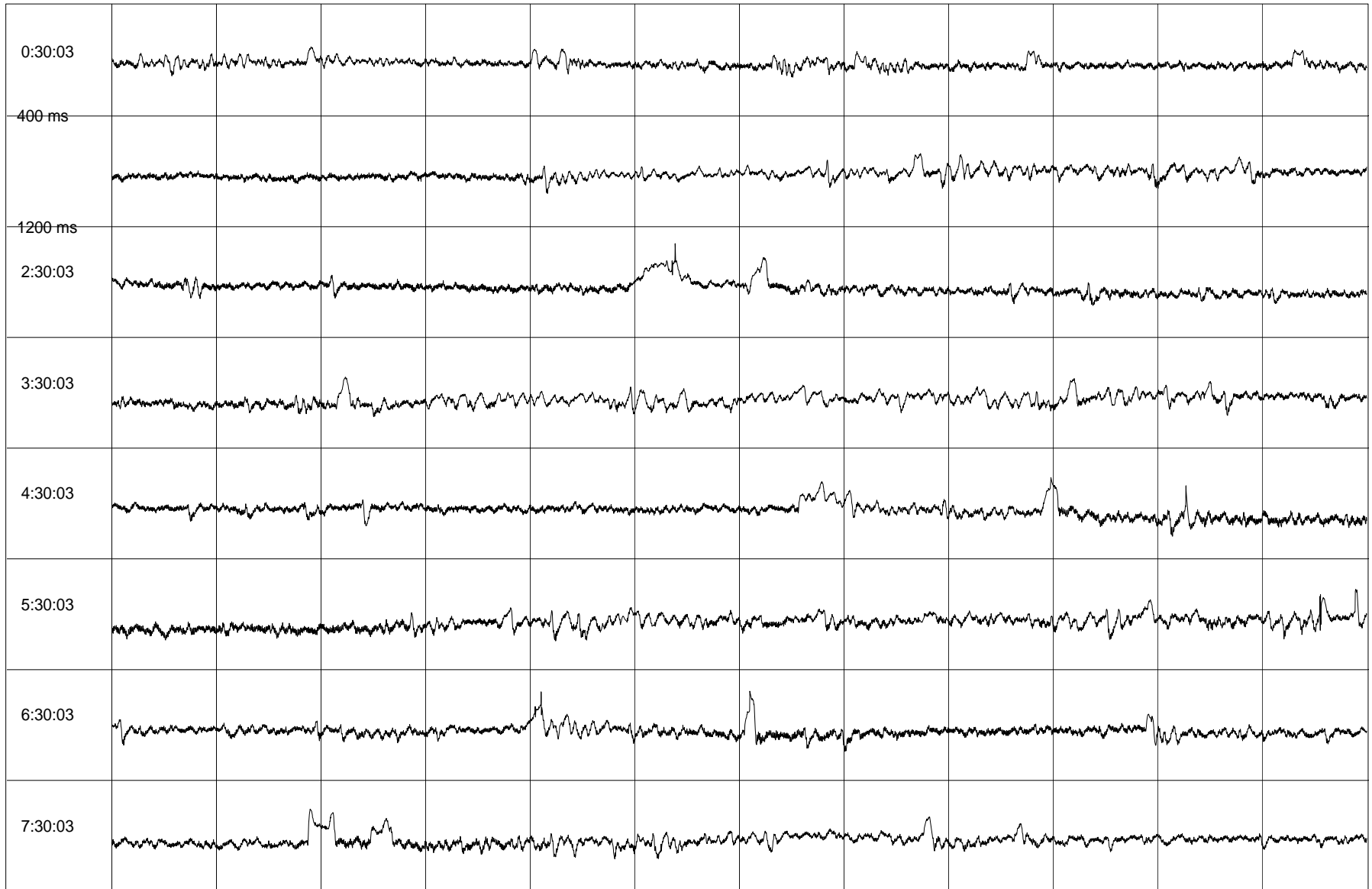


	Absolute Values	Ln Values	Reference Values
<b>12 hour</b>	182.6	5.2	(4.6 - 9.2)
<b>6 Hour</b>	43.2	3.8	(5.1 - 7.6)
<b>3 Hour</b>	51.8	3.9	(4.2 - 6.3)
<b>90 Min</b>	37.6	3.6	(3.2 - 5.6)
<b>60 Min</b>	13.2	2.6	(2.8 - 4.4)
<b>20 Min</b>	3.9	1.4	(1.4 - 3.0)

W22: Abnormal Female 4/30/2013 page 1



W22: Abnormal Female 4/30/2013 page 2



W22: Abnormal Female 4/30/2013 page 3

