

**Ambient Ground Vibration Measurements  
at the Hanford, Washington LIGO Site**

**Appendix H**

LIGO-C950580-00-□

**LIGO Site Wind Noise Plots**

## LIGO Wind Speed Plots

### LIGO Site 15-Minute Mean Wind Speed

Days 333 -336 Northwest End  
Days 336 -342 Southwest End  
Days 342 -349 Corner

### LIGO Site 15-Minute Peak Wind Speed

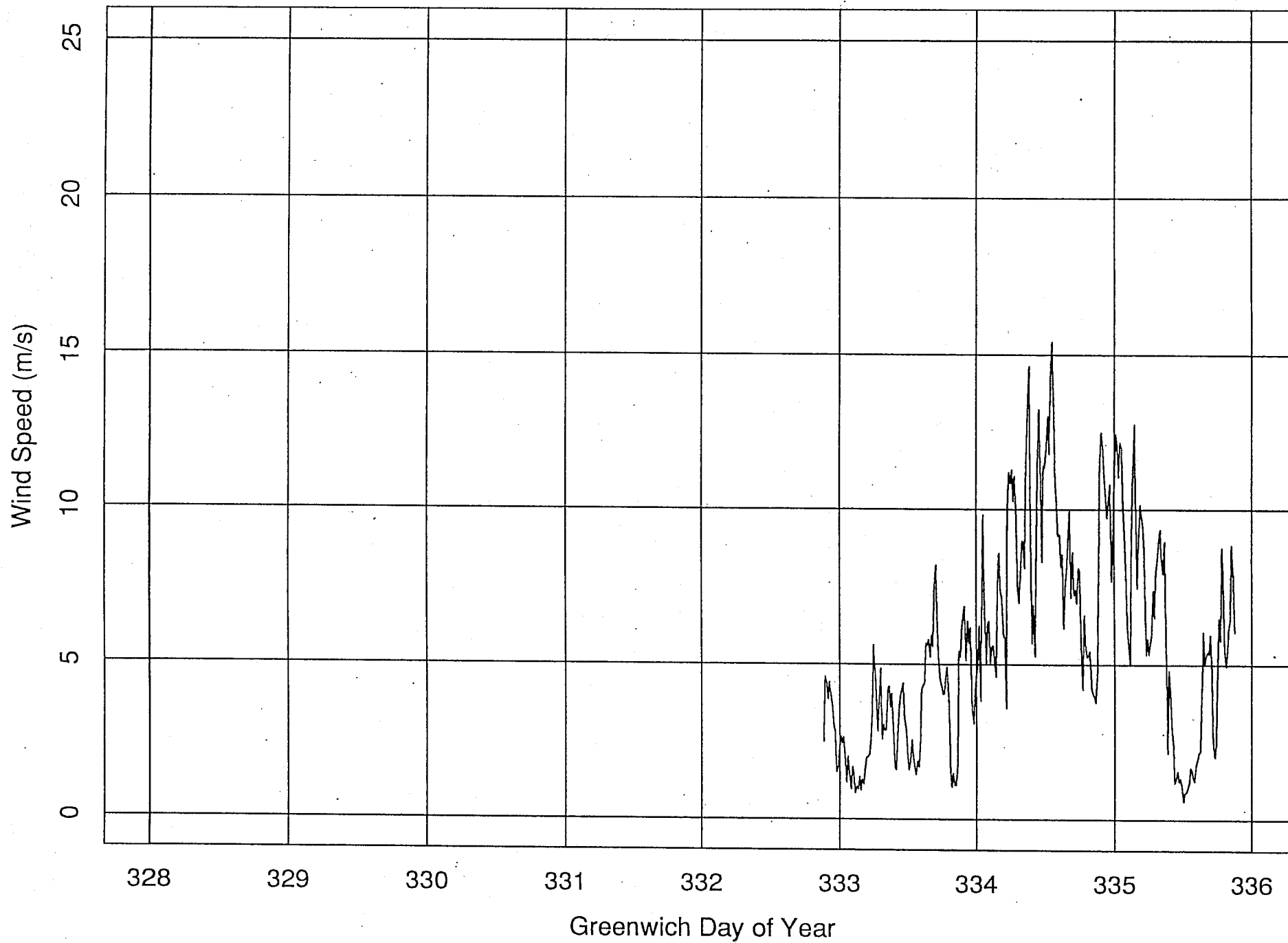
Days 333 -336 Northwest End  
Days 336 -342 Southwest End  
Days 342 -349 Corner

### Horn Rapids 15-Minute Mean Wind Speed

Days 328 - 336  
Days 336 - 342  
Days 342 - 349

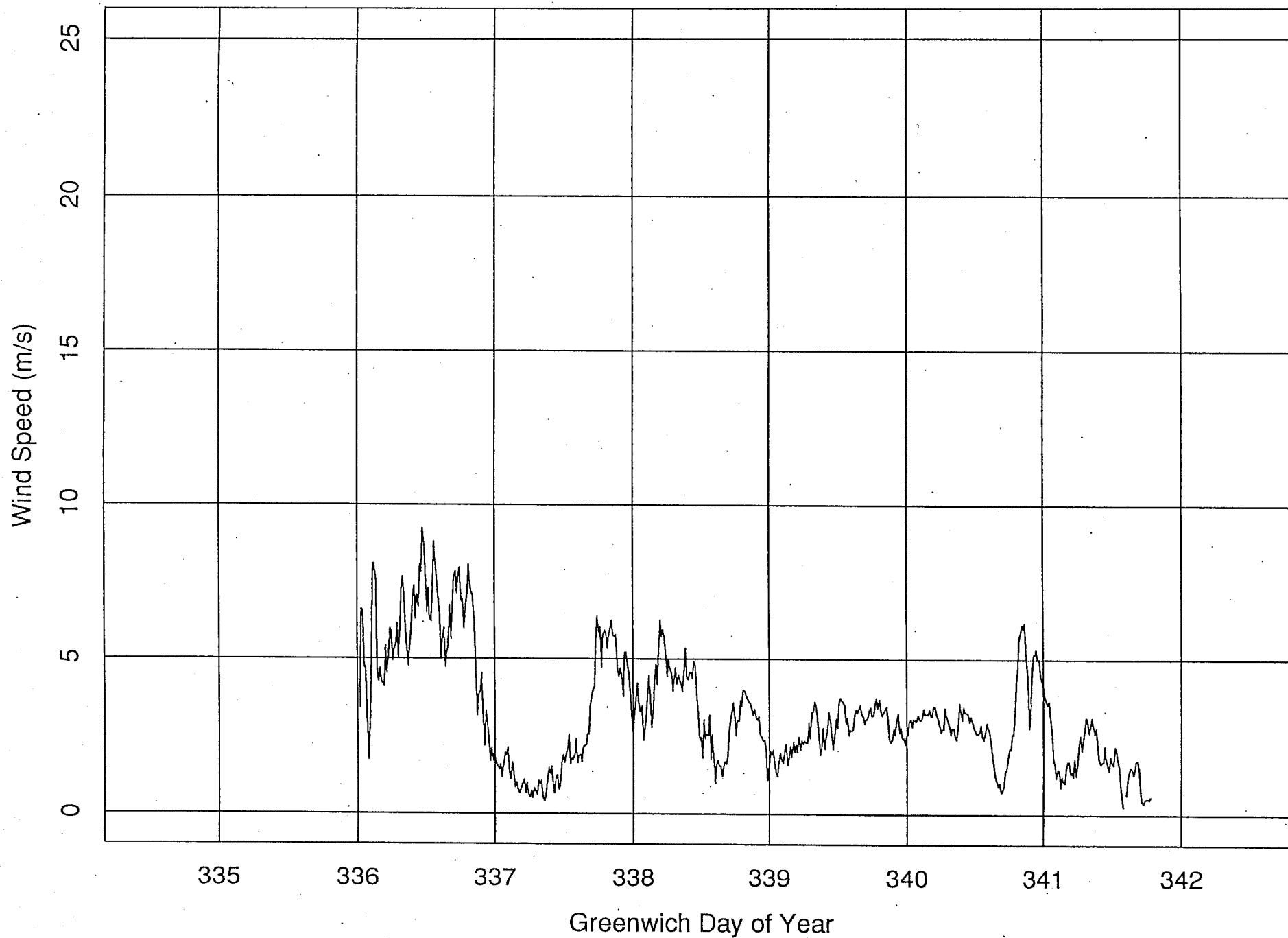
# LIGO Northwest Arm 15-Minute Mean Wind Speed

LIGO-C950580-00-0



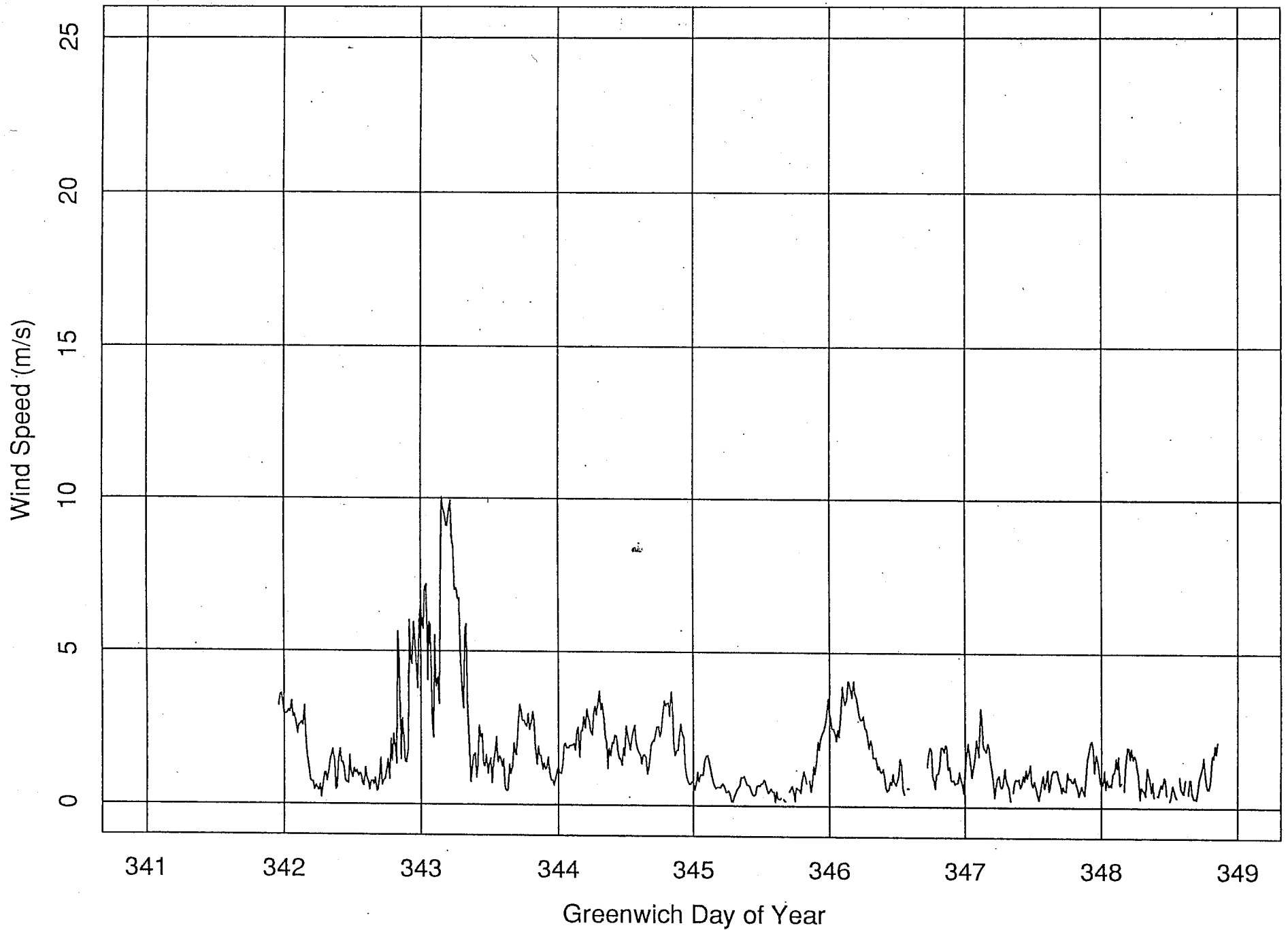
# LIGO Southwest Arm 15-Minute Mean Wind Speed

LIGO-C950580-00-0



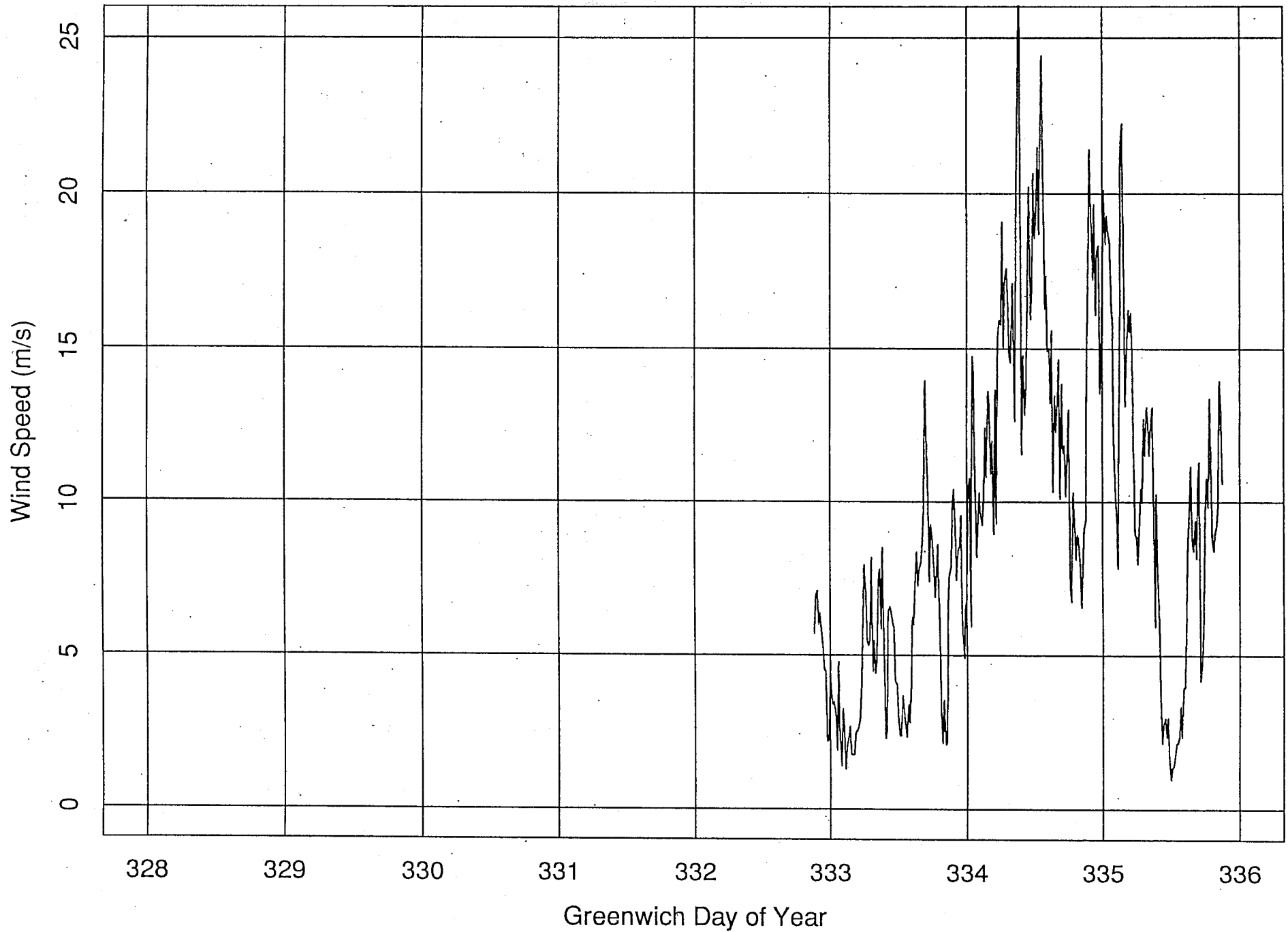
# LIGO Corner 15-Minute Mean Wind Speed

LIGO-C950580-00-0



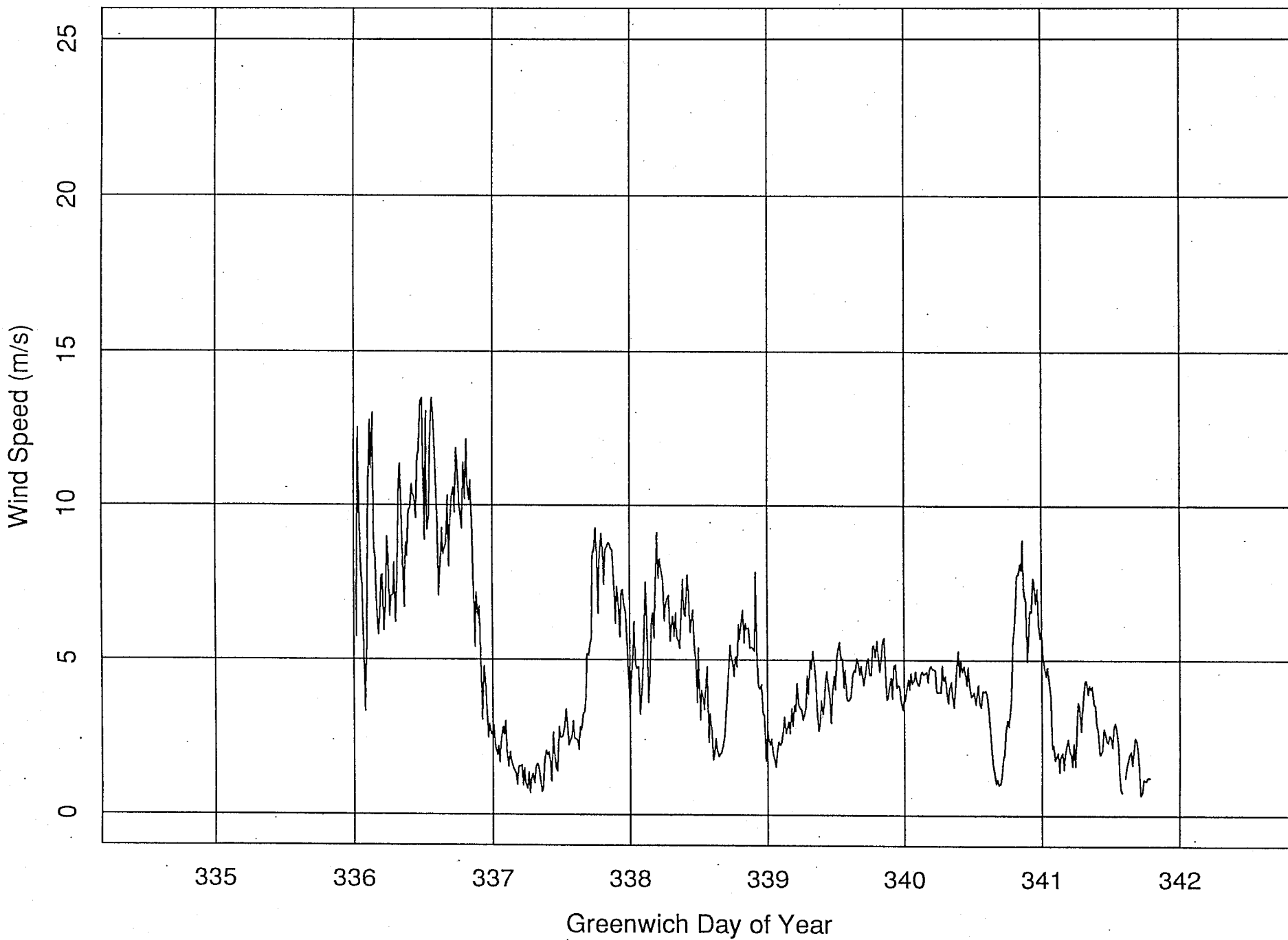
# LIGO Northwest Arm 15-Minute Peak Wind Speed

LIGO-C950580-00-0



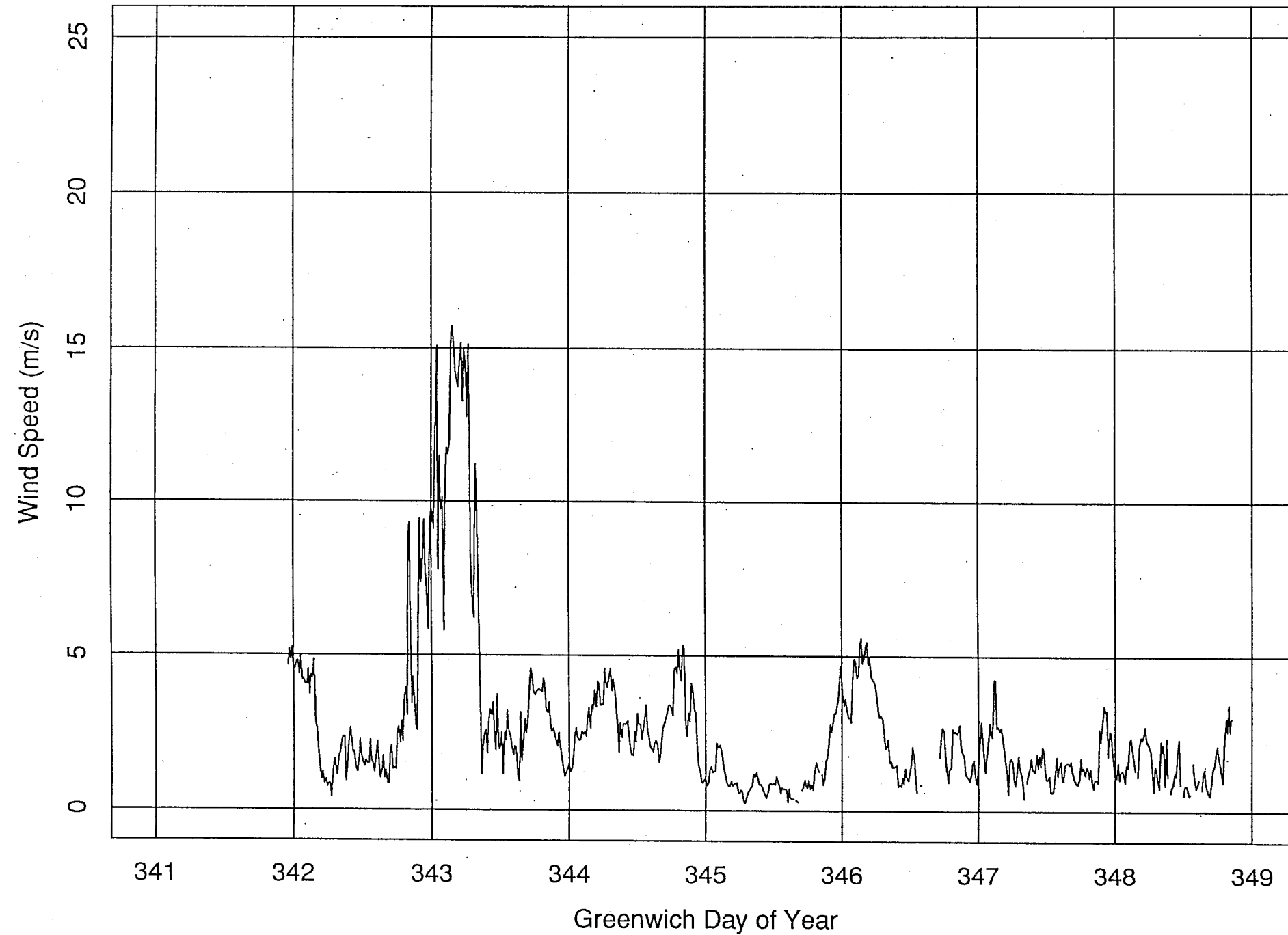
# LIGO Southwest Arm 15-Minute Peak Wind Speed

LIGO-C950580-00-0



# LIGO Corner 15-Minute Peak Wind Speed

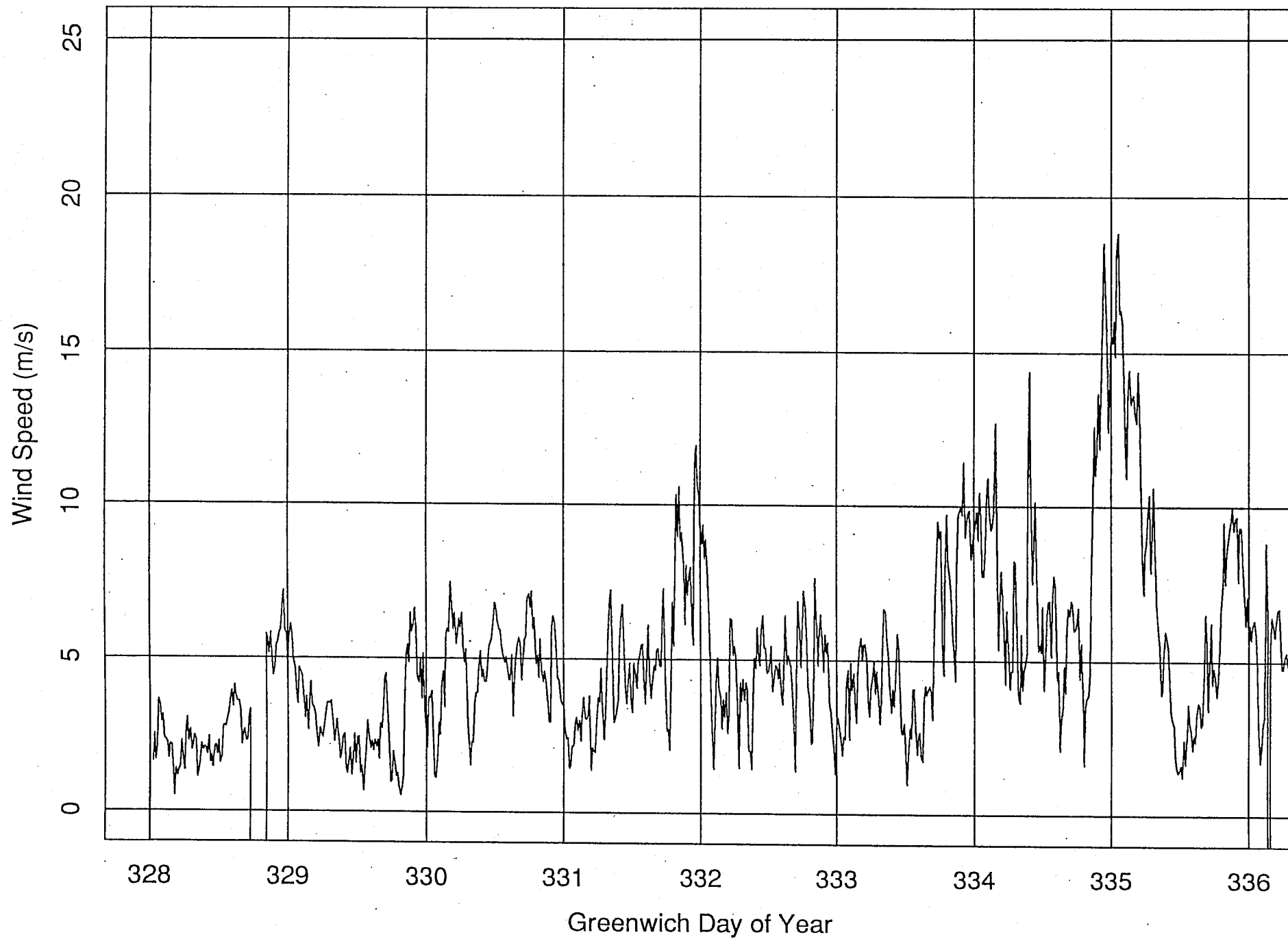
LIGO-C950580-00-0





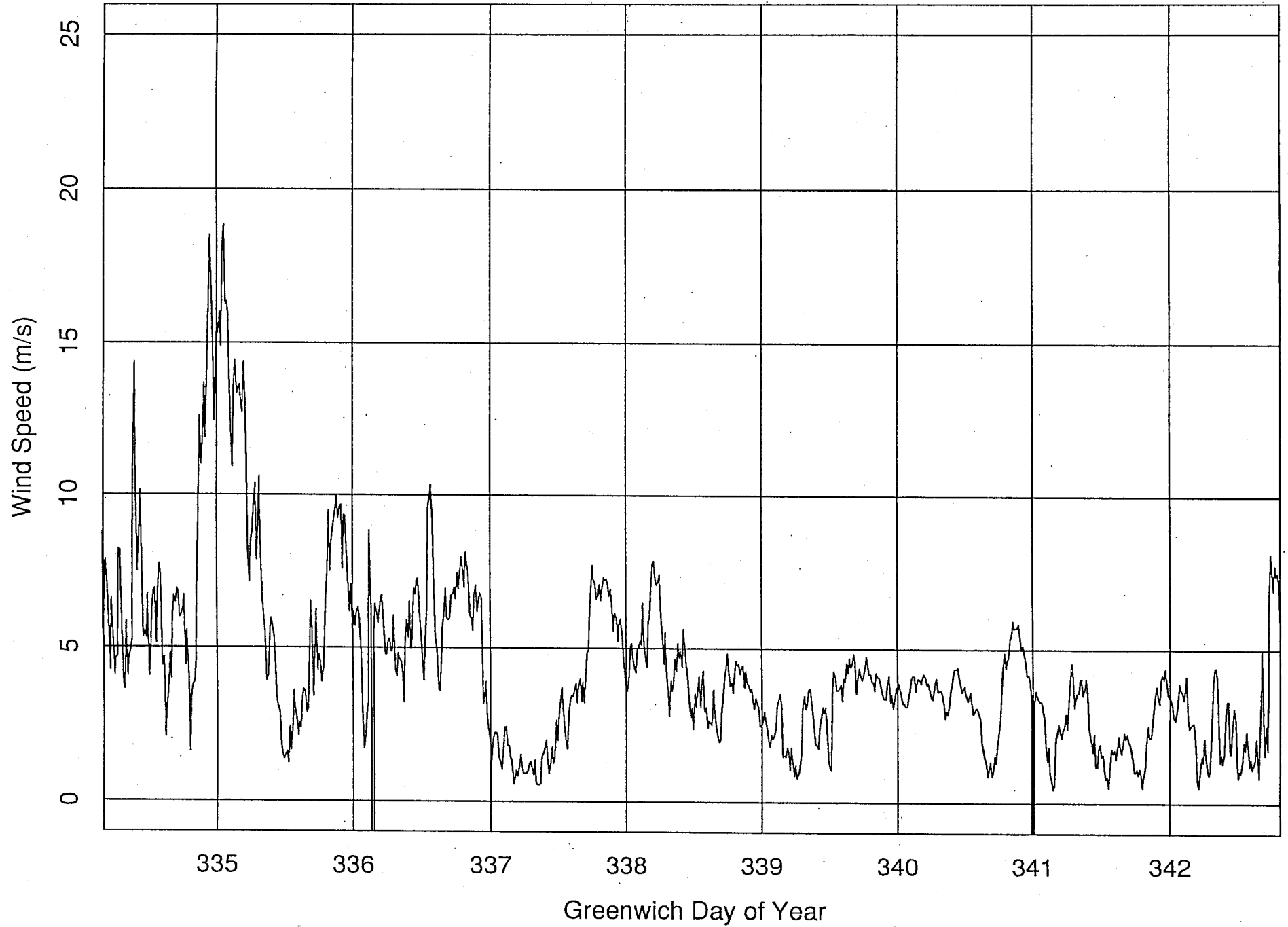
# Horn Rapids 15-Minute Mean Wind Speed

LIGO-C950580-00-0

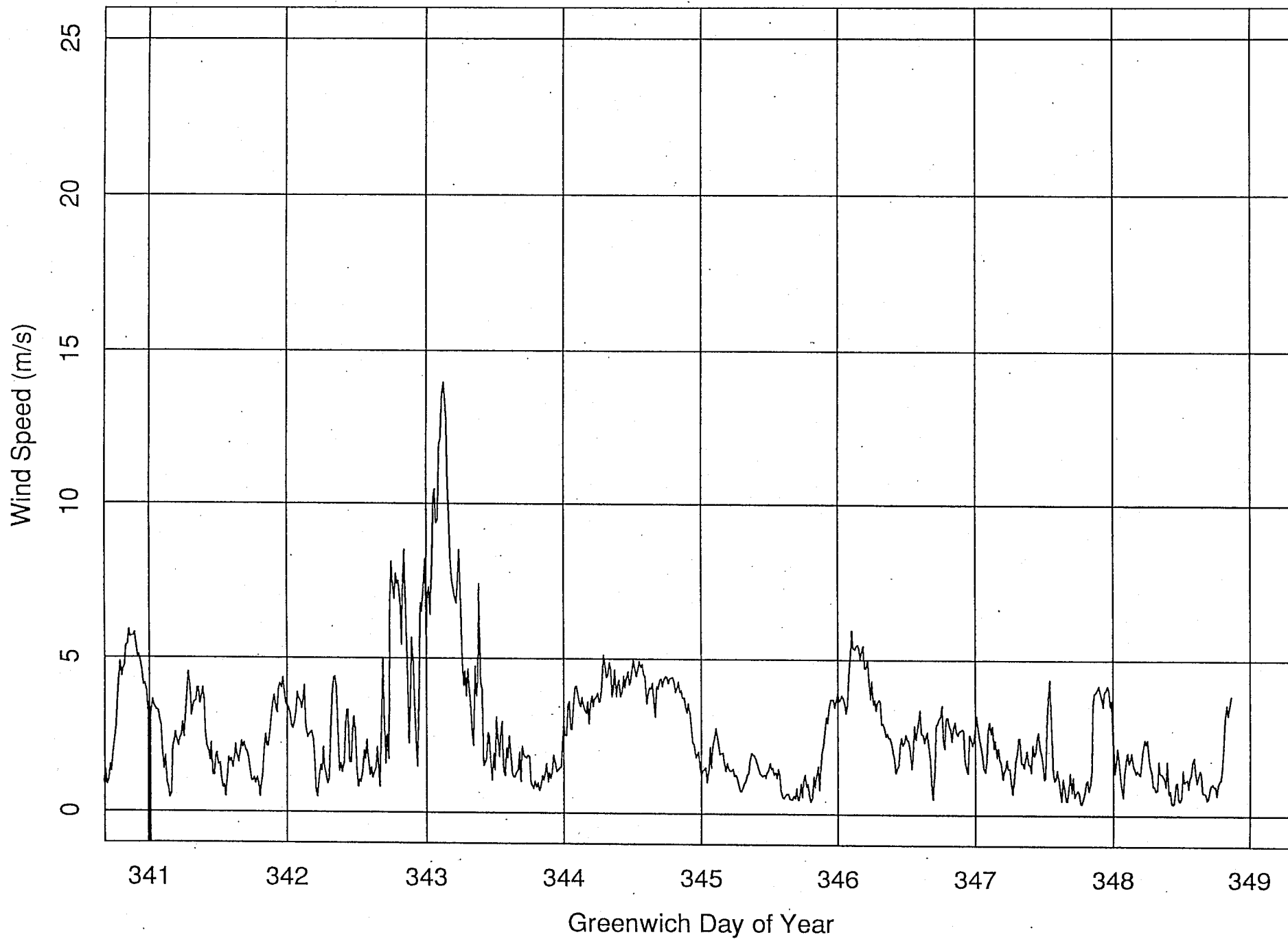


# Horn Rapids 15-Minute Mean Wind Speed

LIGO-C950580-00-0

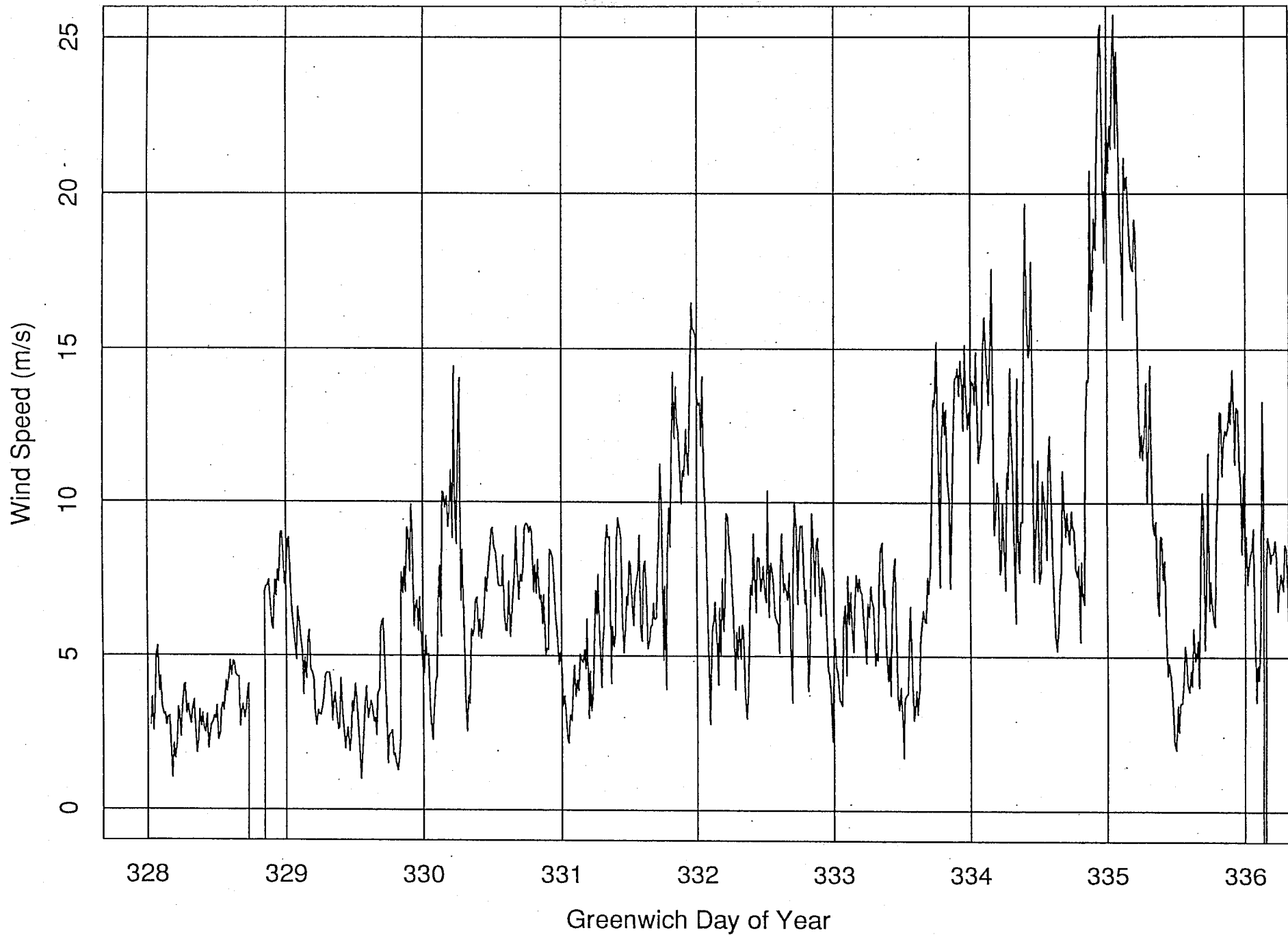


## Horn Rapids 15-Minute Mean Wind Speed



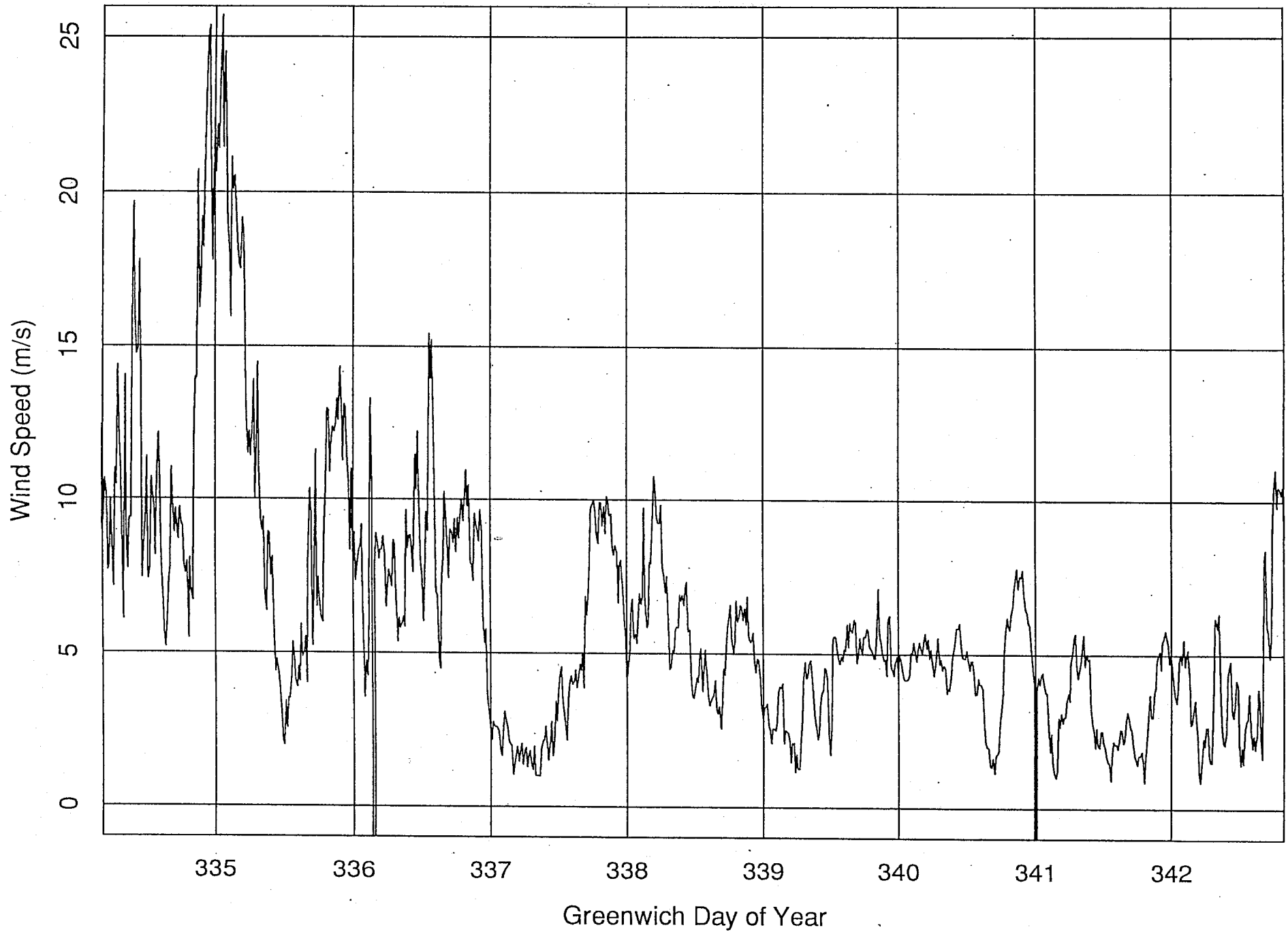
# Horn Rapids 15-Minute Peak Wind Speed

LIGO-C950580-00-0



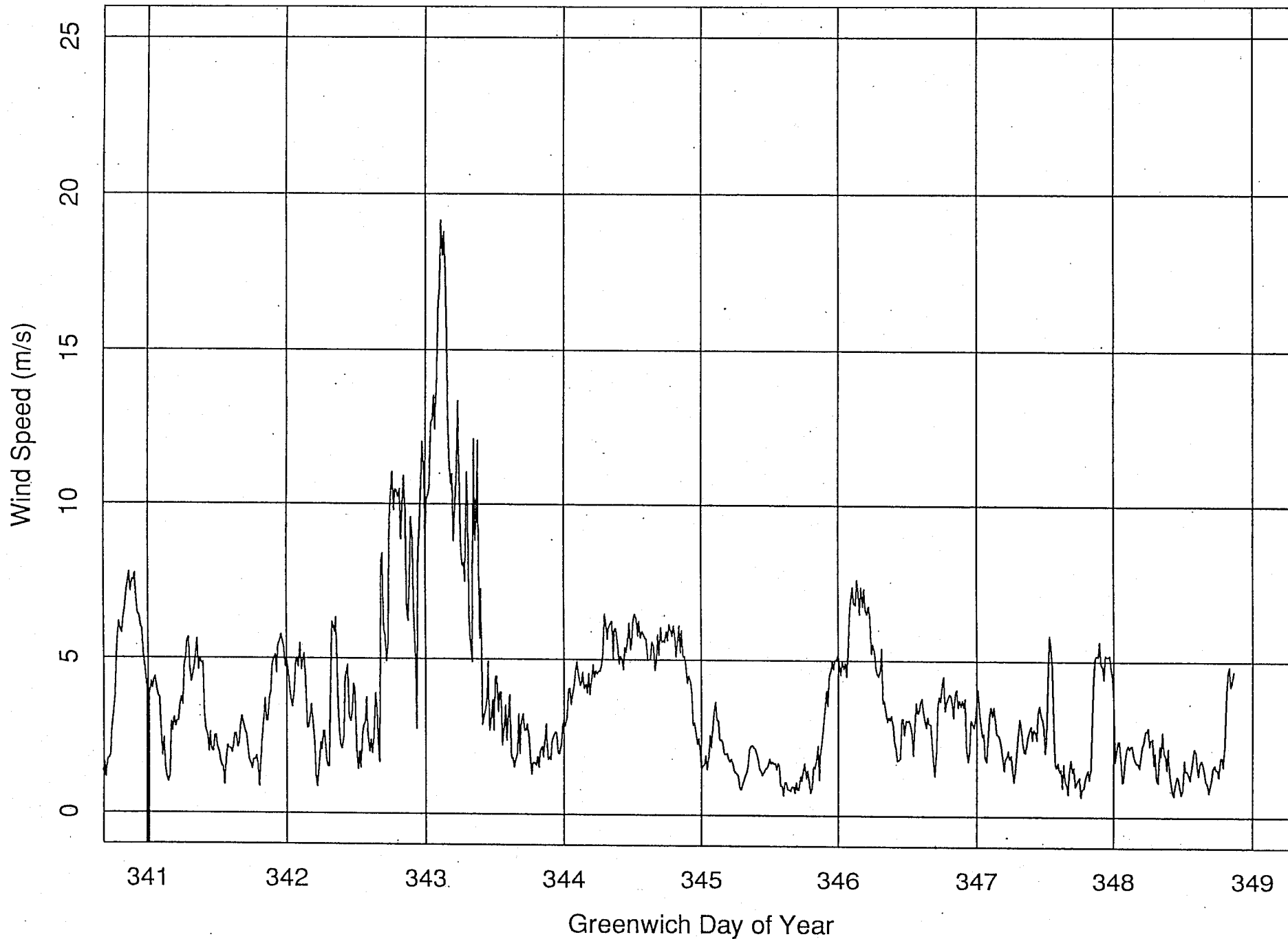
# Horn Rapids 15-Minute Peak Wind Speed

LIGO-C950580-00-0



# Horn Rapids 15-Minute Peak Wind Speed

LIGO-C950580-00-0



## LIGO Wind Speed Plots

### Wind Effects at Northwest End

#### Day 335 Hourly Seismic Acceleration Spectrograms

Hour 06 06:00 - 07:00 GMT  
Hour 07 07:00 - 08:00 GMT  
Hour 08 08:00 - 09:00 GMT  
Hour 09 09:00 - 10:00 GMT  
Hour 10 10:00 - 11:00 GMT  
Hour 11 11:00 - 12:00 GMT  
Hour 12 12:00 - 13:00 GMT  
Hour 13 13:00 - 14:00 GMT

#### Day 335 Hourly Wind Speed Plots

Hour 06 06:00 - 07:00 GMT  
Hour 07 07:00 - 08:00 GMT  
Hour 08 08:00 - 09:00 GMT  
Hour 09 09:00 - 10:00 GMT  
Hour 10 10:00 - 11:00 GMT  
Hour 11 11:00 - 12:00 GMT  
Hour 12 12:00 - 13:00 GMT  
Hour 13 13:00 - 14:00 GMT

#### Day 335 Vertical Component Displacement Spectra

Hour 07 0540 seconds  
Hour 07 1640 seconds  
Hour 10 1400 seconds  
Hour 11 0000 seconds

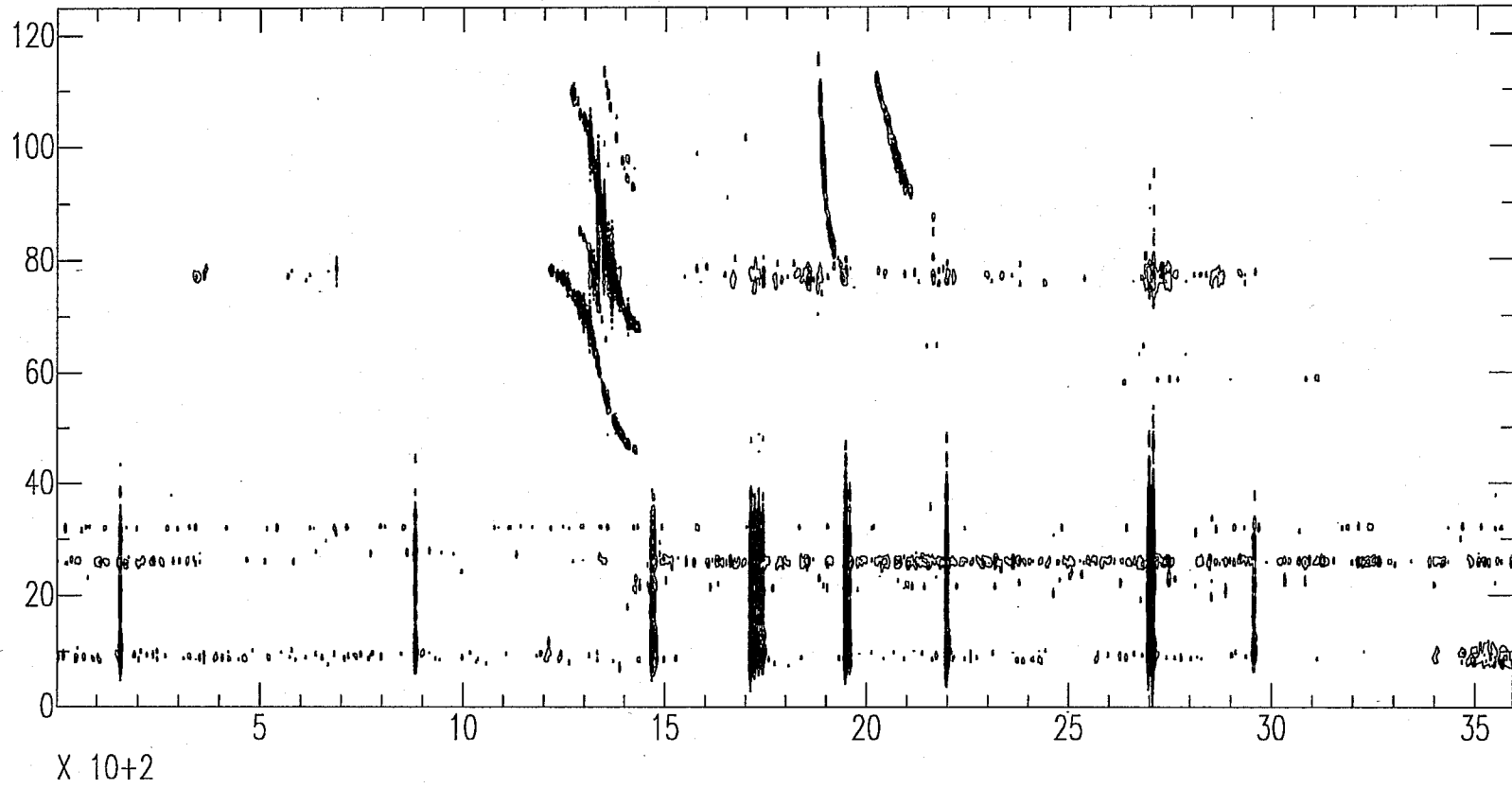
#### Day 335 Northwest Component Displacement Spectra

Hour 07 0540 seconds  
Hour 07 1640 seconds  
Hour 10 1400 seconds  
Hour 11 0000 seconds

#### Day 335 Southwest Component Displacement Spectra

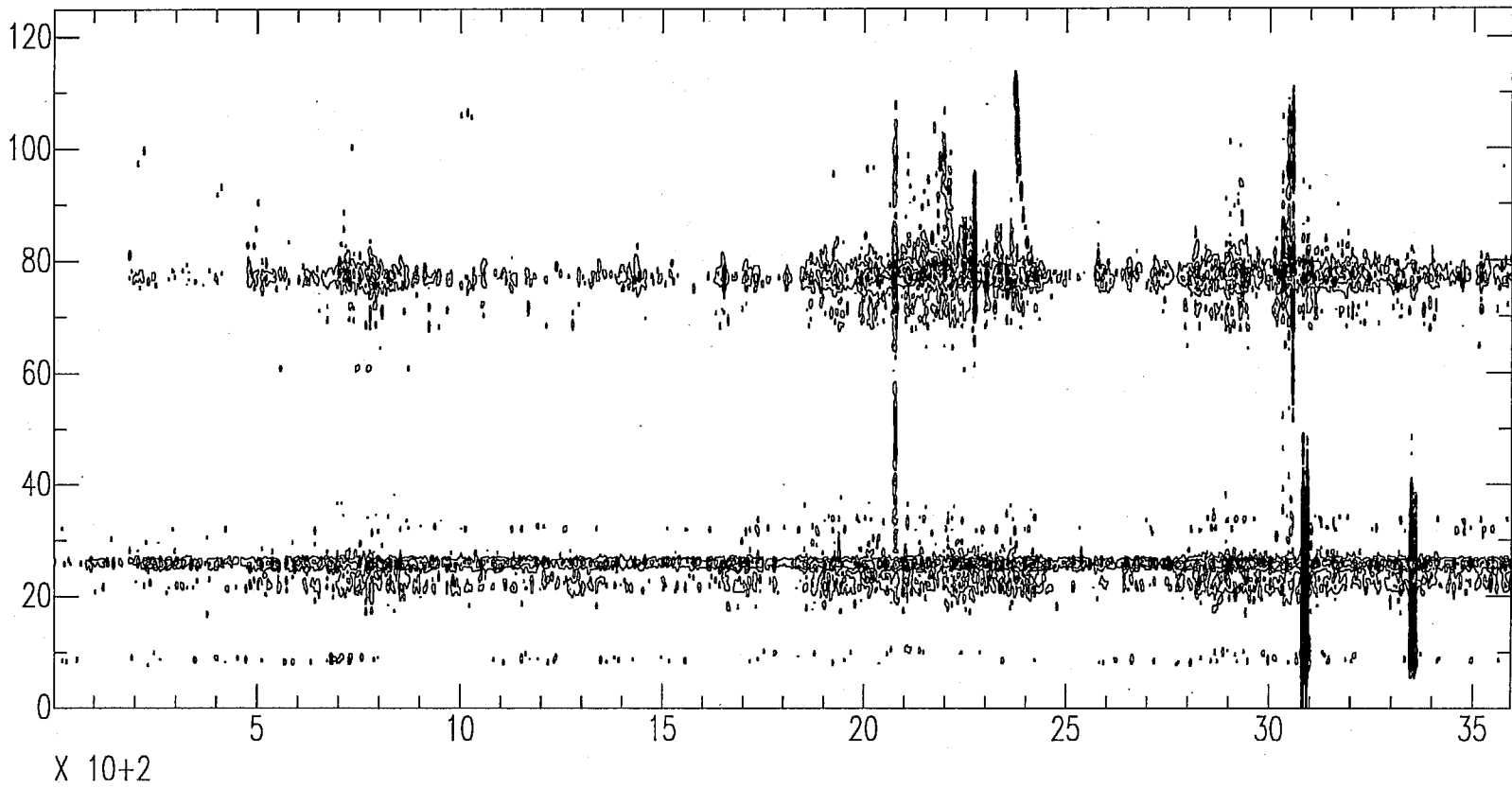
Hour 07 0540 seconds  
Hour 07 1640 seconds  
Hour 10 1400 seconds  
Hour 11 0000 seconds

335.0600.1.sac

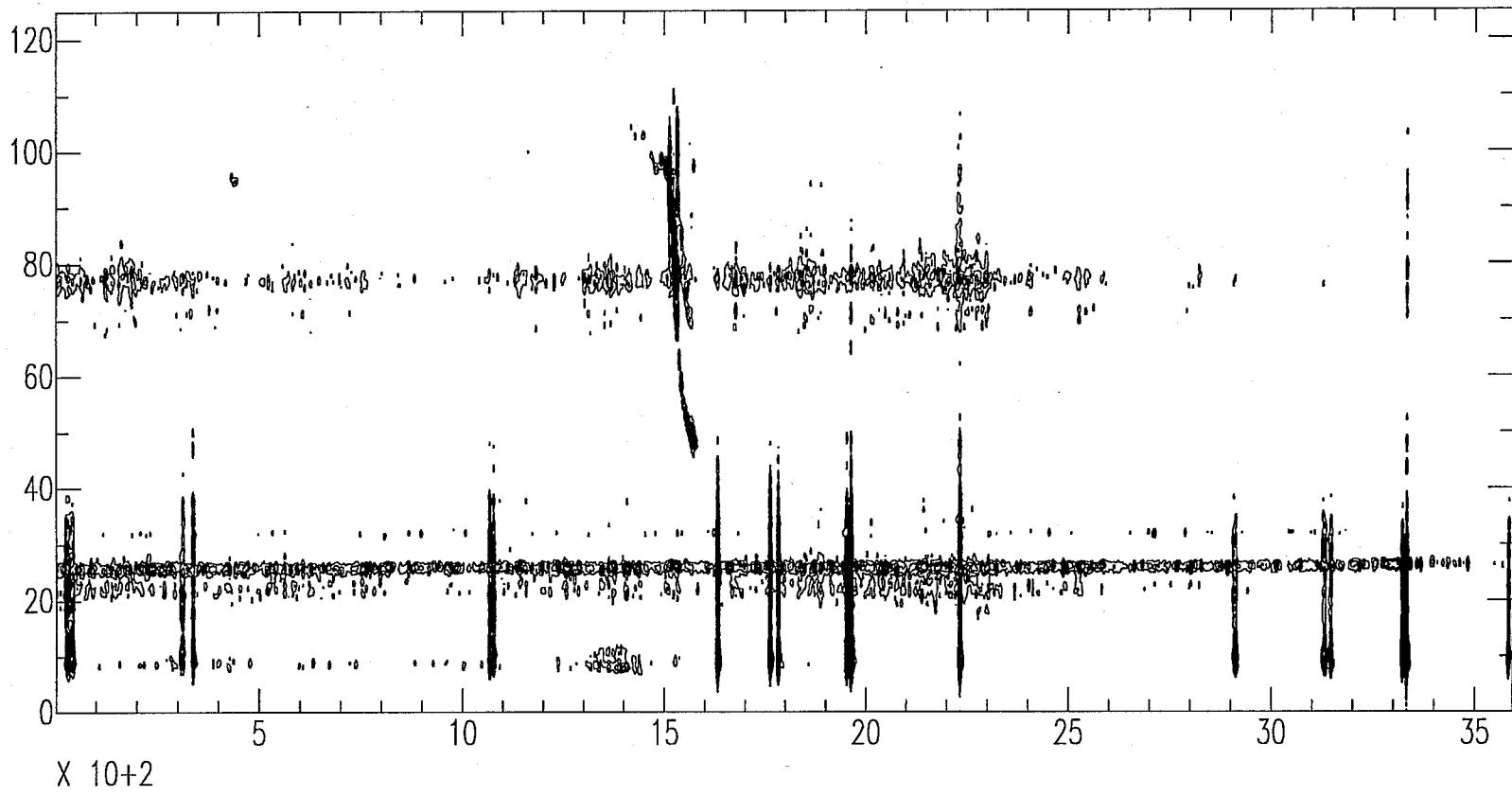


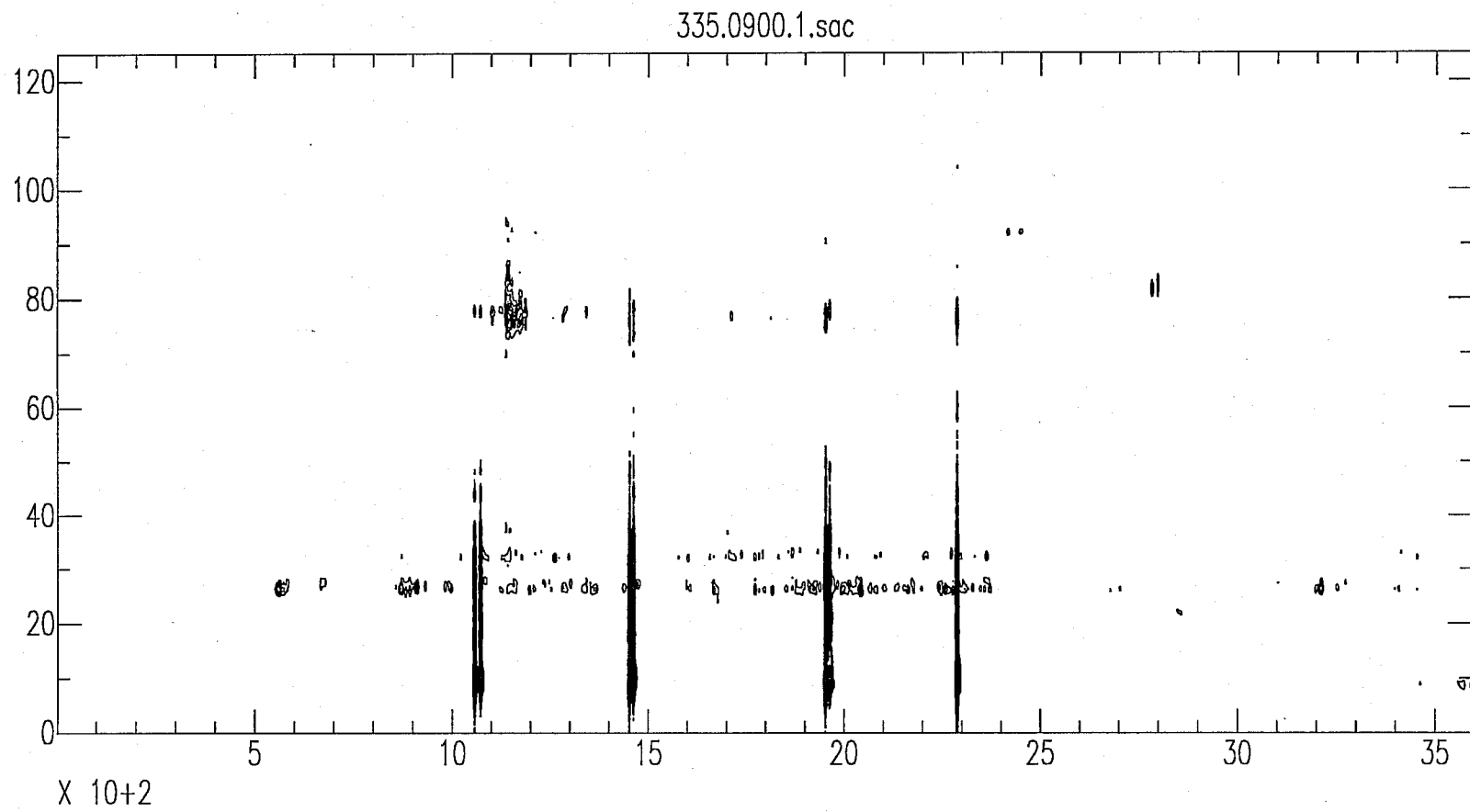


335.0700.1.sac

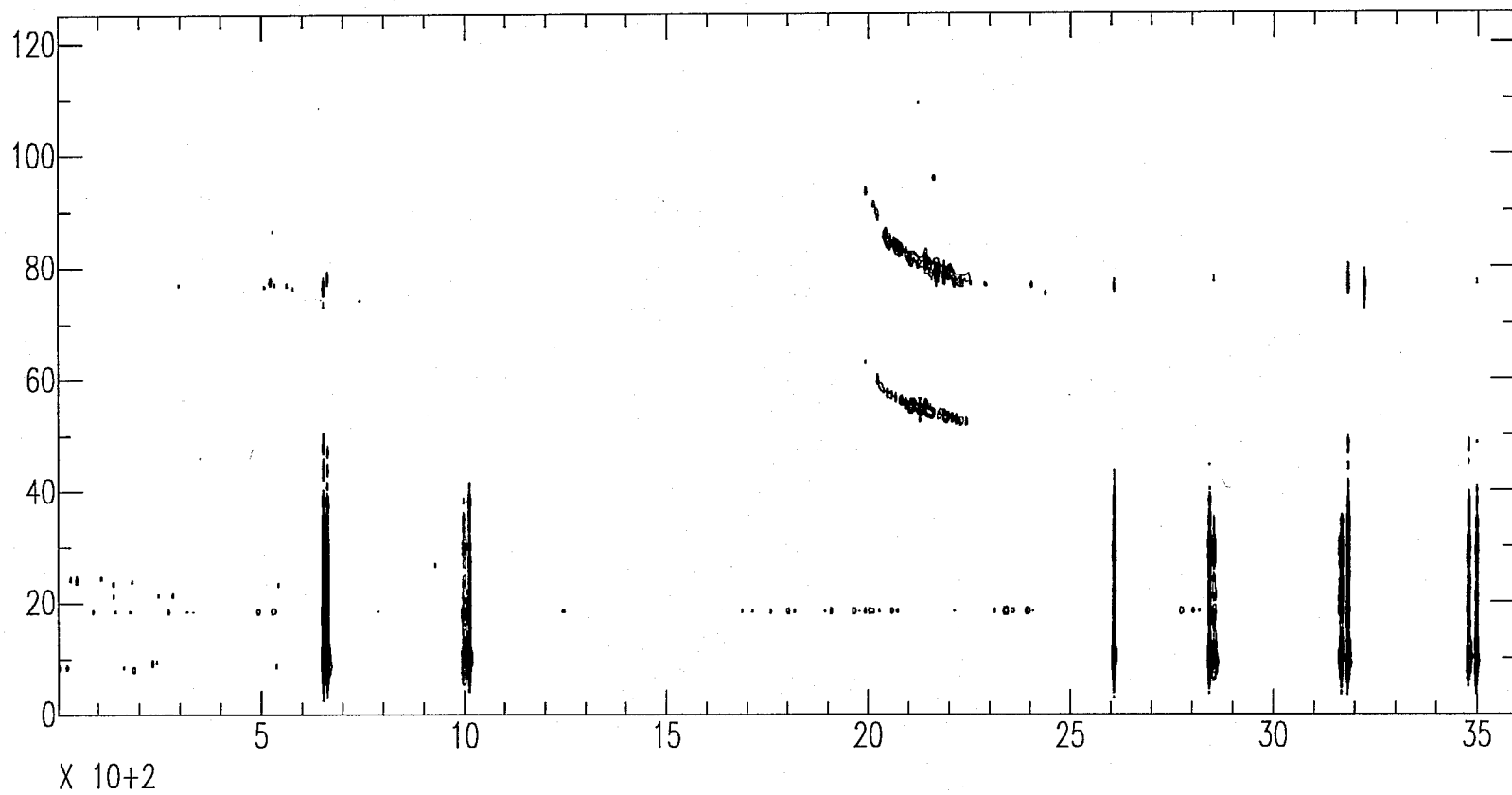


335.0800.1.sac

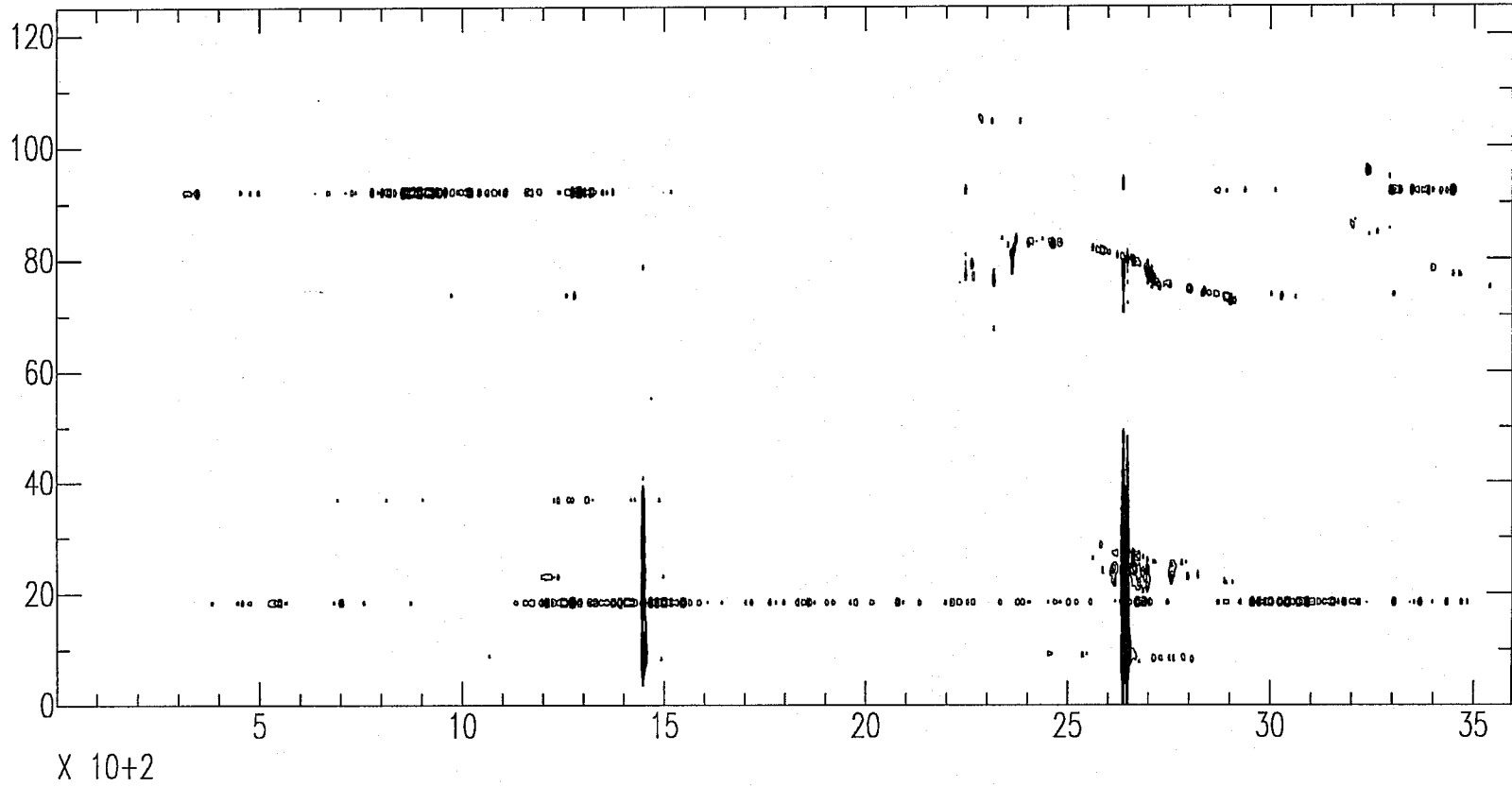




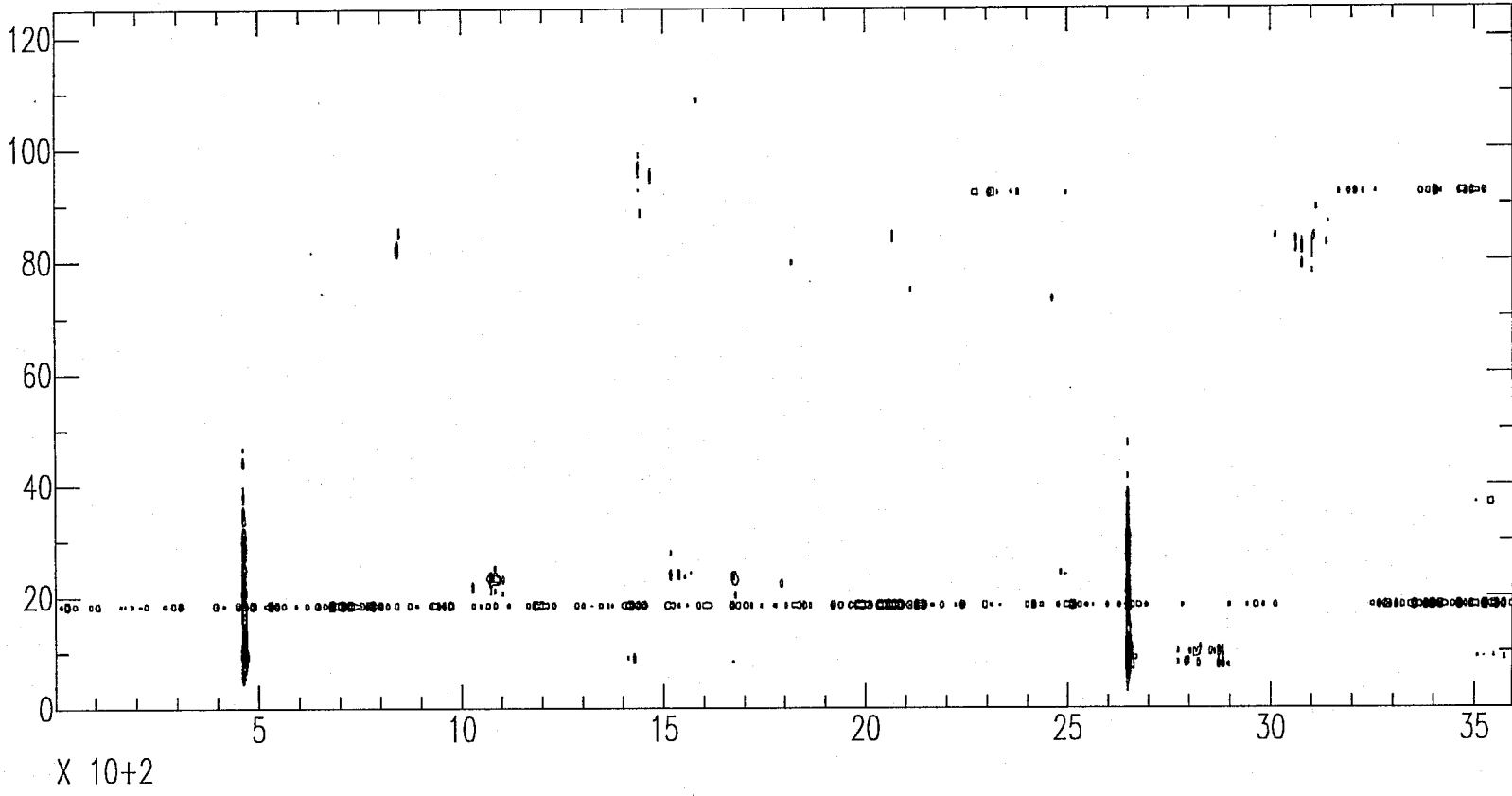
335.1000.1.sac



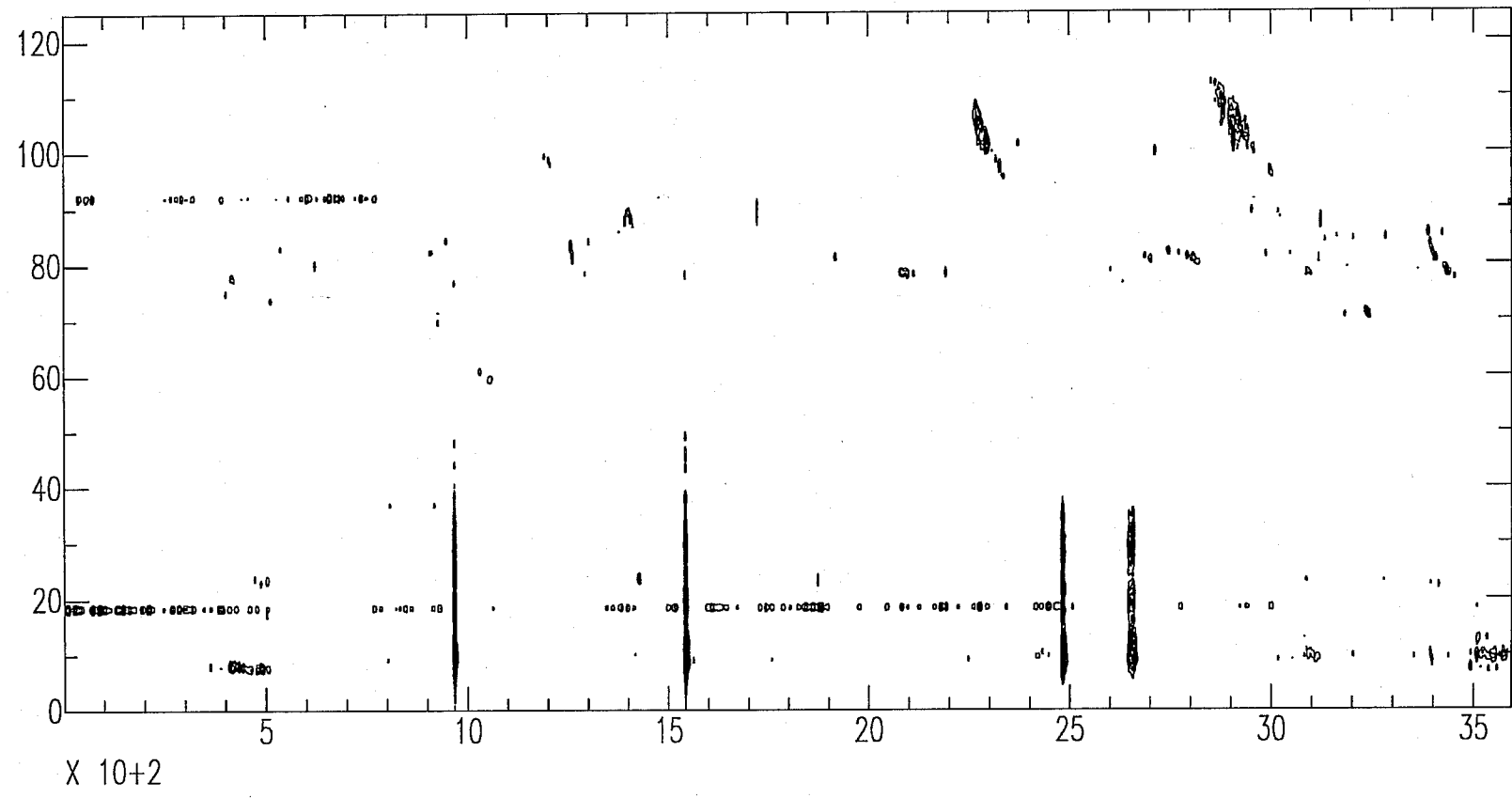
335.1100.1.sac



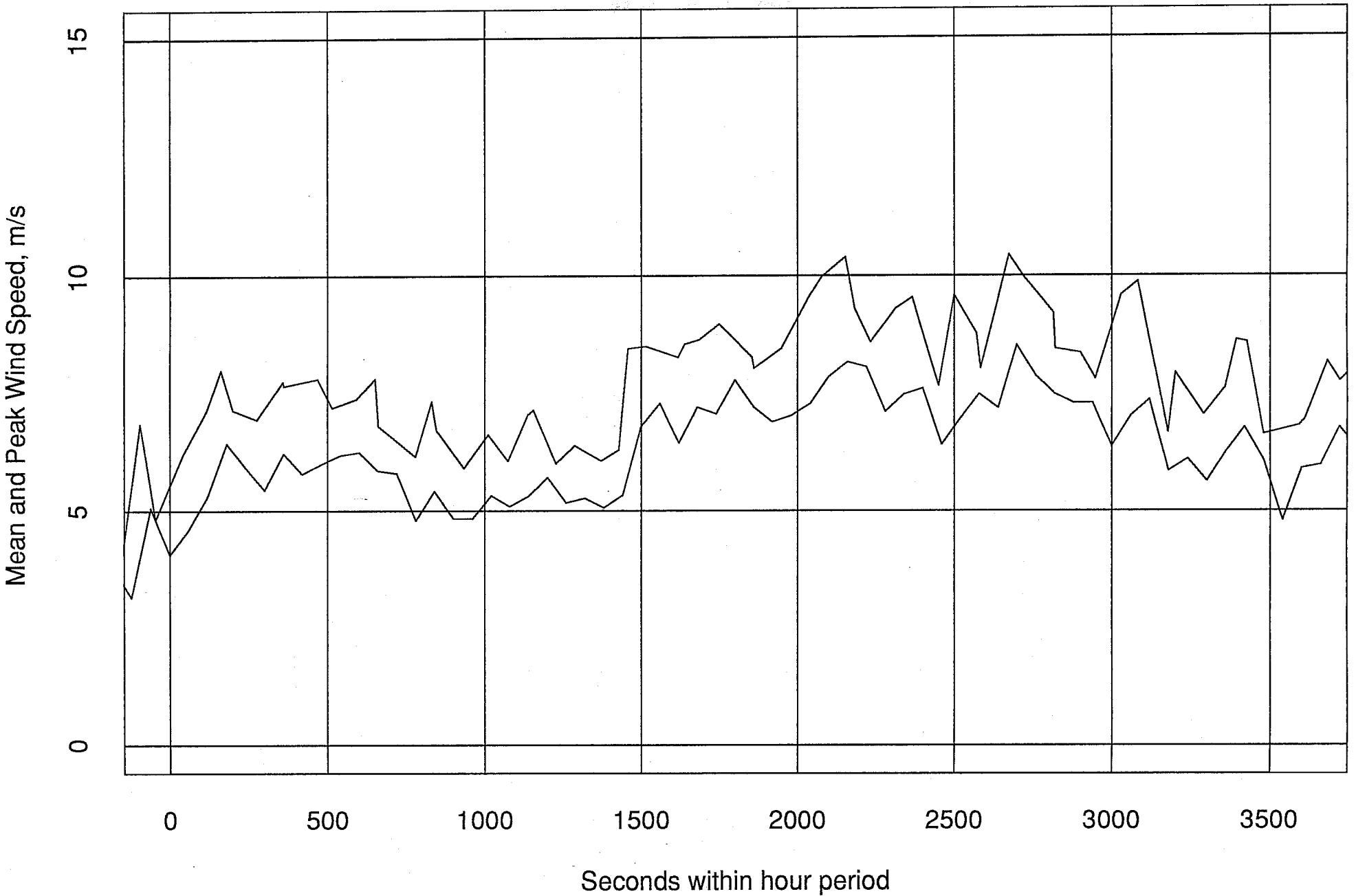
335.1200.1.sac



335.1300.1.sac

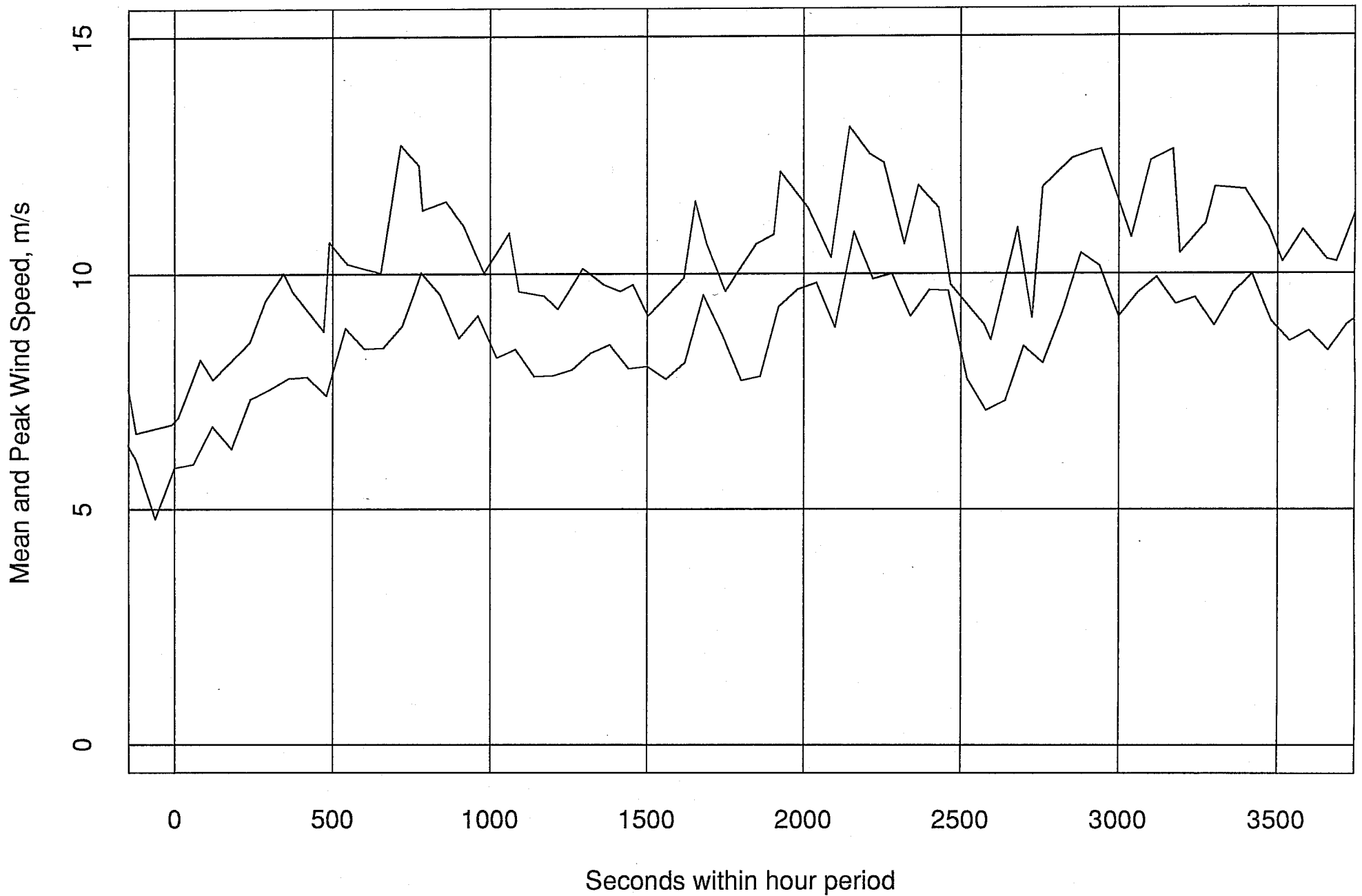


# Mean and Peak Wind Speeds, Day 335 Hour 06:00 GMT LIGO-C950580-00-0

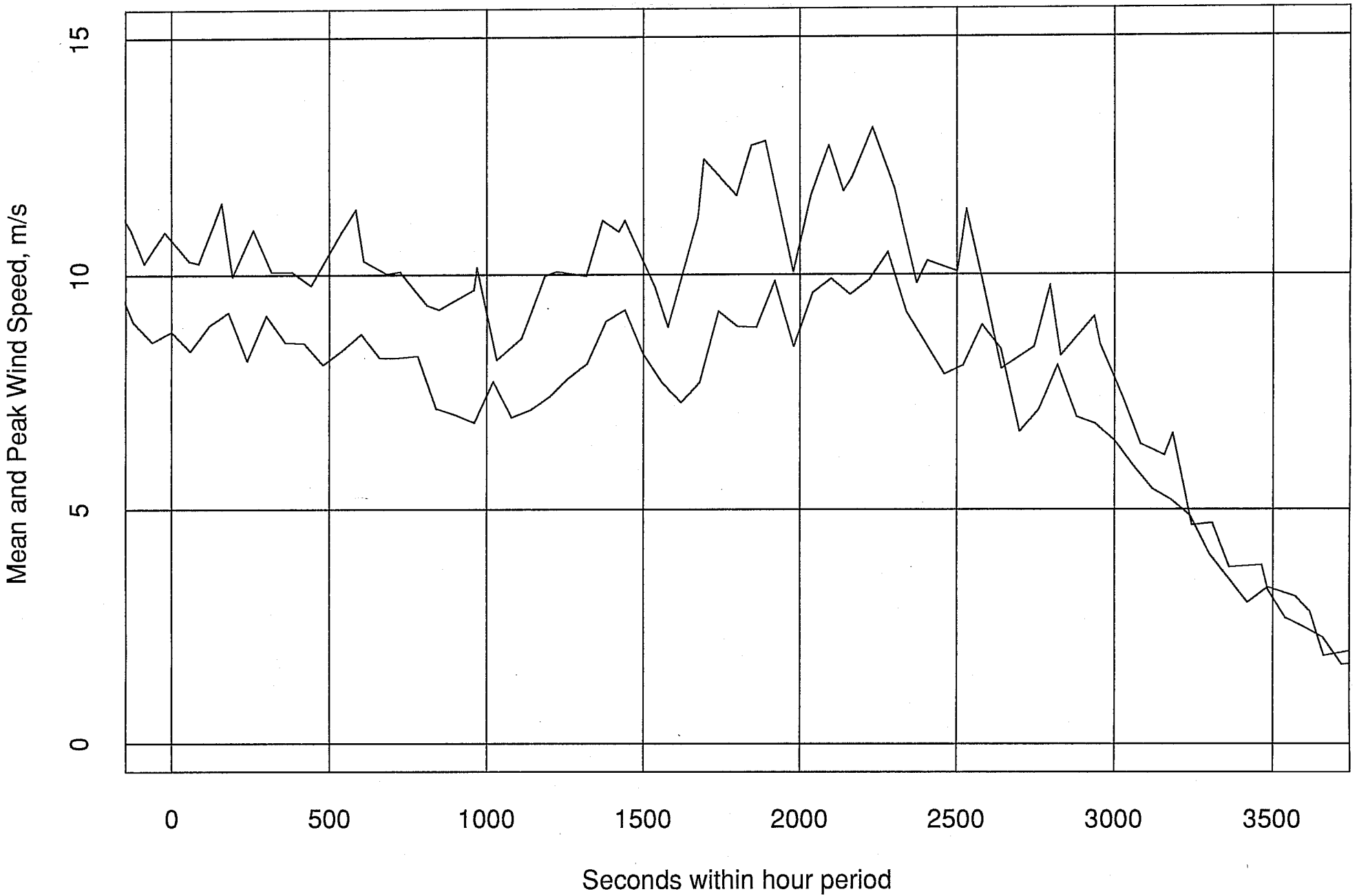




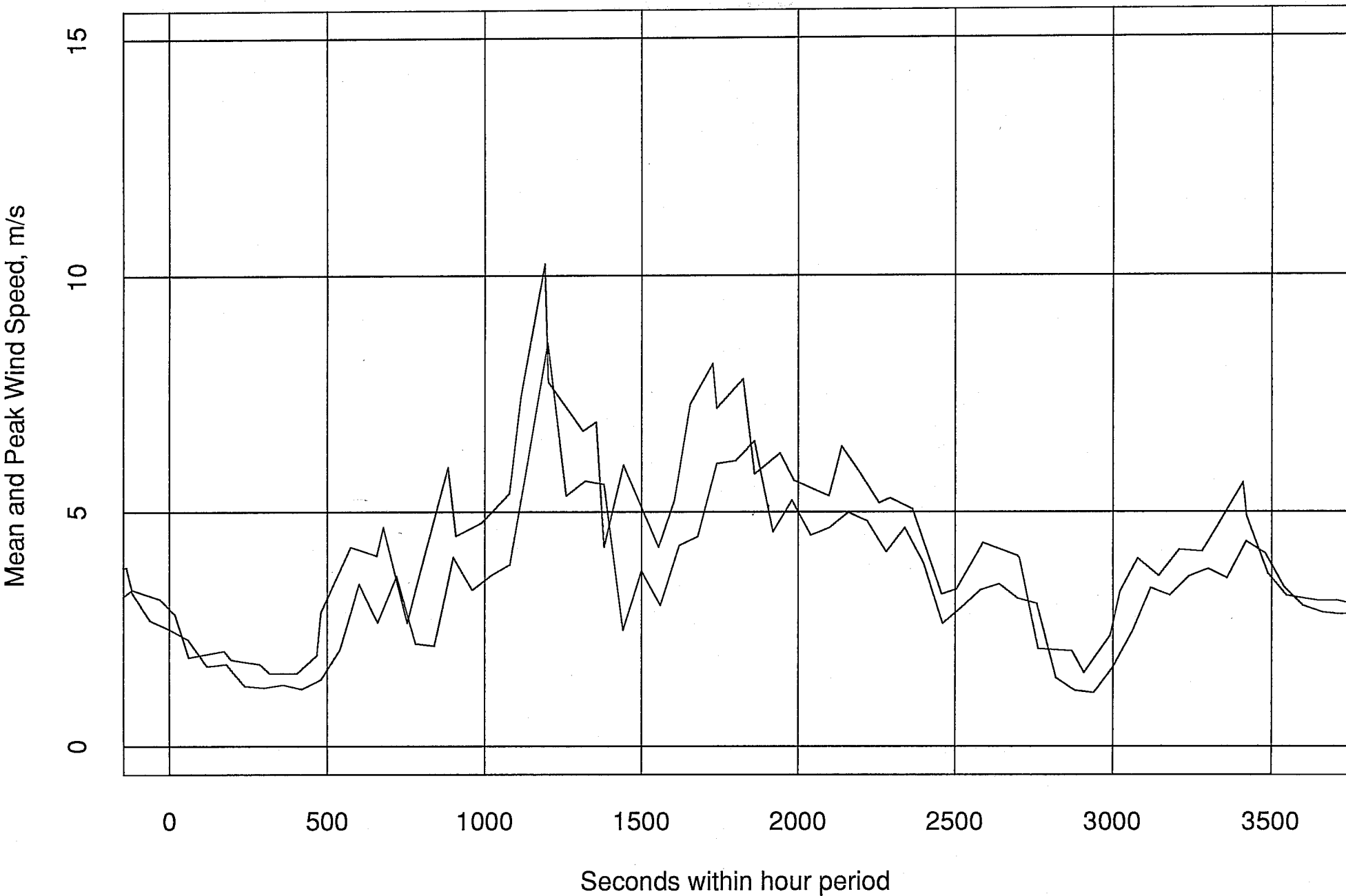
# Mean and Peak Wind Speeds, Day 335 Hour 07:00 GMT LIGO-C950580-00-0



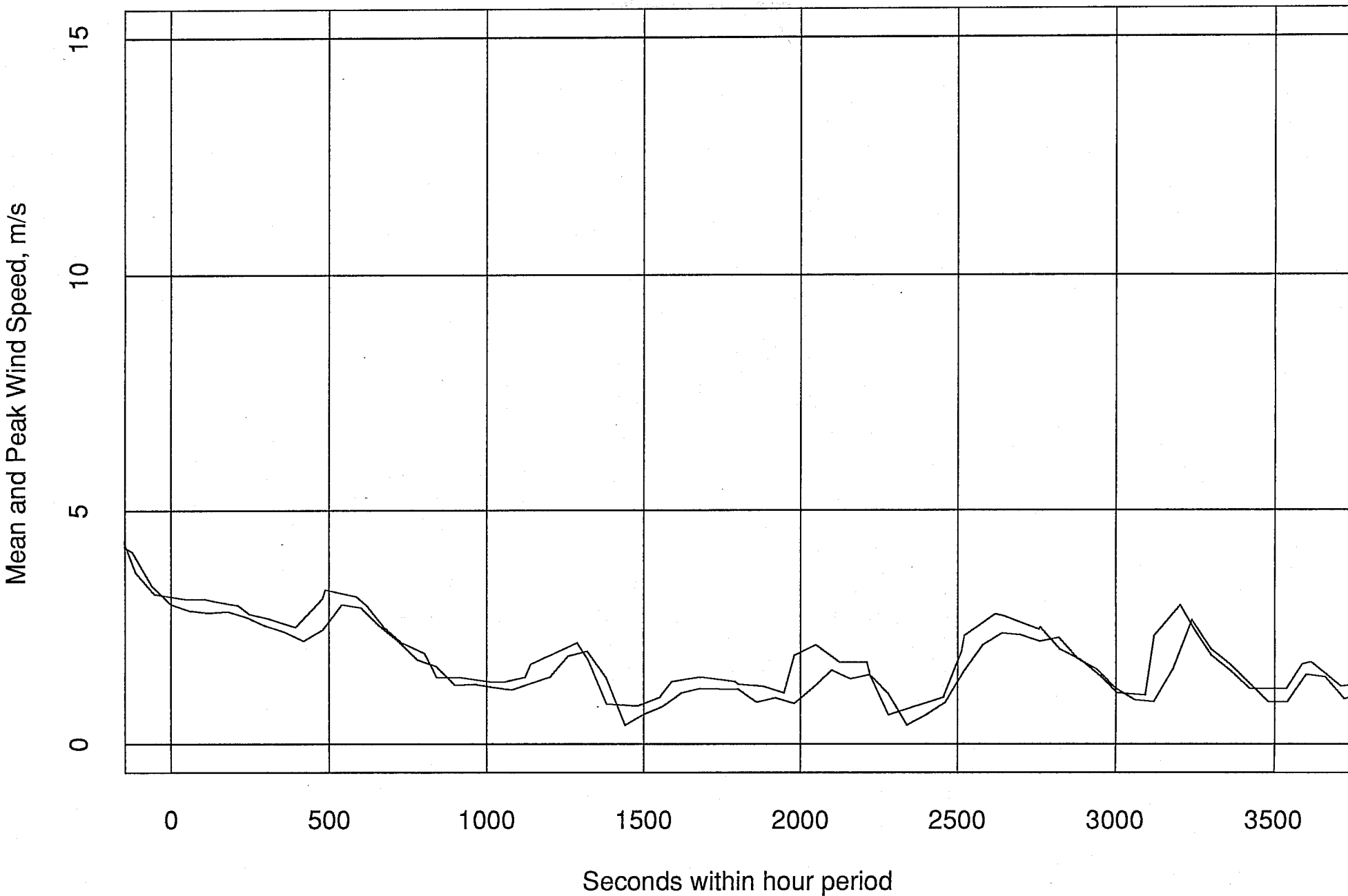
# Mean and Peak Wind Speeds, Day 335 Hour 08:00 GMT LIGO-C950580-00-0



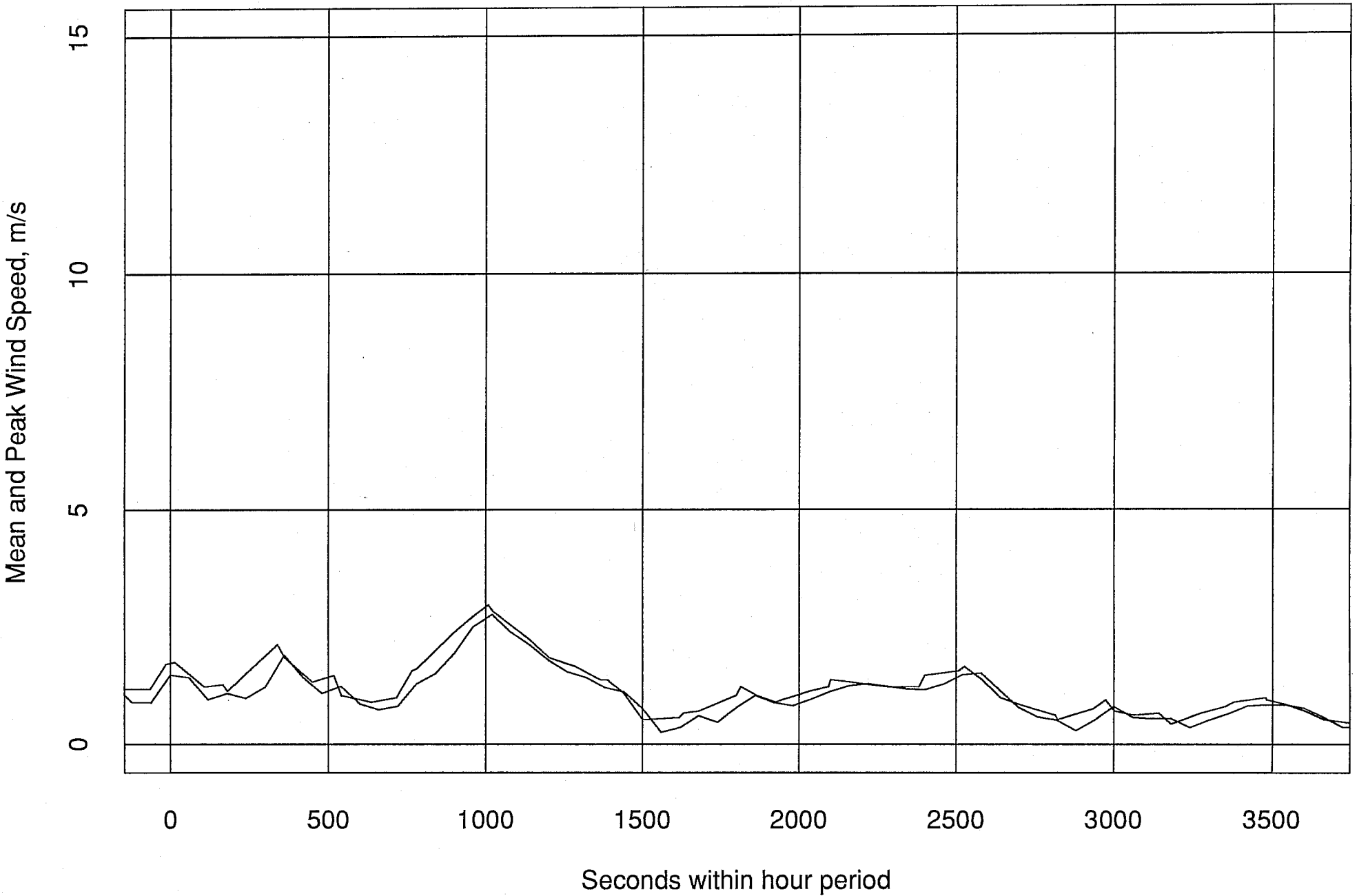
# Mean and Peak Wind Speeds, Day 335 Hour 09:00 GMT LIGO-C950580-00-0



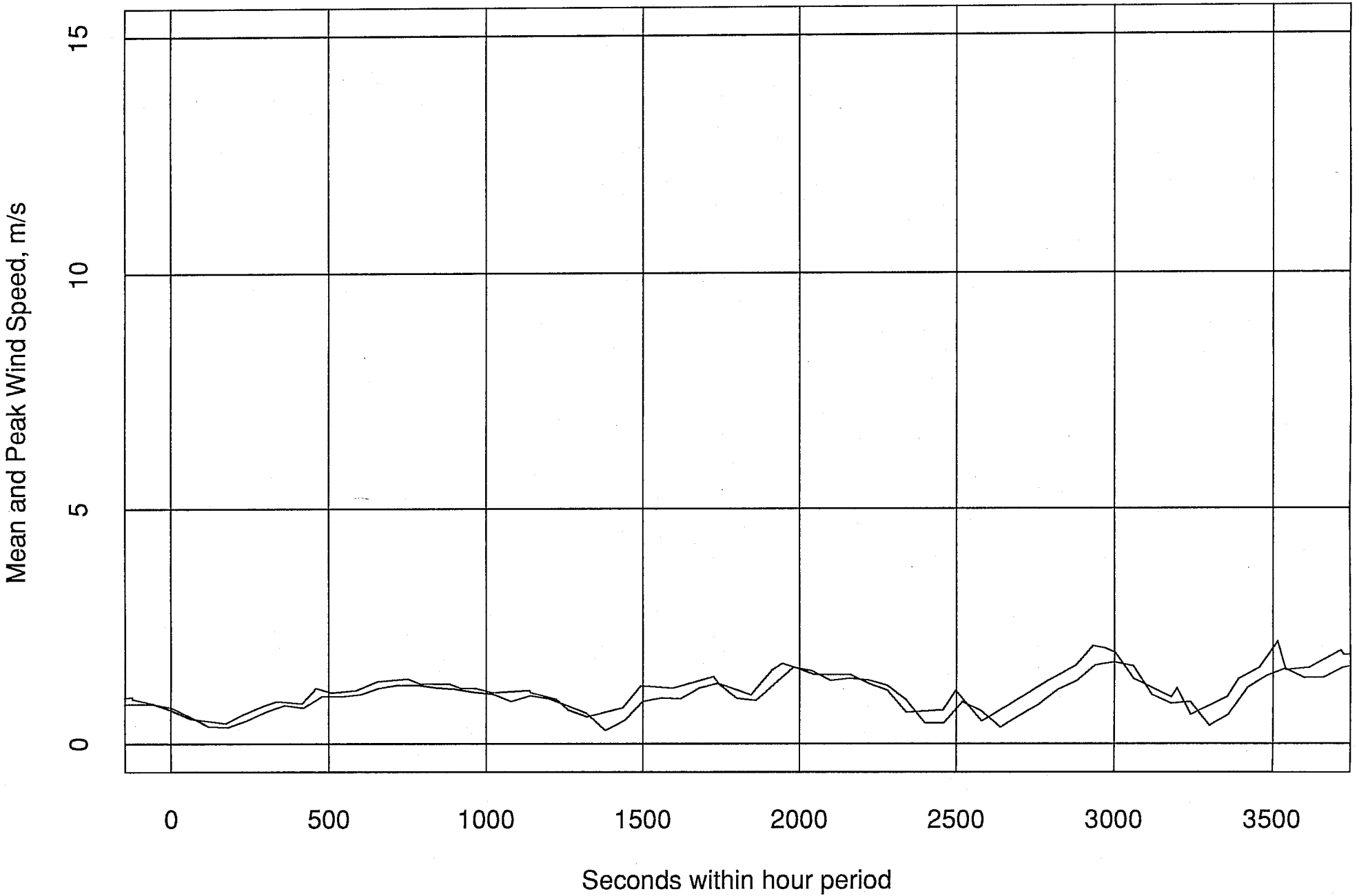
# Mean and Peak Wind Speeds, Day 335 Hour 10:00 GMT LIGO-C950580-00-0



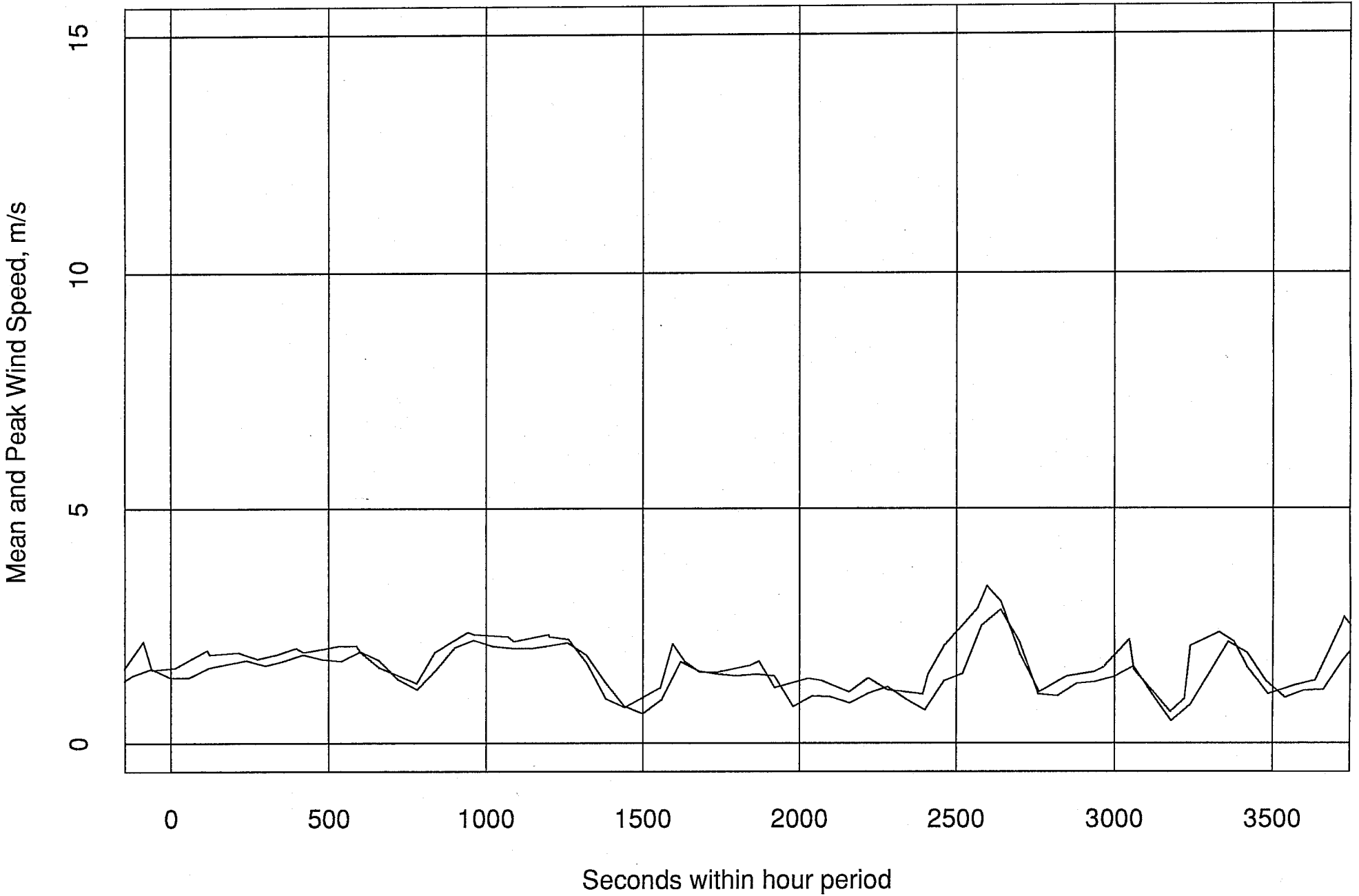
# Mean and Peak Wind Speeds, Day 335 Hour 11:00 GMT LIGO-C950580-00-0



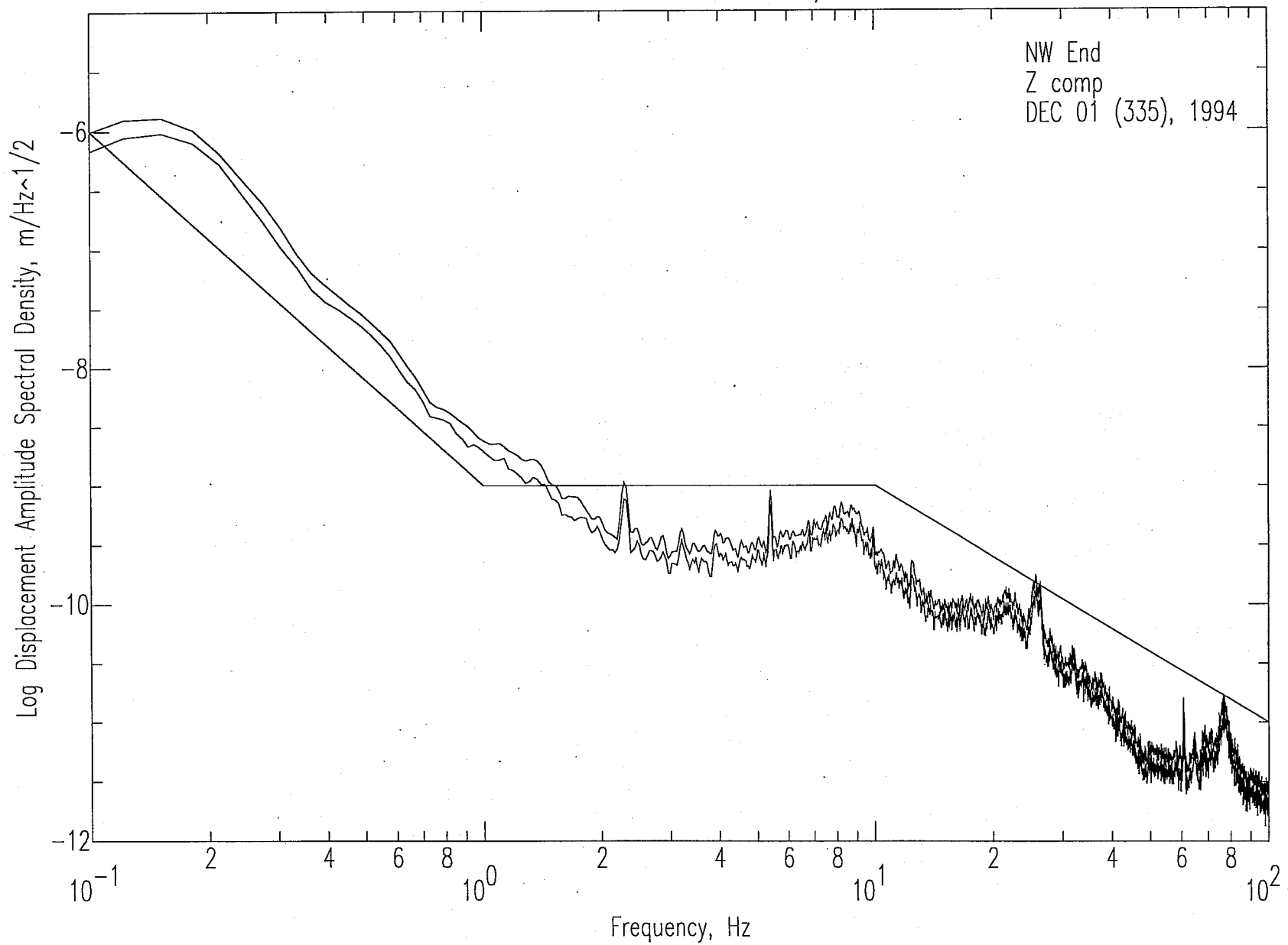
# Mean and Peak Wind Speeds, Day 335 Hour 12:00 GMT LIGO-C950580-00-0



# Mean and Peak Wind Speeds, Day 335 Hour 13:00 GMT LIGO-C950580-00-0

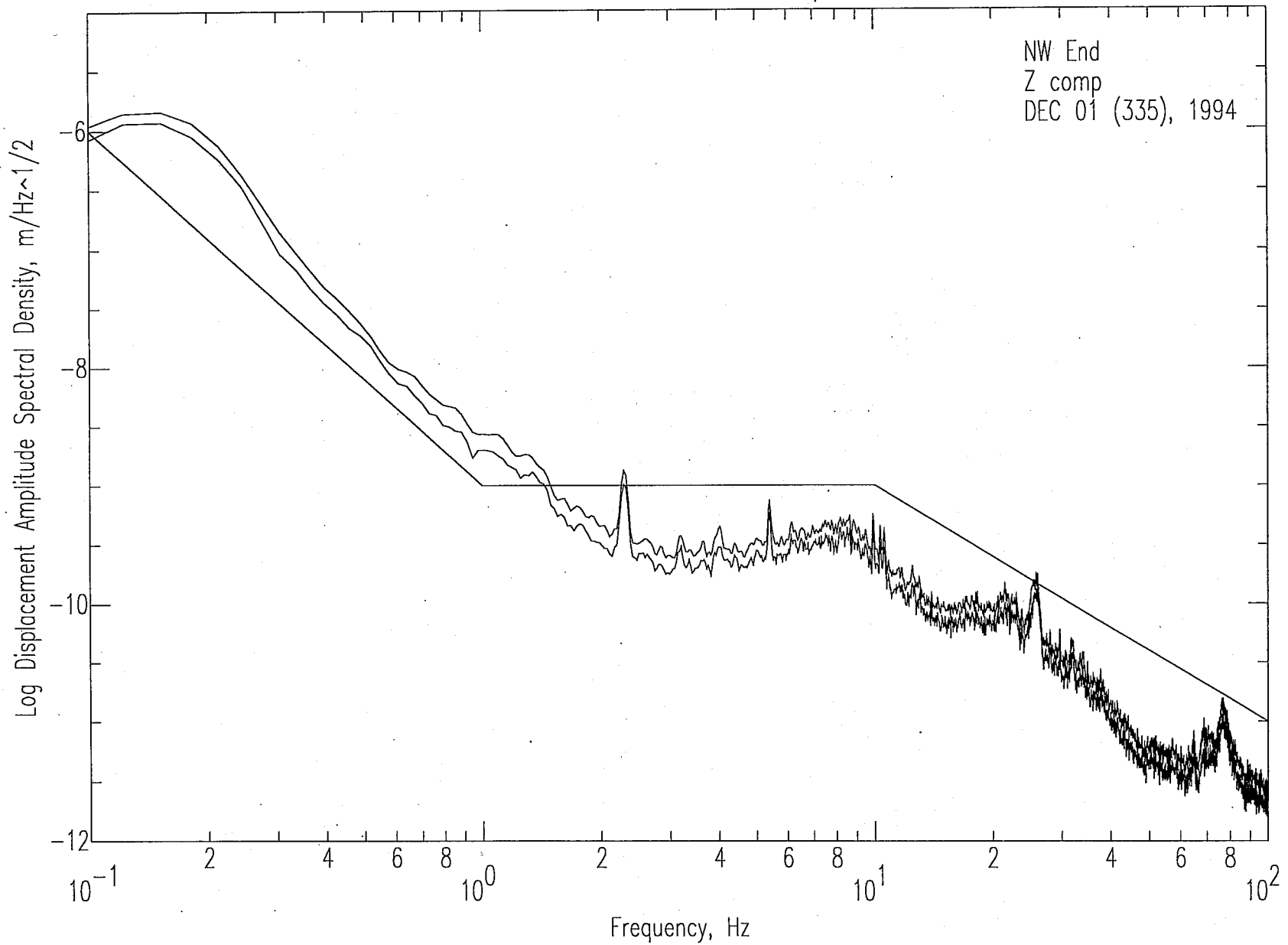


LIGO Northwest End Moderate Wind 6 - 8 m/s 335.07.1.0540

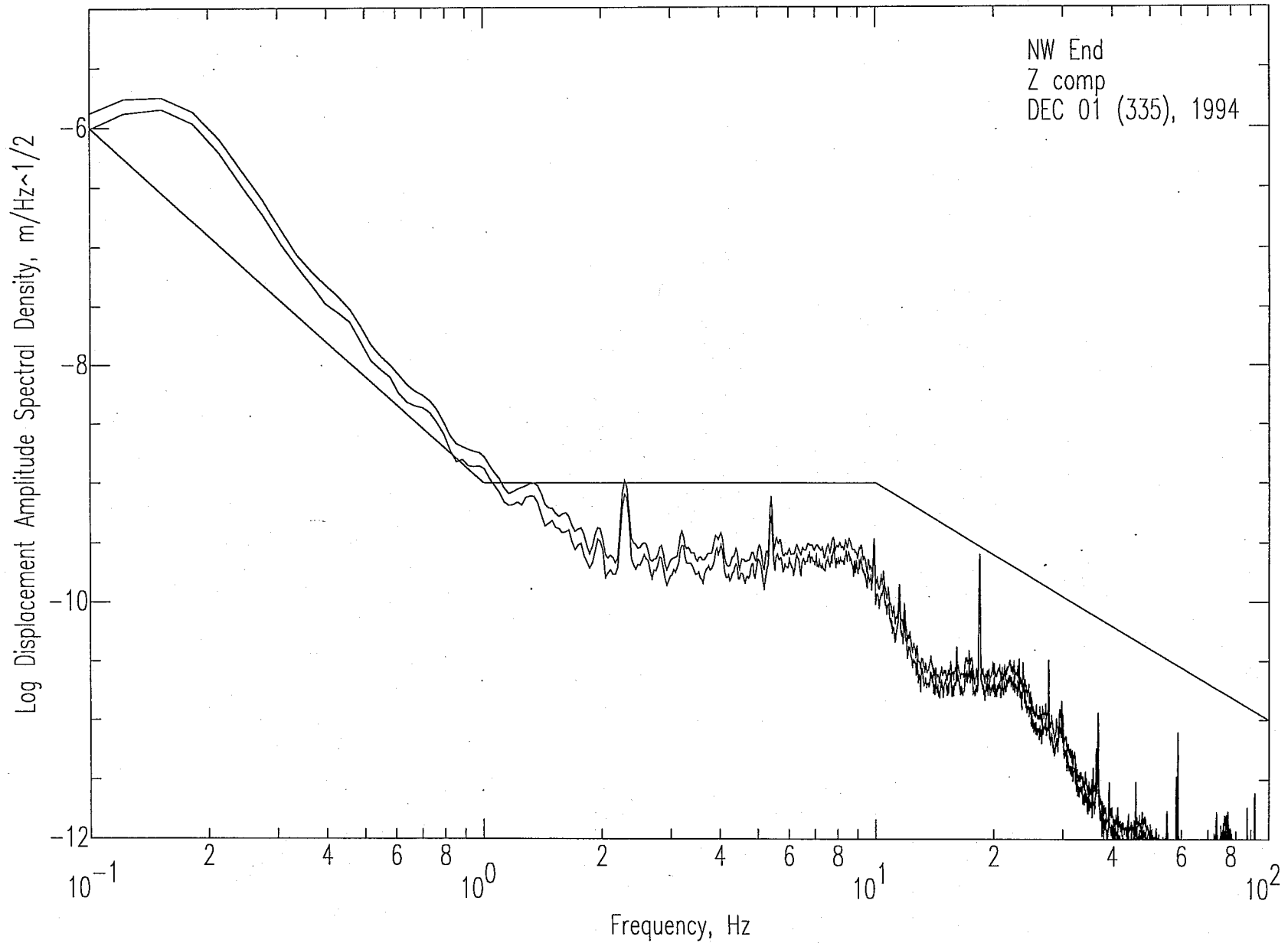




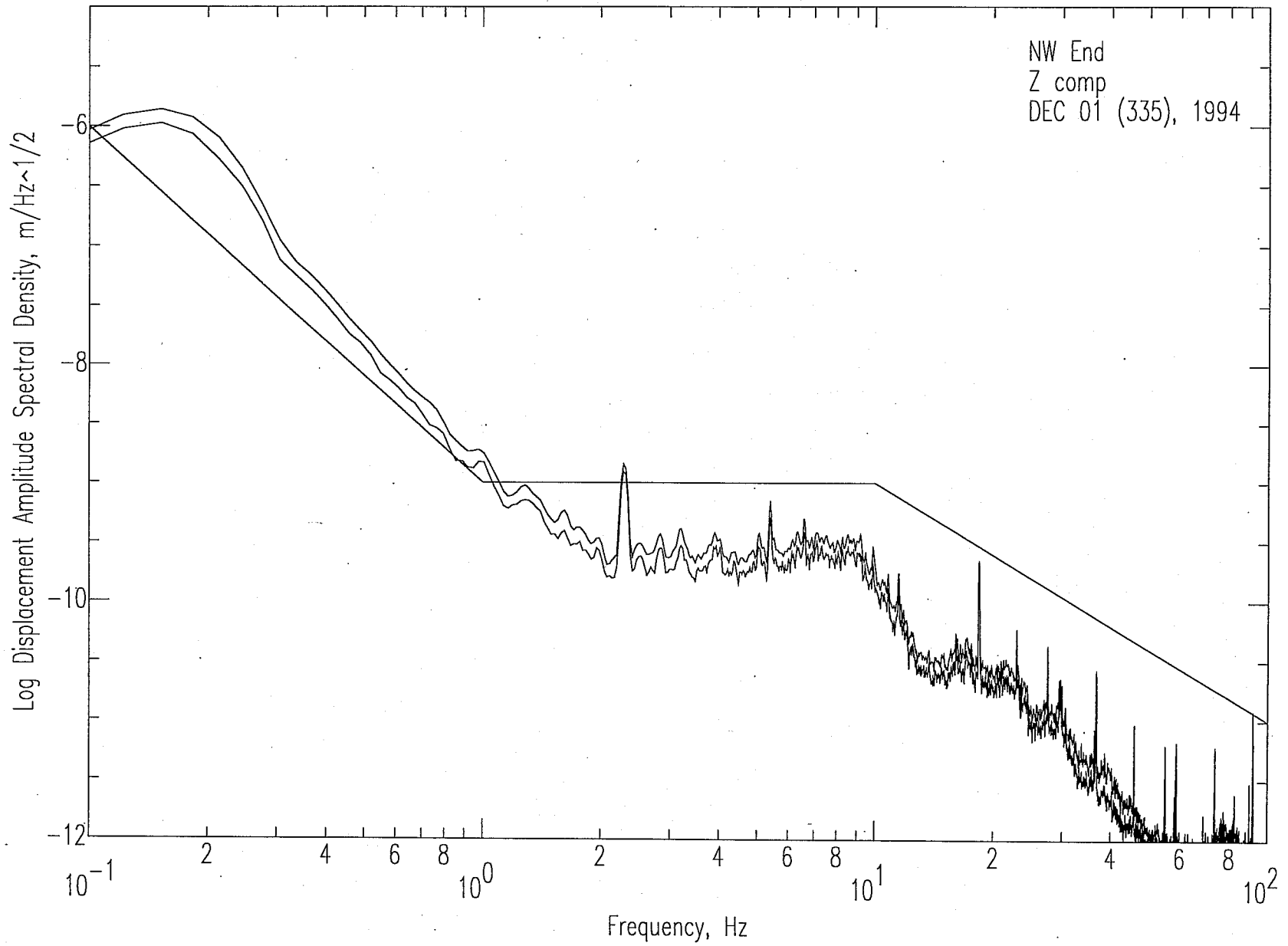
LIGO Northwest End Moderate Wind 6 - 8 m/s 335.07.1.1640



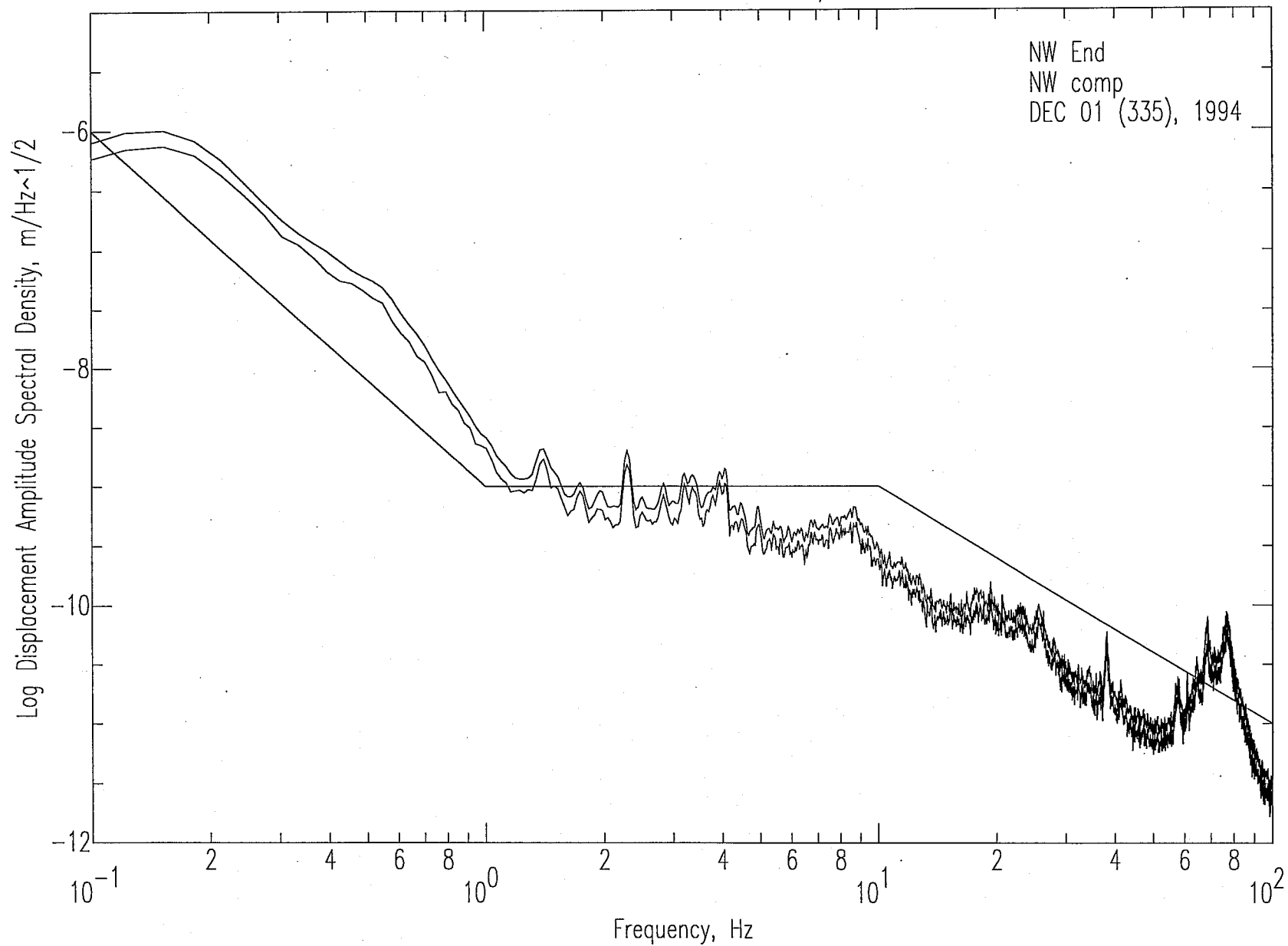
LIGO Northwest End Low Wind 1 - 2 m/s 335.10.1.1400



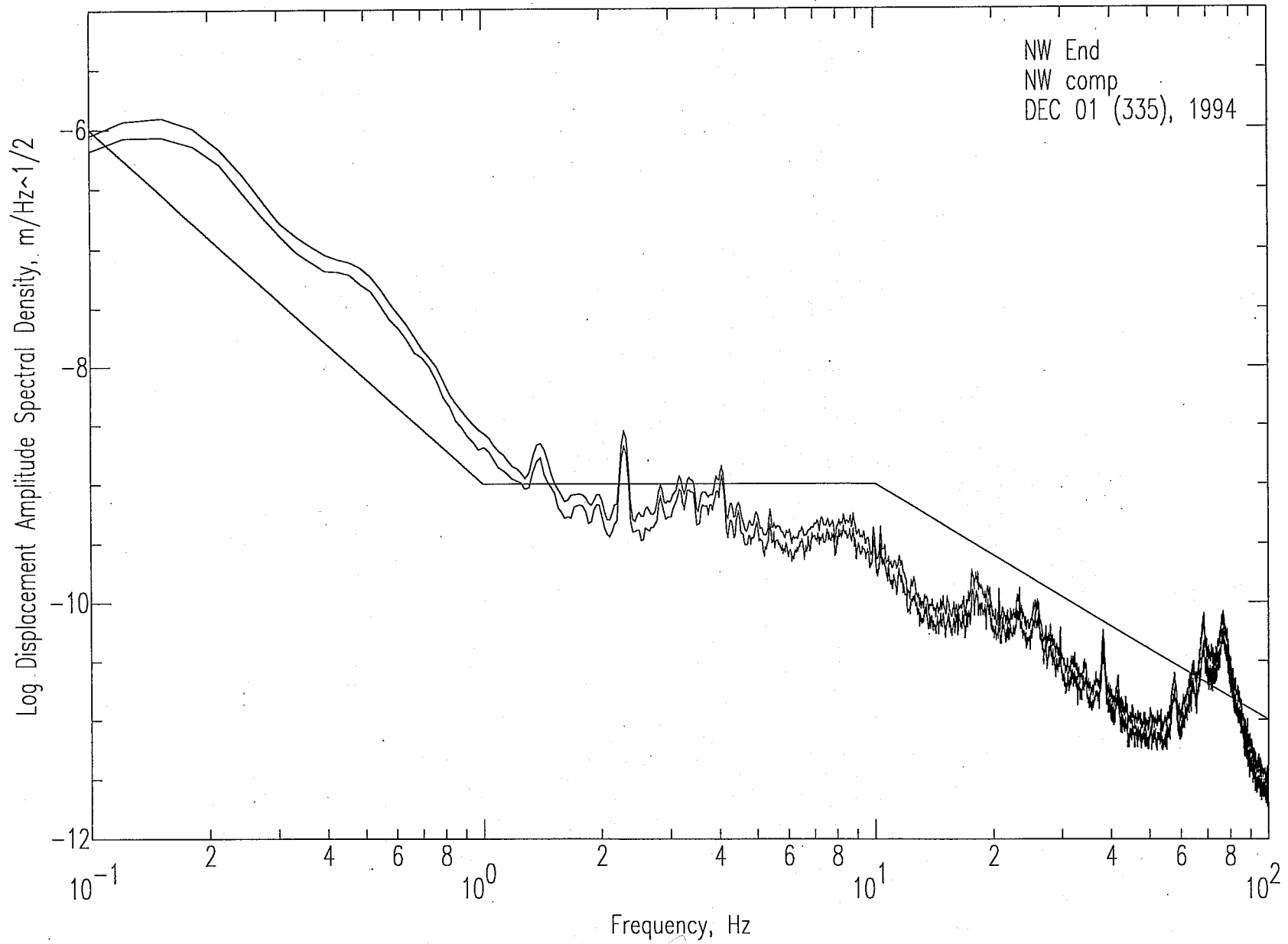
LIGO Northwest End Low Wind 1 - 2 m/s 335.11.1.0000



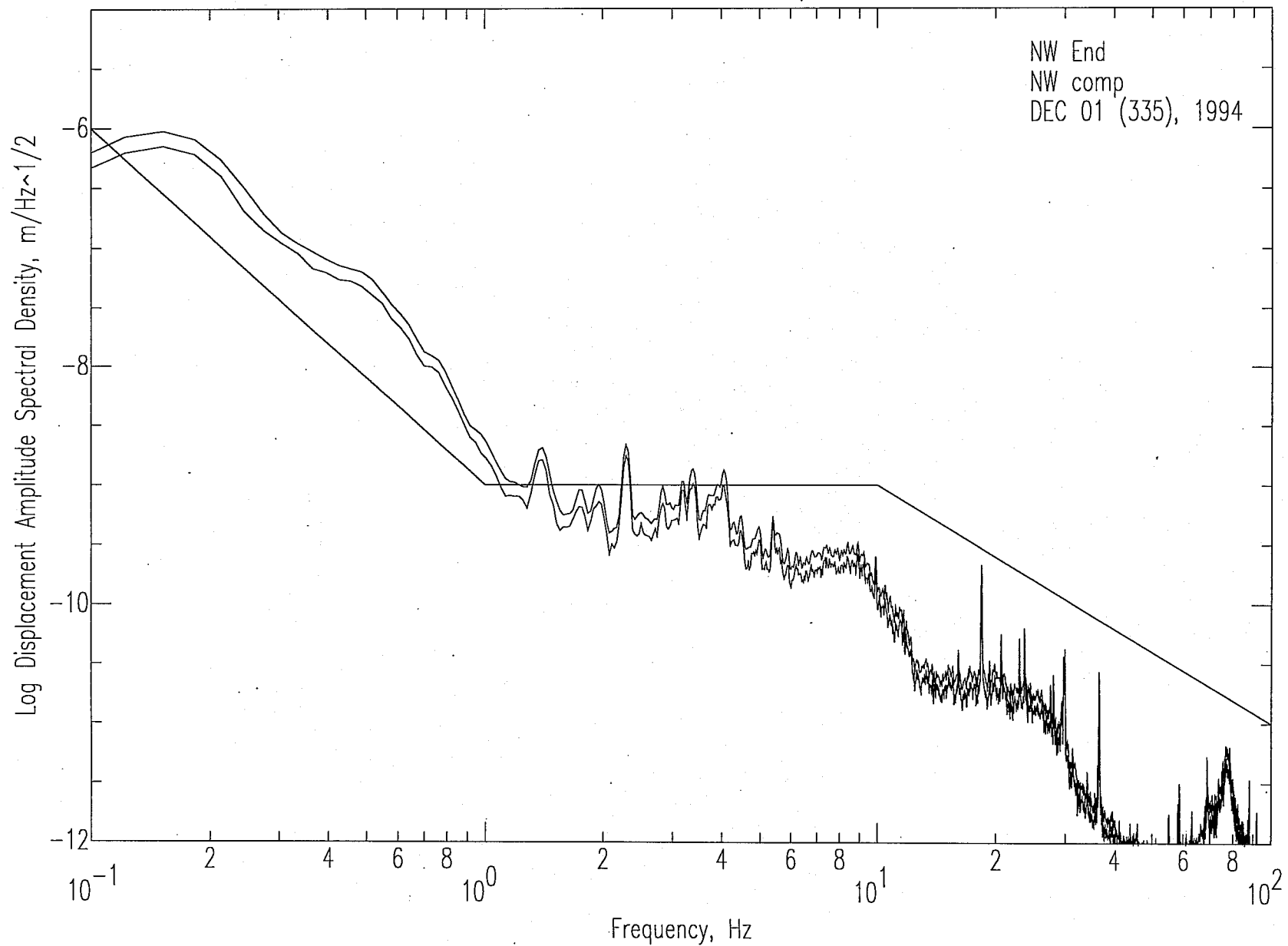
LIGO Northwest End Moderate Wind 6 - 8 m/s 335.07.2.0540



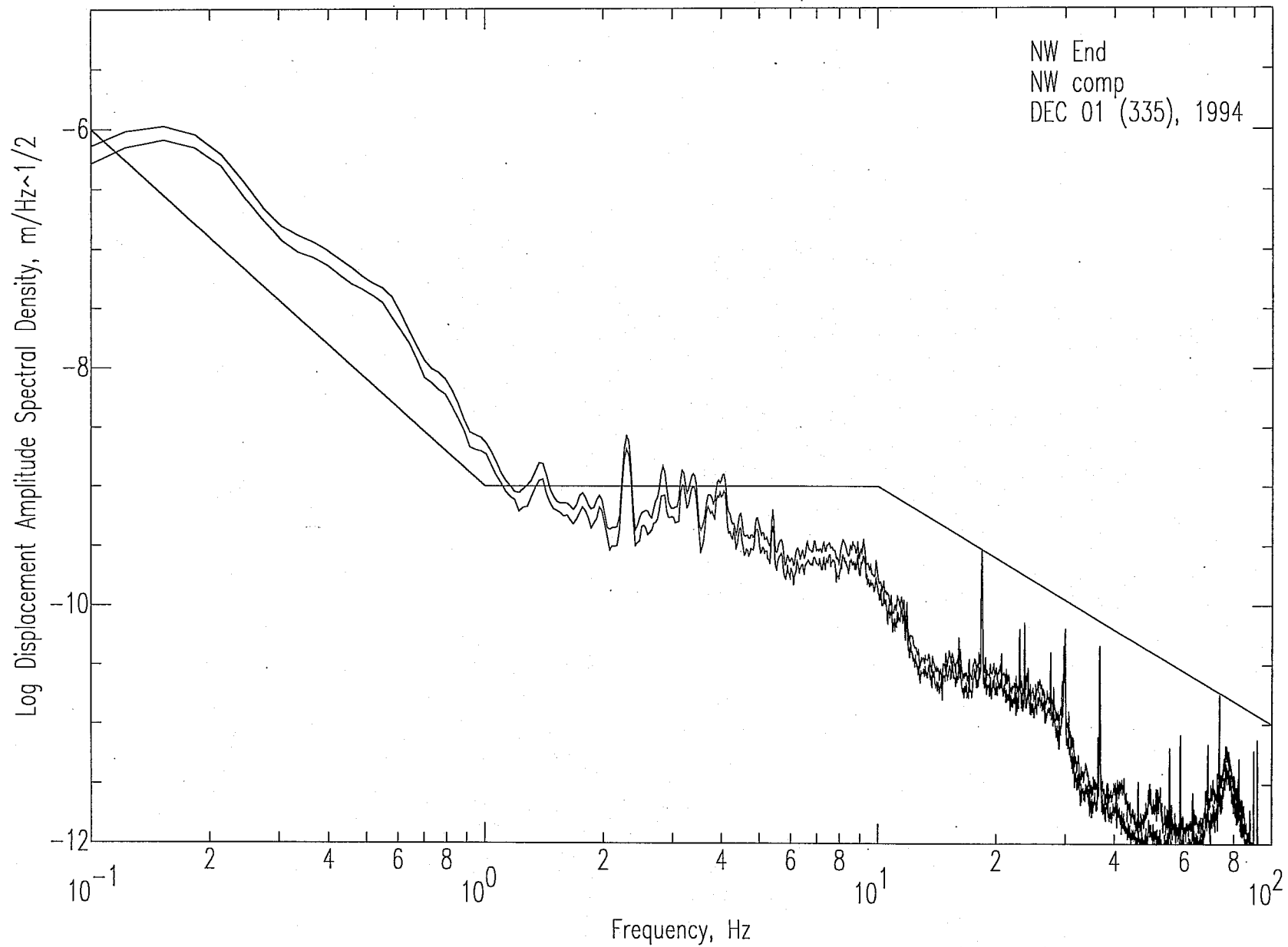
LIGO Northwest End Moderate Wind 6 - 8 m/s 335.07.2.1640



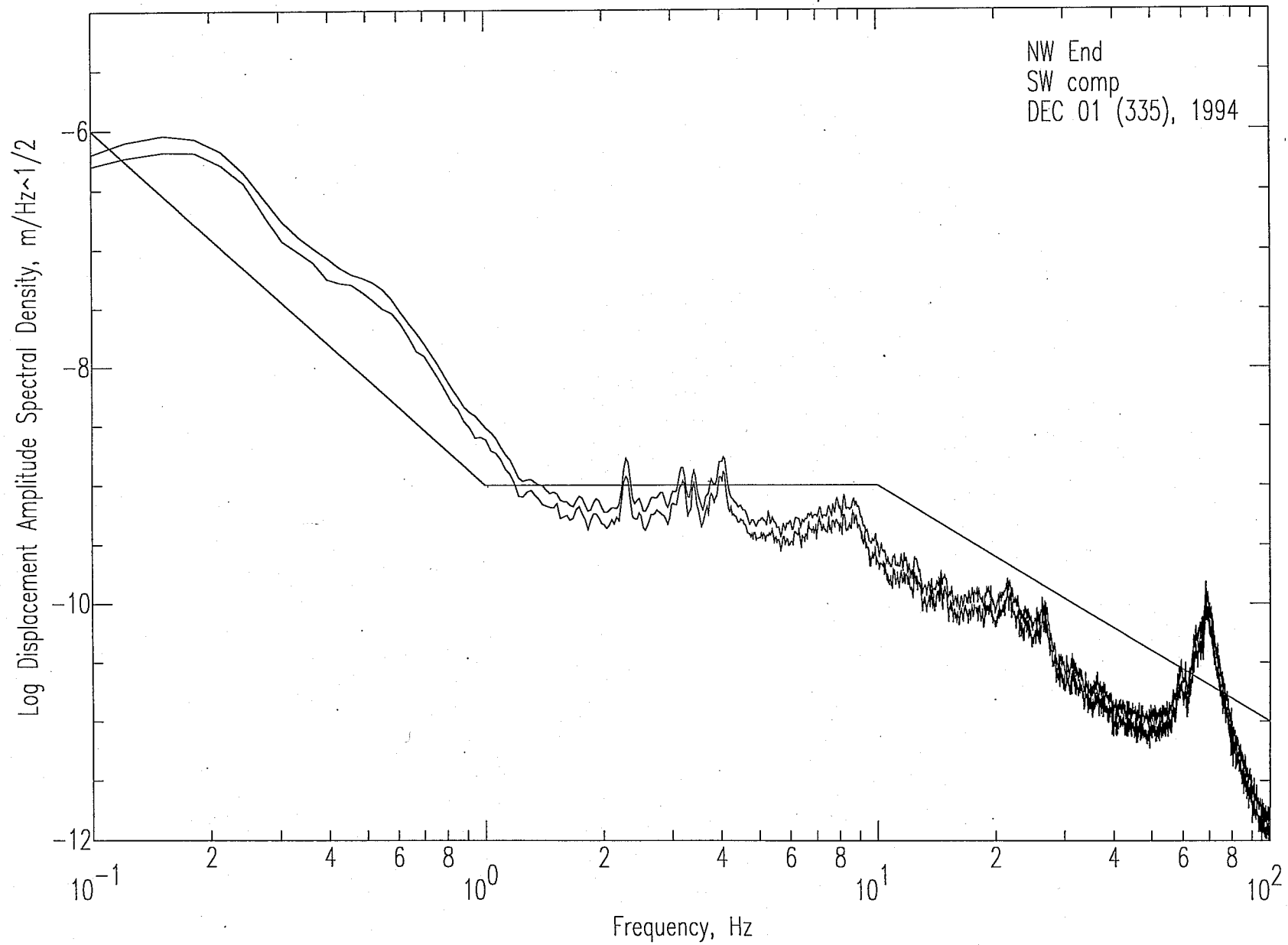
LIGO Northwest End Low Wind 1 - 2 m/s 335.10.2.1400



LIGO Northwest End Low Wind 1 - 2 m/s 335.11.2.0000

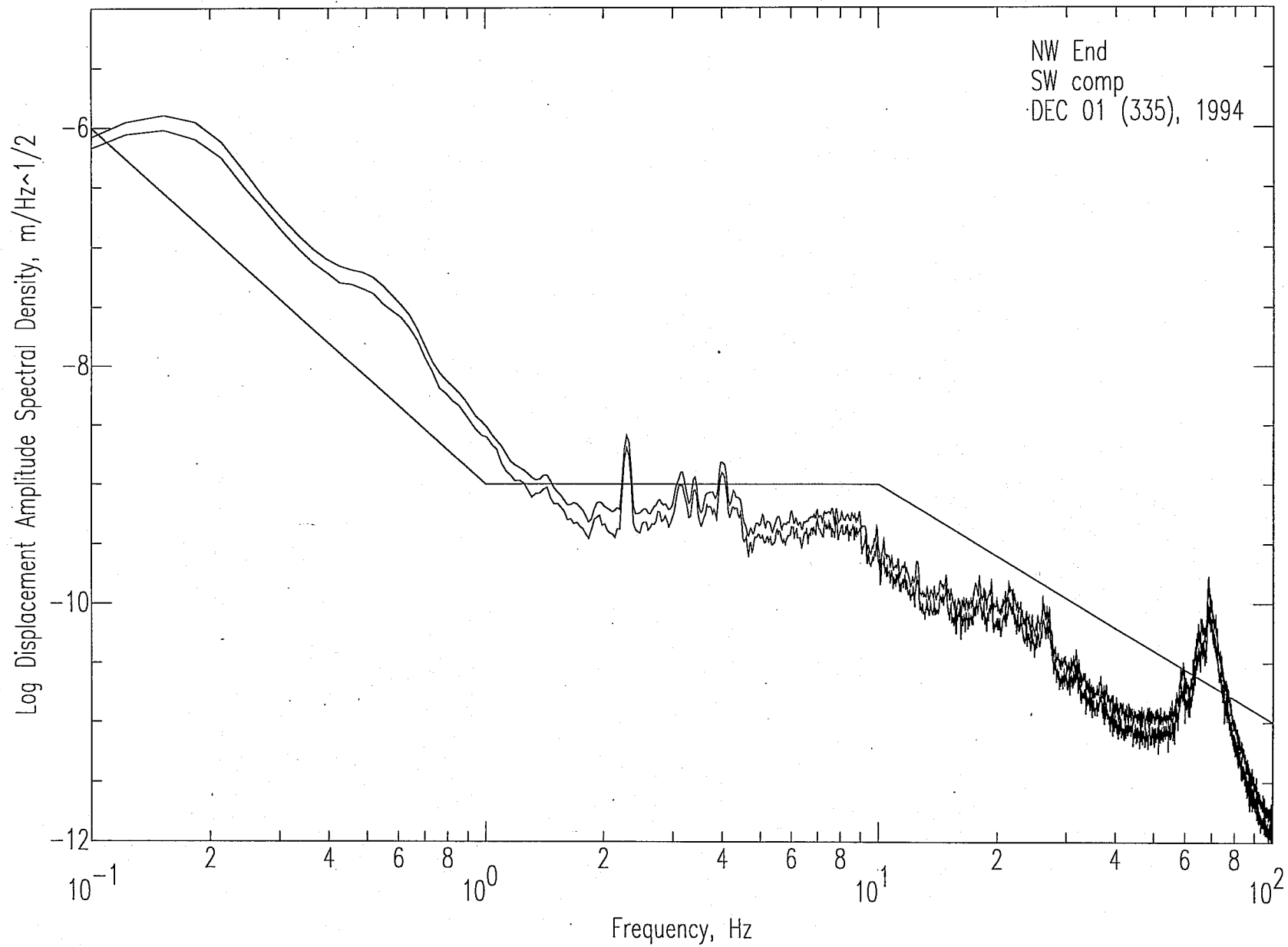


LIGO Northwest End Moderate Wind 6 - 8 m/s 335.07.3.0540

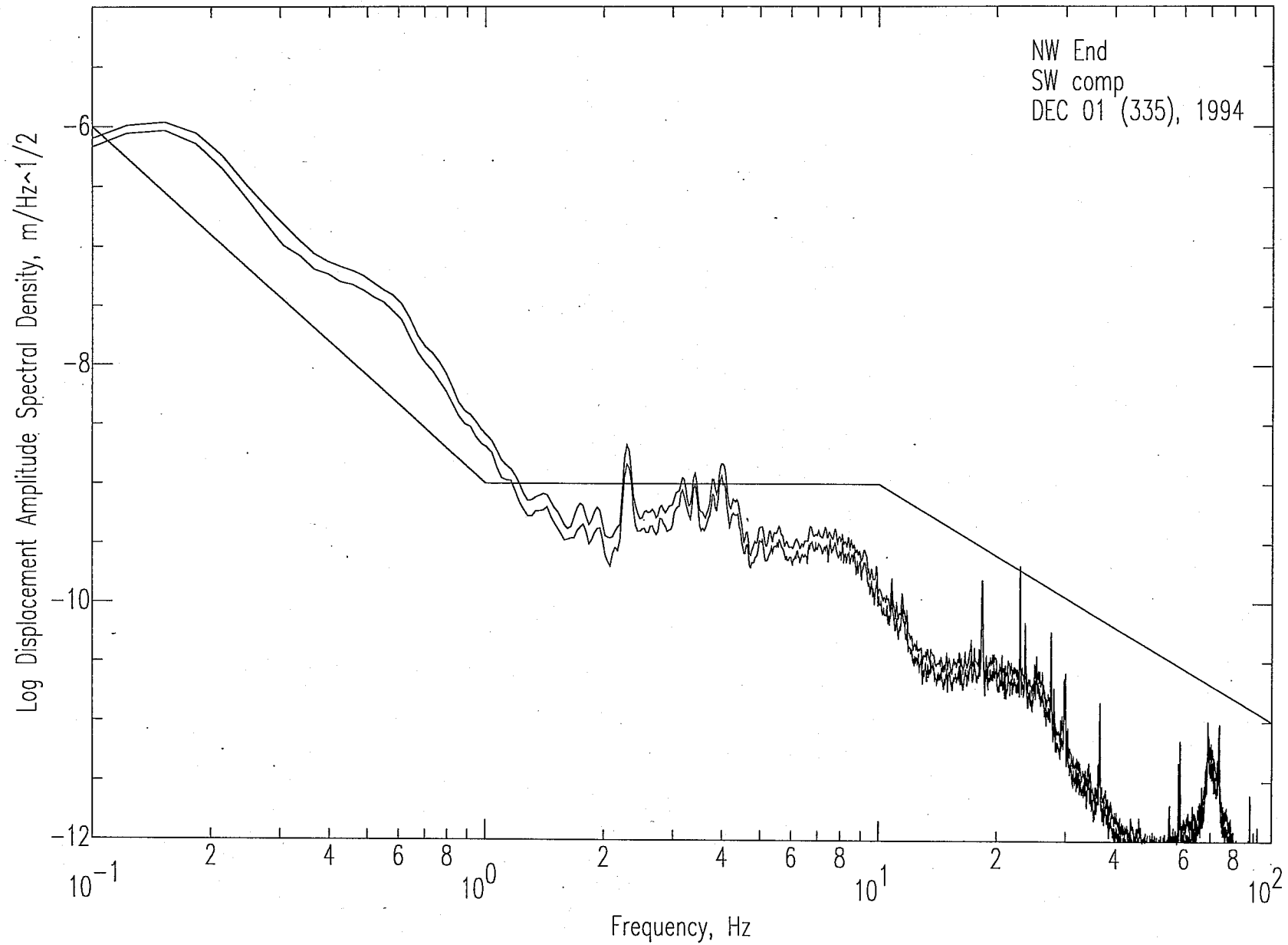




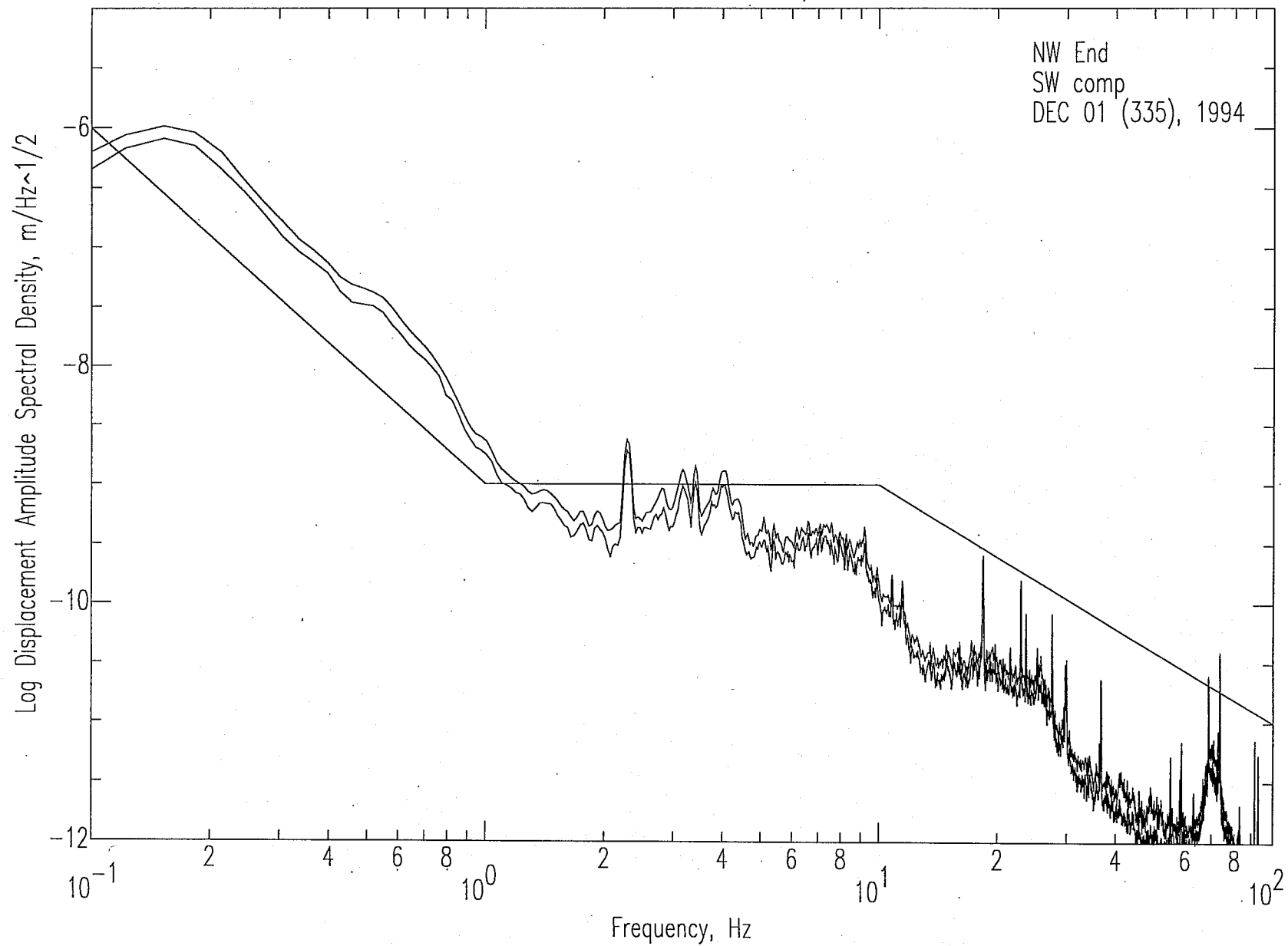
LIGO Northwest End Moderate Wind 6 - 8 m/s 335.07.3.1640



LIGO Northwest End Low Wind 1 - 2 m/s 335.10.3.1400



LIGO Northwest End Low Wind 1 - 2 m/s 335.11.3.0000



## LIGO Wind Speed Plots

### Wind Effects at Corner

#### Day 343 Hourly Seismic Acceleration Spectrograms

Hour 03 03:00 - 04:00 GMT  
Hour 04 04:00 - 05:00 GMT  
Hour 05 05:00 - 06:00 GMT  
Hour 06 06:00 - 07:00 GMT  
Hour 07 07:00 - 08:00 GMT  
Hour 08 08:00 - 09:00 GMT  
Hour 09 09:00 - 10:00 GMT  
Hour 10 10:00 - 11:00 GMT

#### Day 343 Hourly Wind Speed Plots

Hour 03 03:00 - 04:00 GMT  
Hour 04 04:00 - 05:00 GMT  
Hour 05 05:00 - 06:00 GMT  
Hour 06 06:00 - 07:00 GMT  
Hour 07 07:00 - 08:00 GMT  
Hour 08 08:00 - 09:00 GMT  
Hour 09 09:00 - 10:00 GMT  
Hour 10 10:00 - 11:00 GMT

#### Day 3Compound3 Vertical Component Displacement Spectra

Hour 03 2200 seconds  
Hour 04 1600 seconds  
Hour 05 1400 seconds  
Hour 06 0400 seconds  
Hour 08 1900 seconds  
Hour 09 2640 seconds

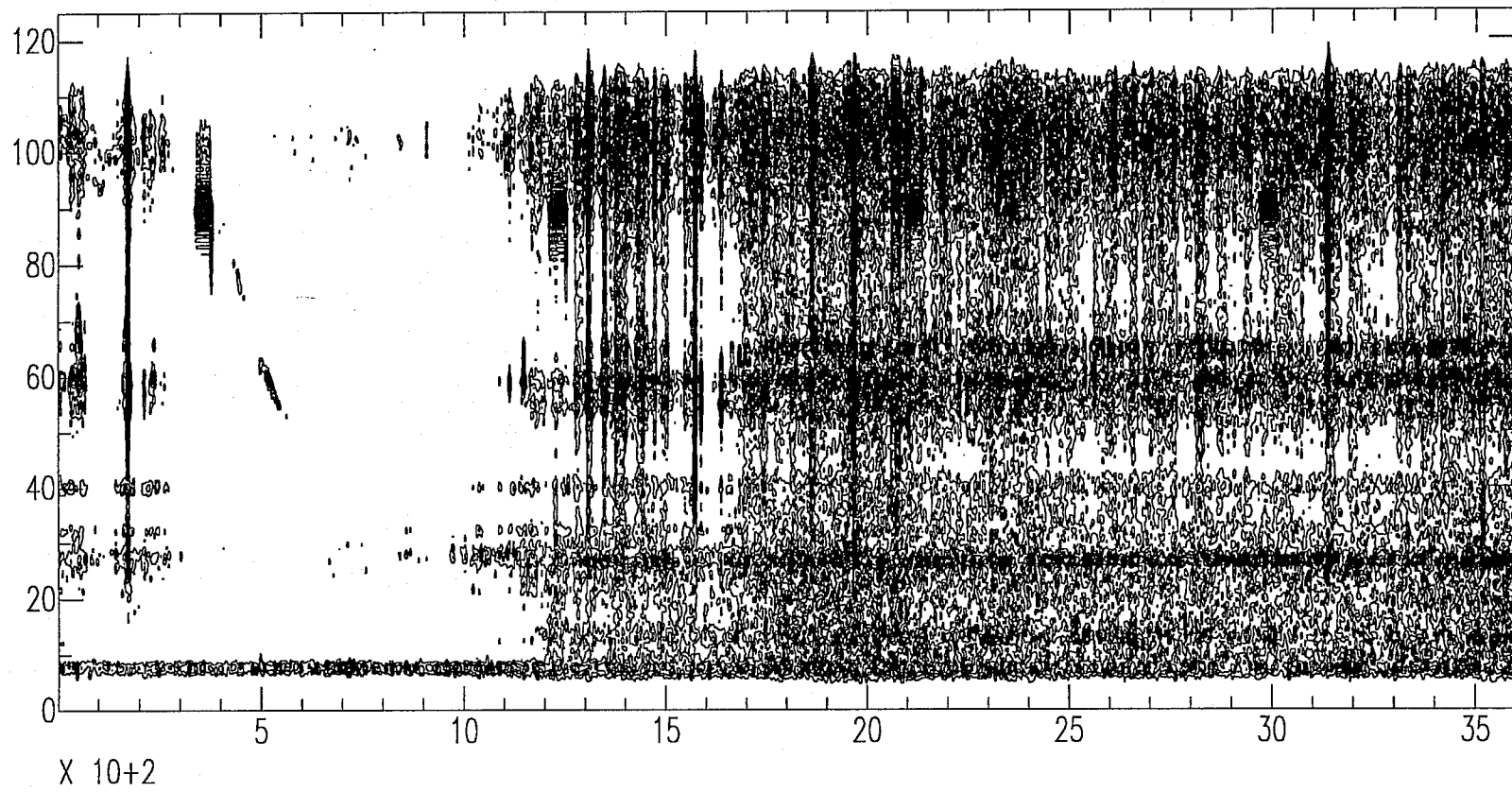
#### Day 343Northwest Component Displacement Spectra

Hour 03 2200 seconds  
Hour 04 1600 seconds  
Hour 05 1400 seconds  
Hour 06 0400 seconds  
Hour 08 1900 seconds  
Hour 09 2640 seconds

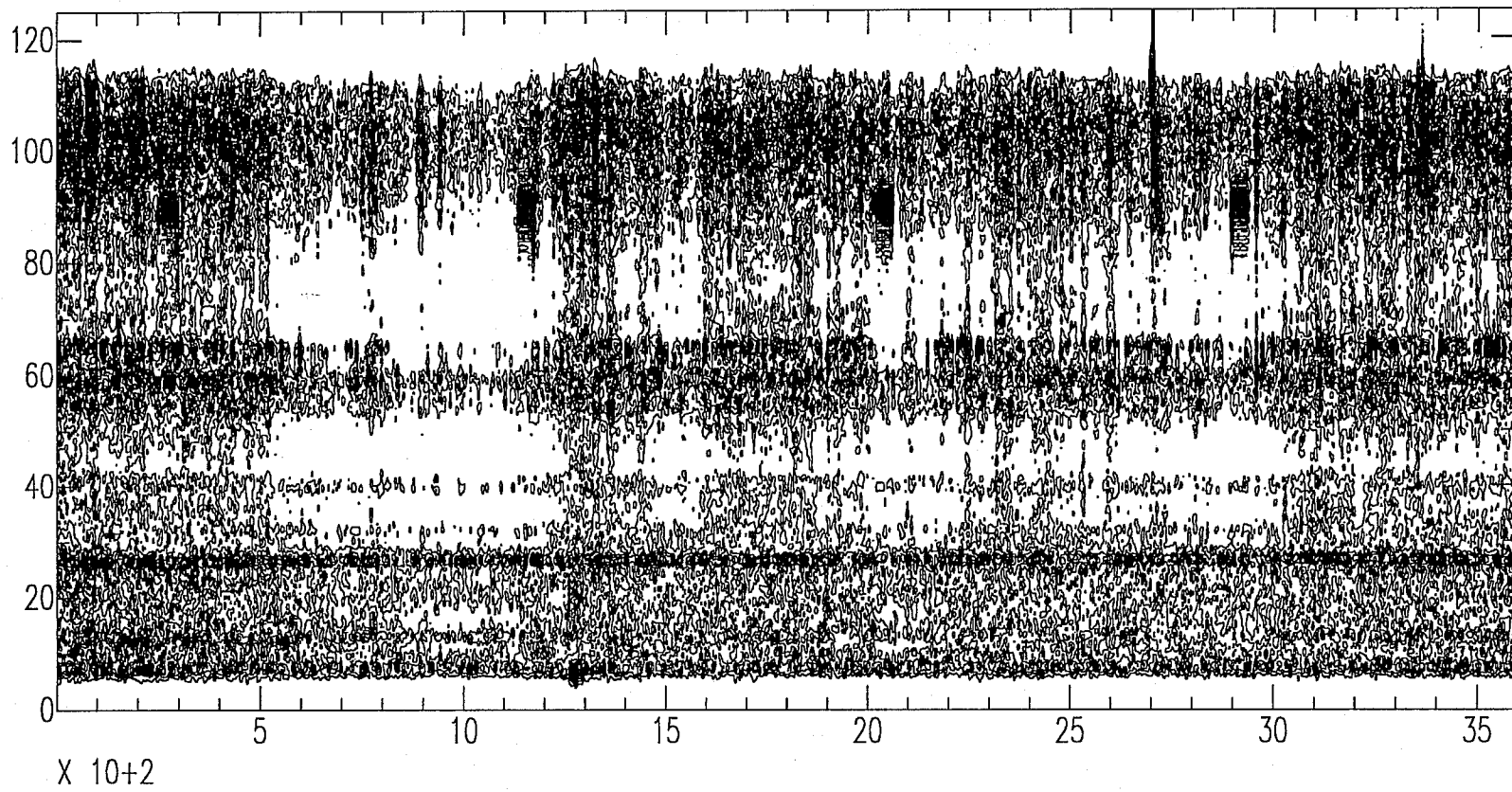
#### Day 343 Southwest Component Displacement Spectra

Hour 03 2200 seconds  
Hour 04 1600 seconds  
Hour 05 1400 seconds  
Hour 06 0400 seconds  
Hour 08 1900 seconds  
Hour 09 2640 seconds

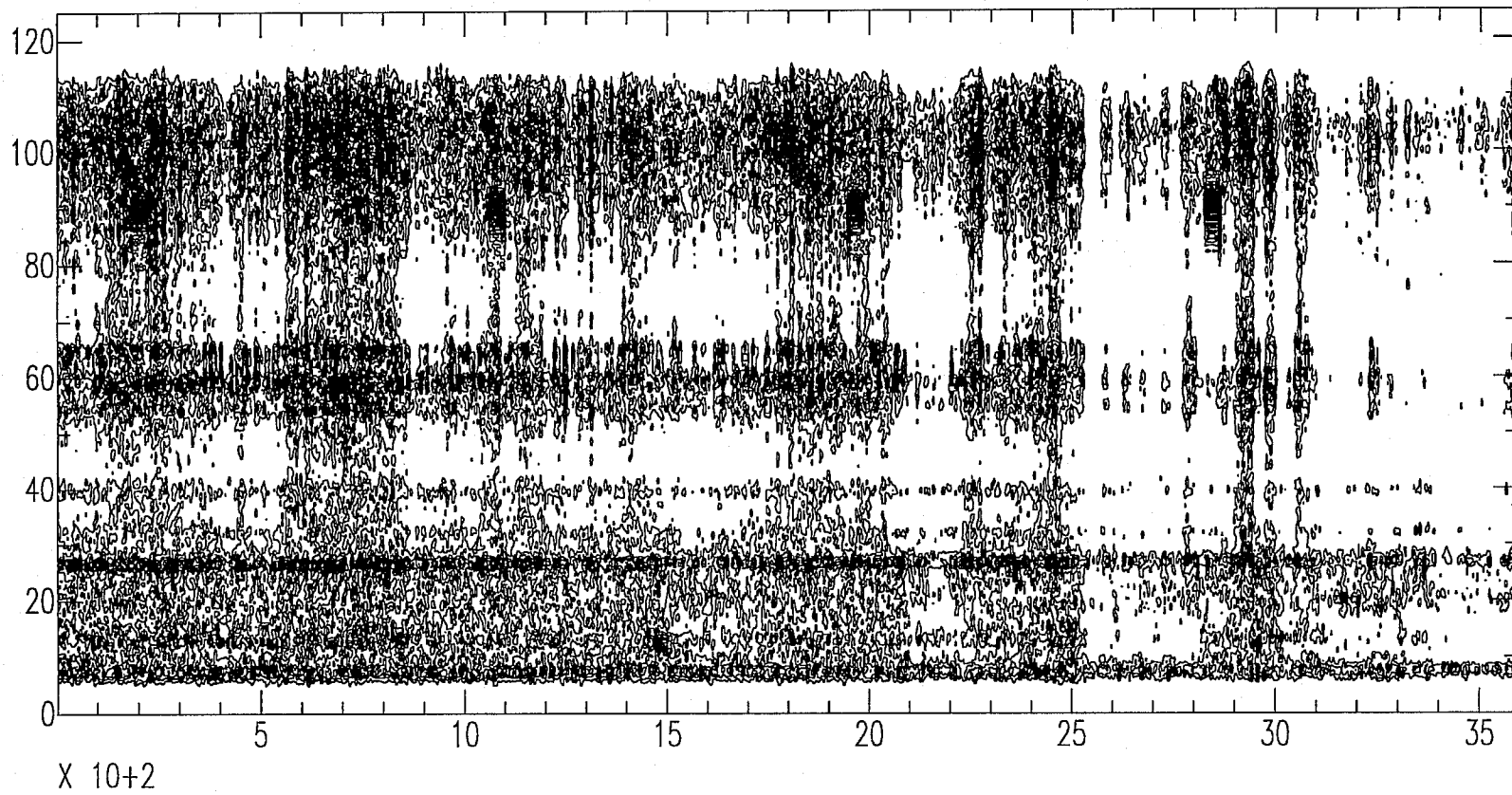
343.03.1.sac



343.04.1.sac

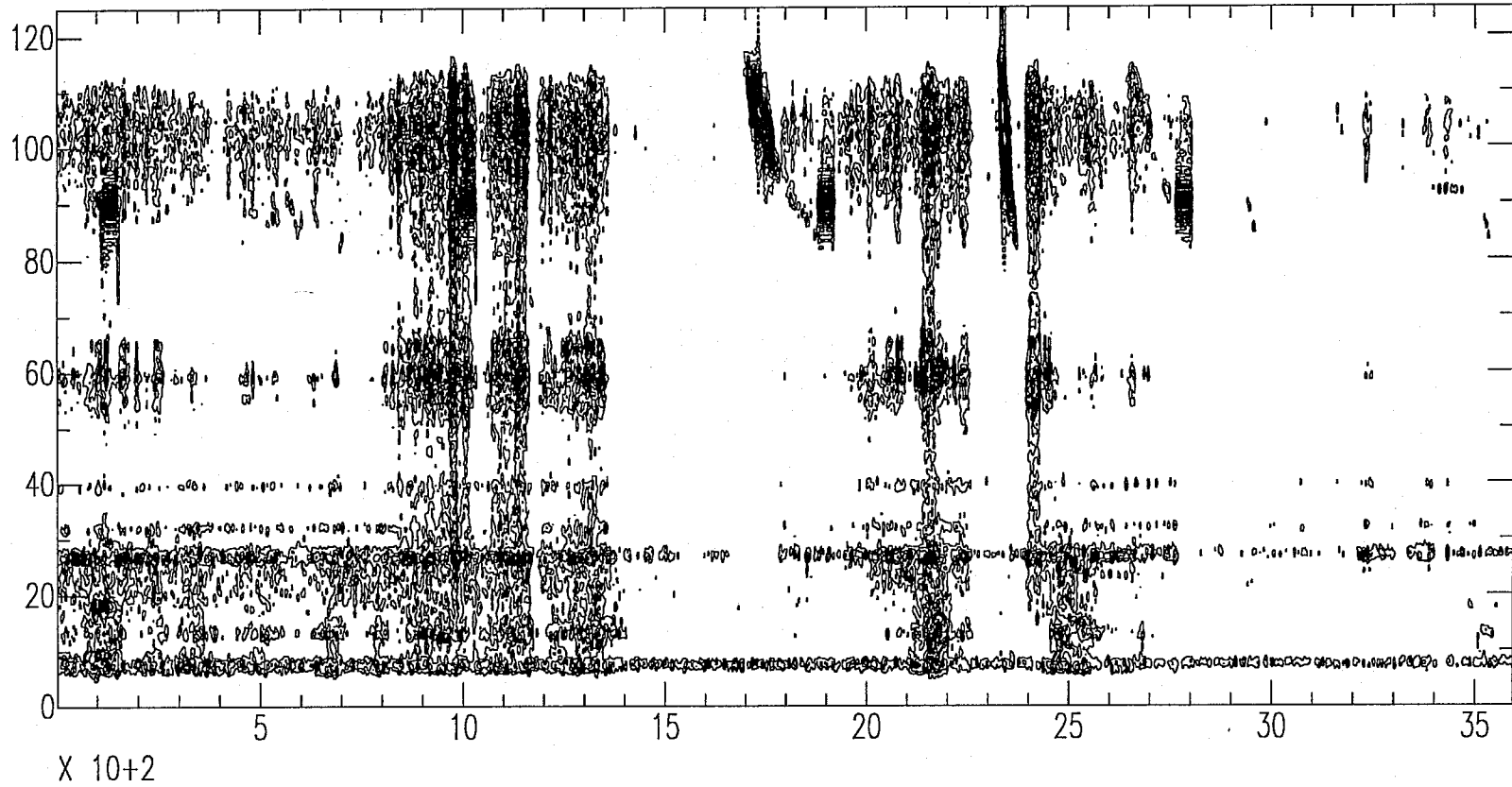


343.05.1.sac



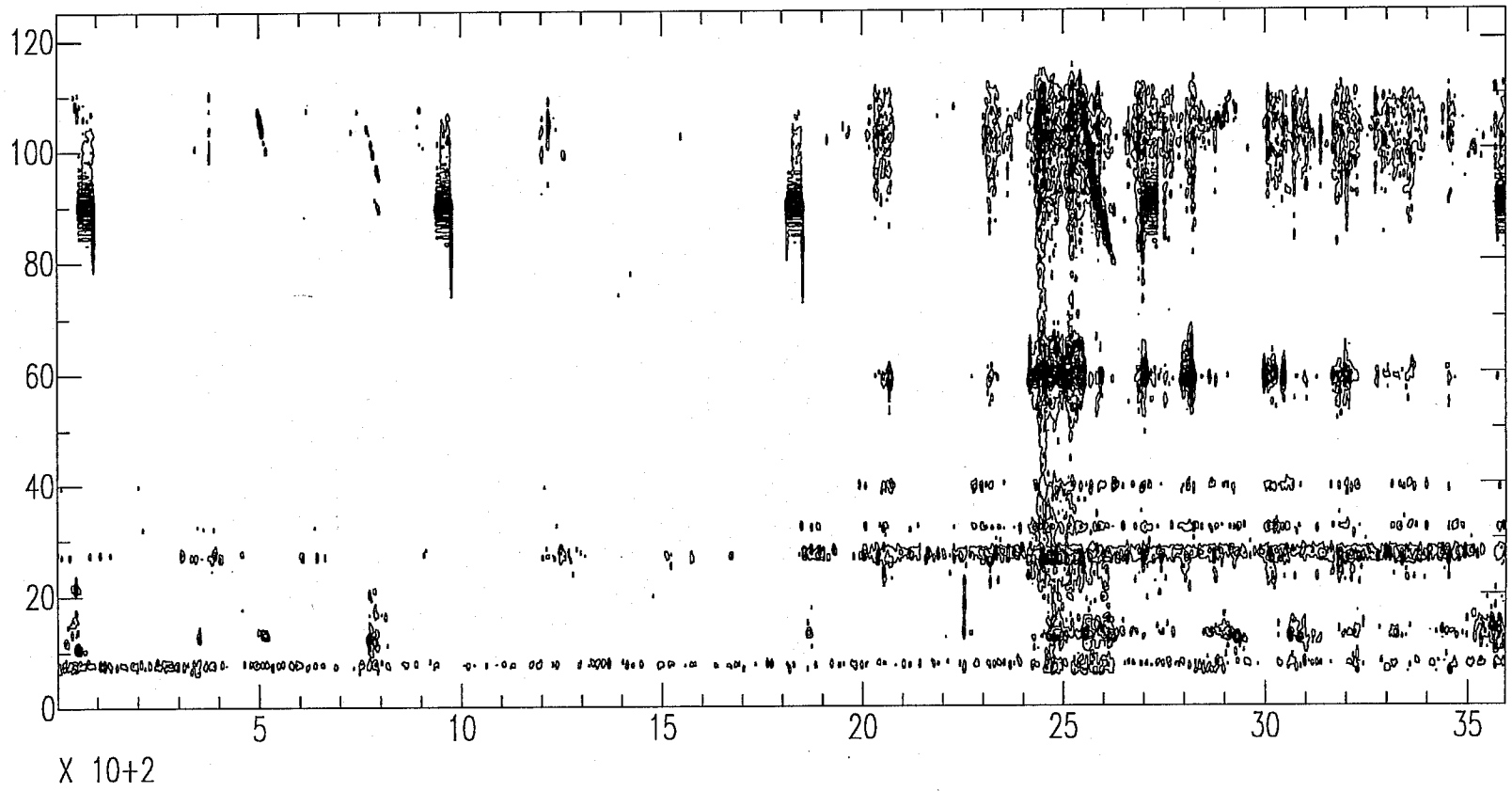


343.06.1.sac

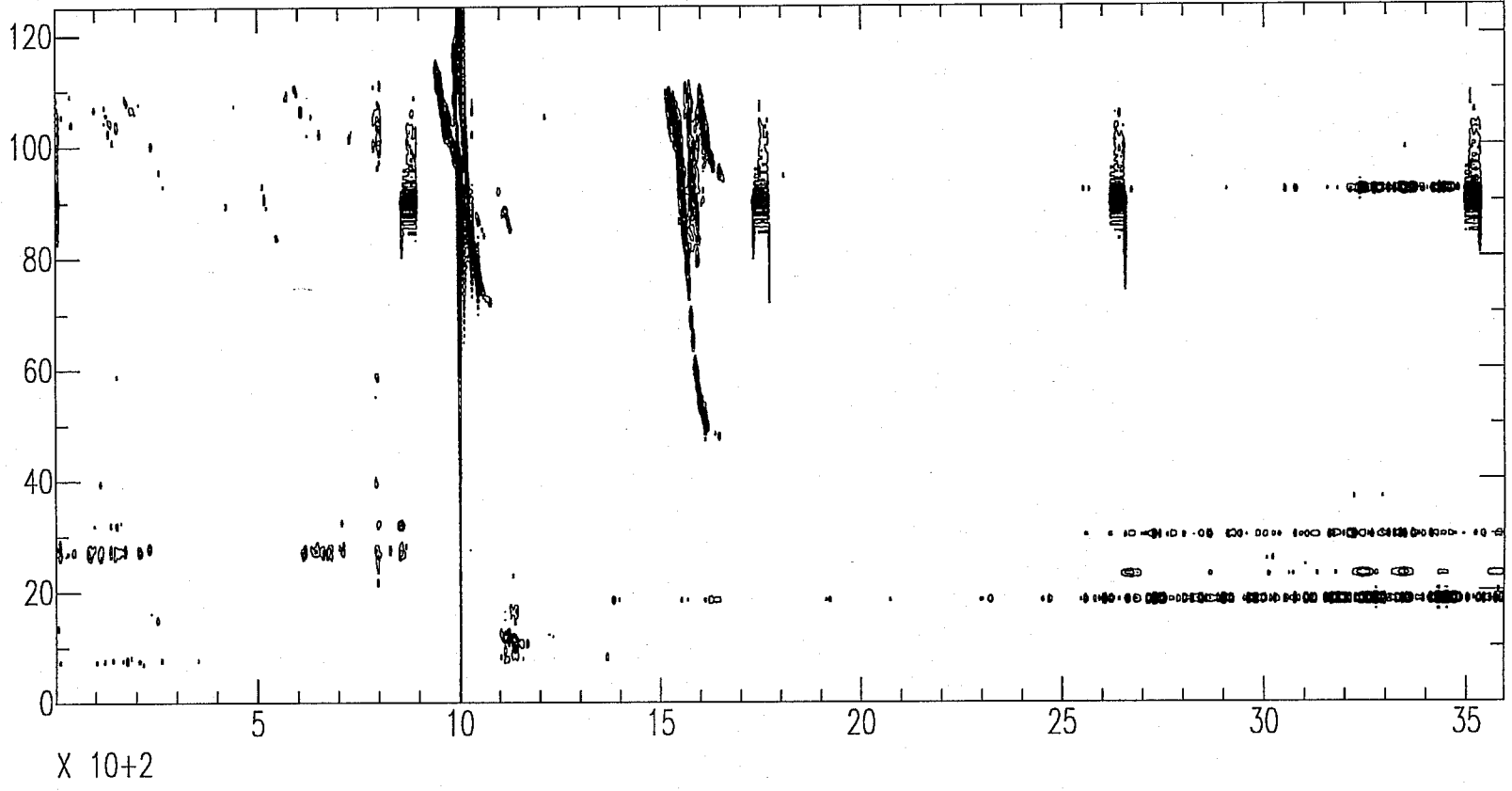




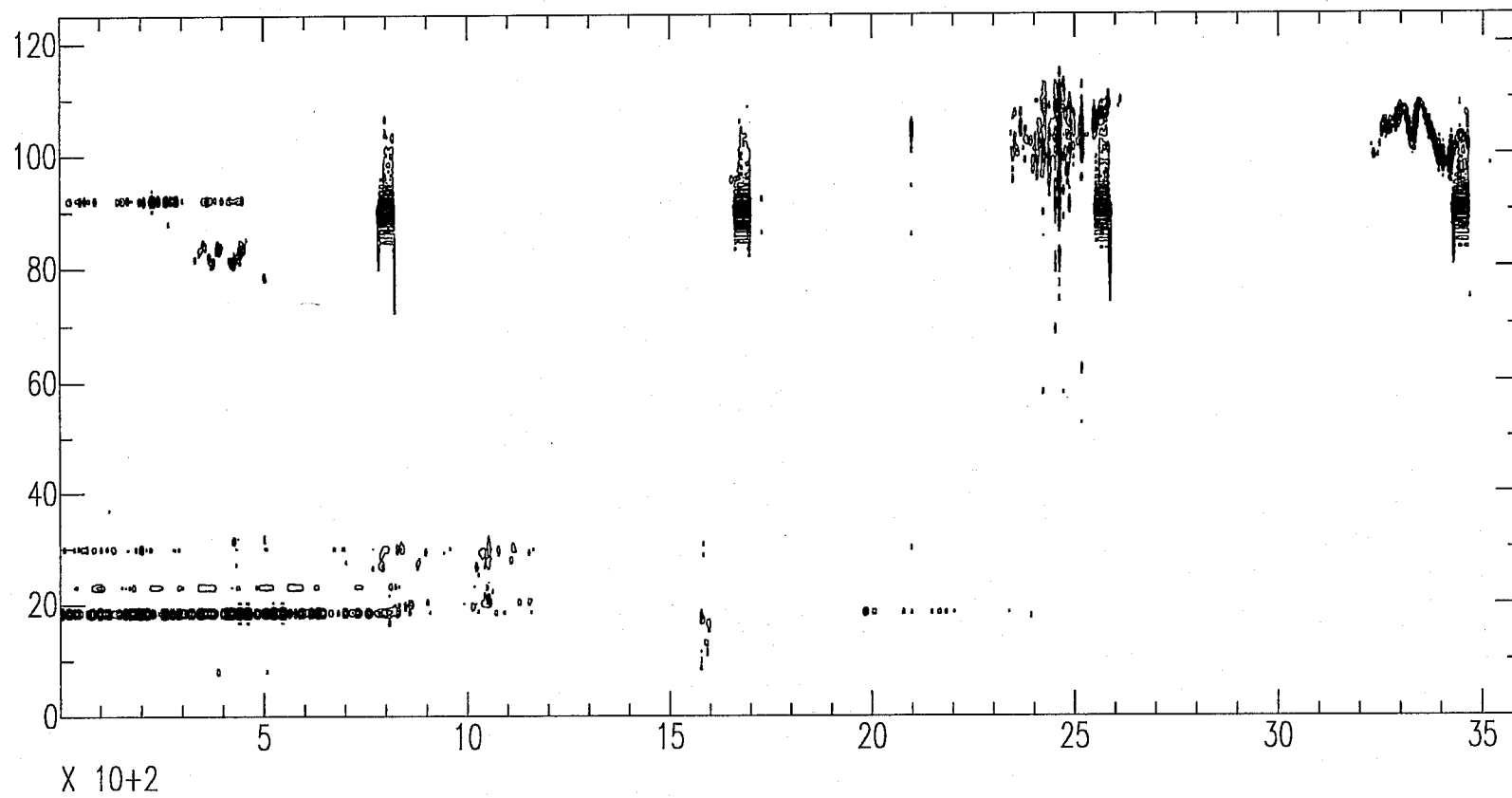
343.07.1.sac

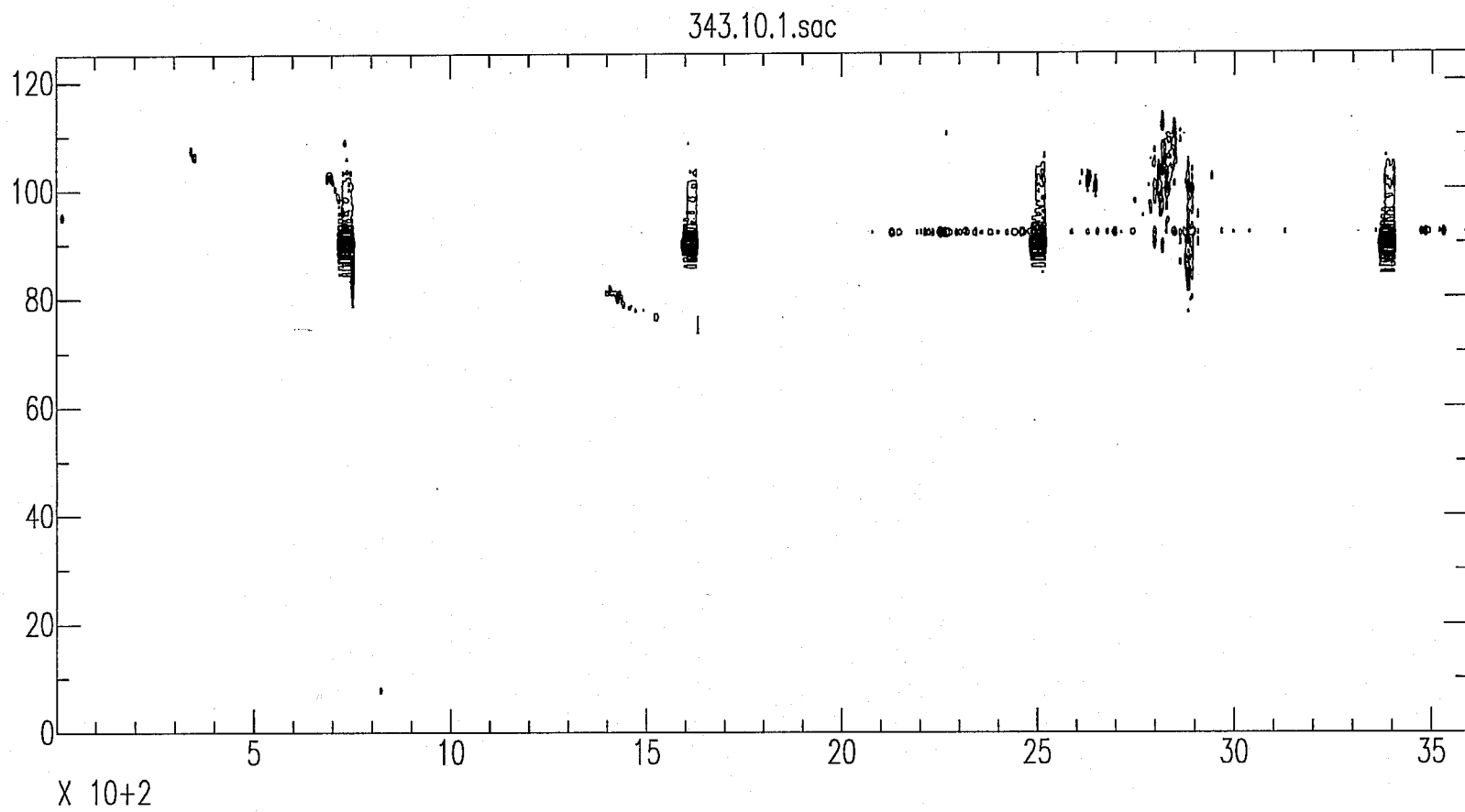


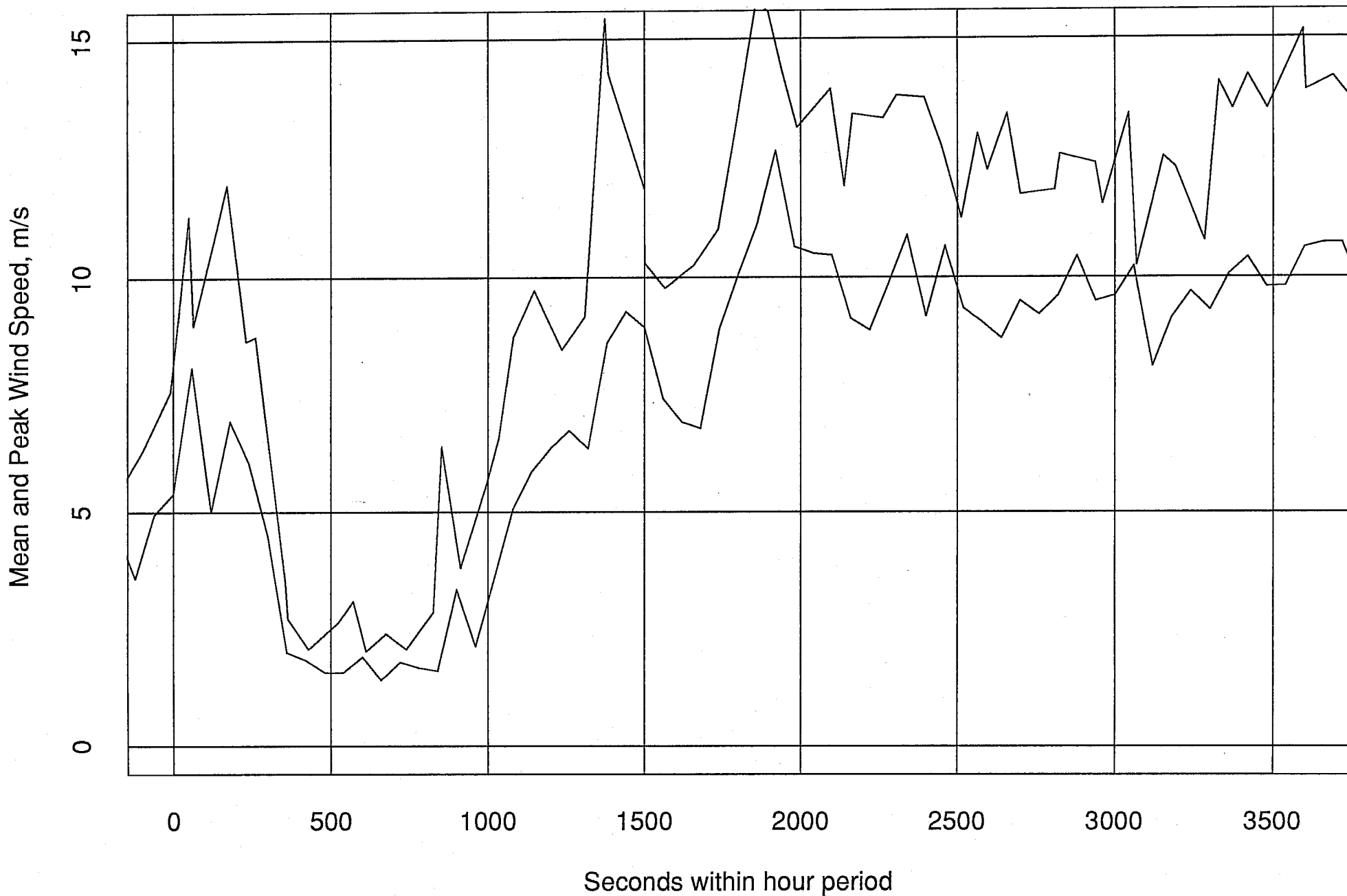
343.08.1.sac



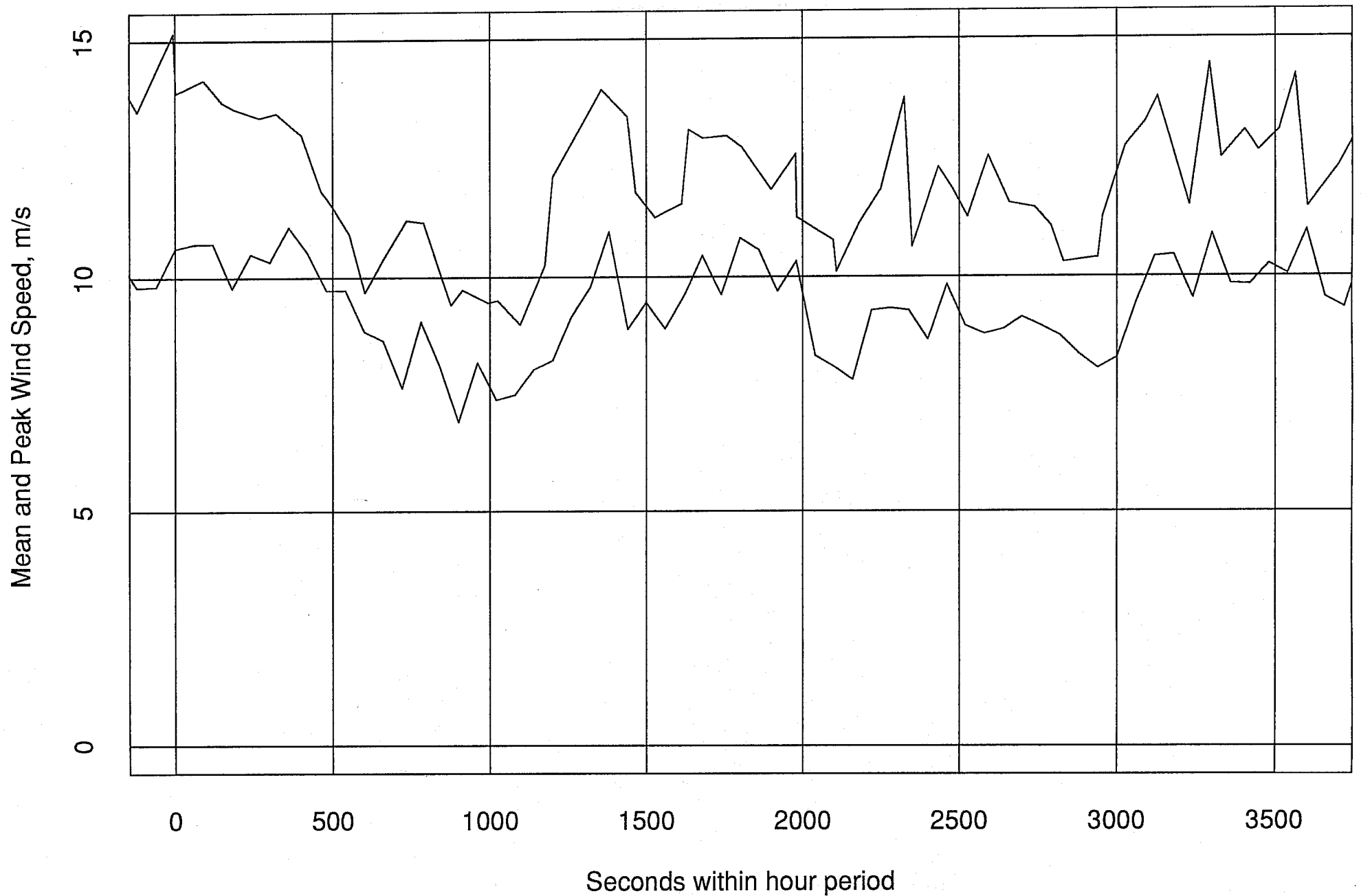
343.09.1.sac



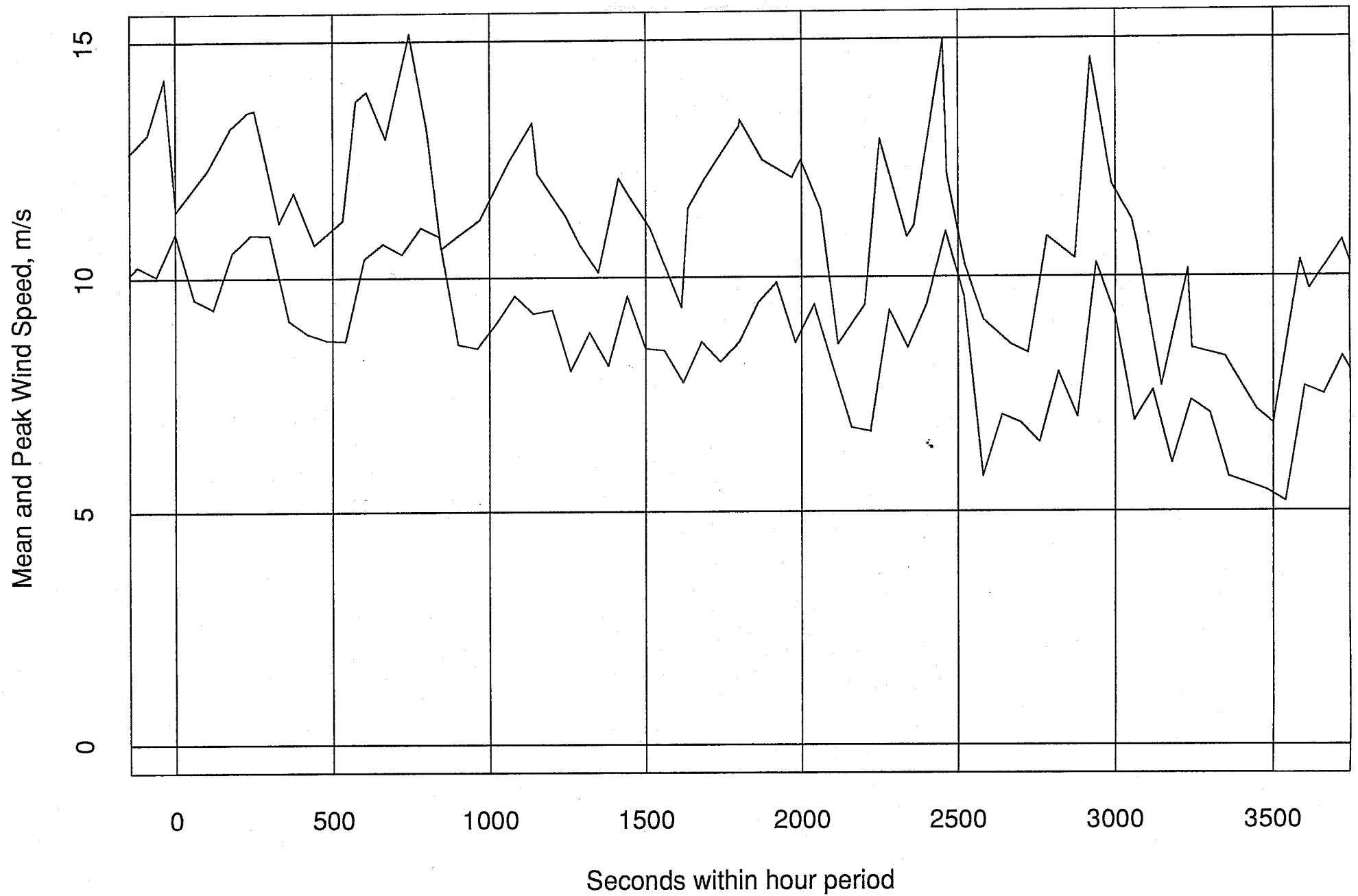




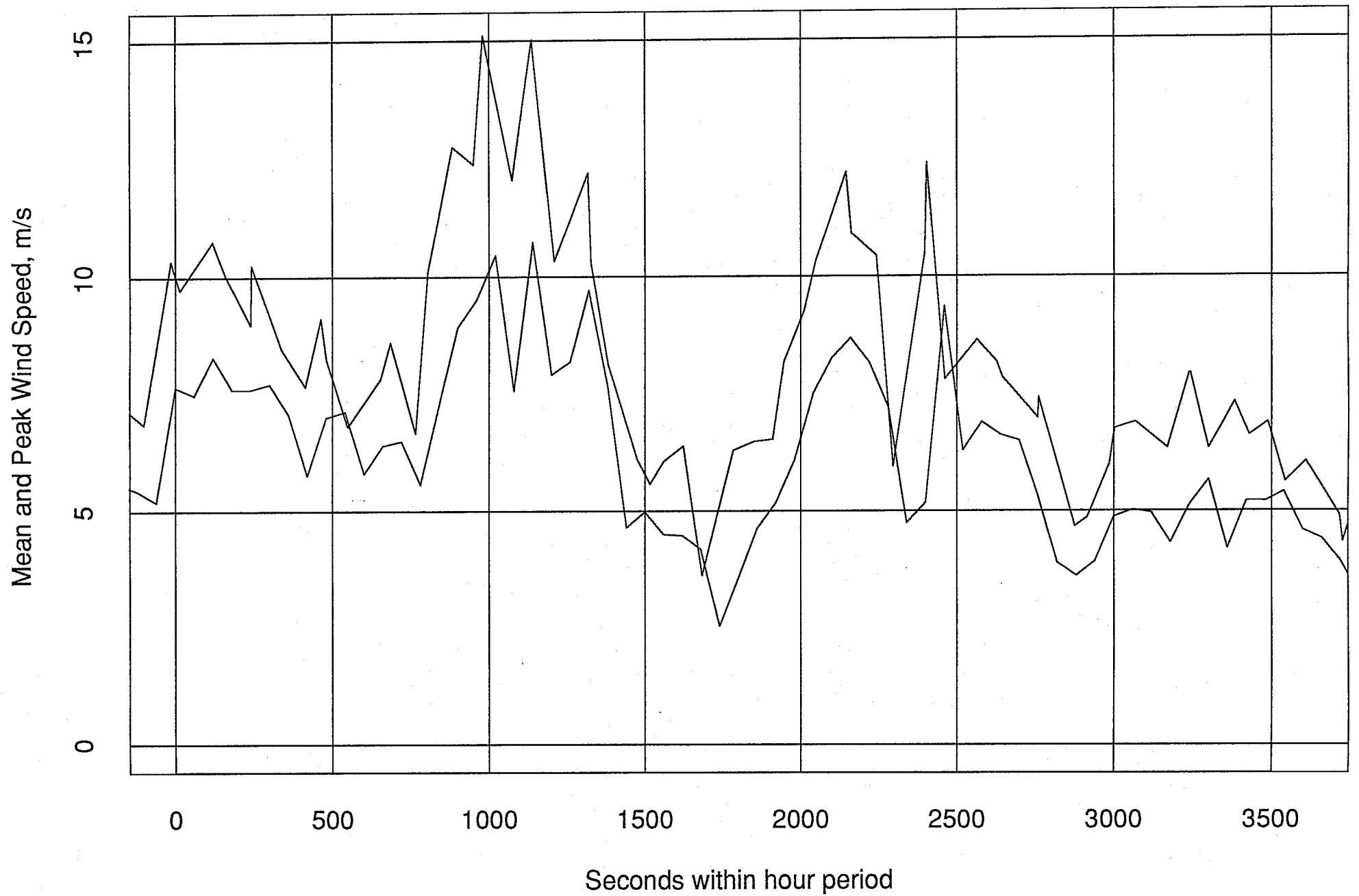
# Mean and Peak Wind Speeds, Day 343 Hour 04:00 GMT LIGO-C950580-00-0



# Mean and Peak Wind Speeds, Day 343 Hour 05:00 GMT LIGO-C950580-00-0

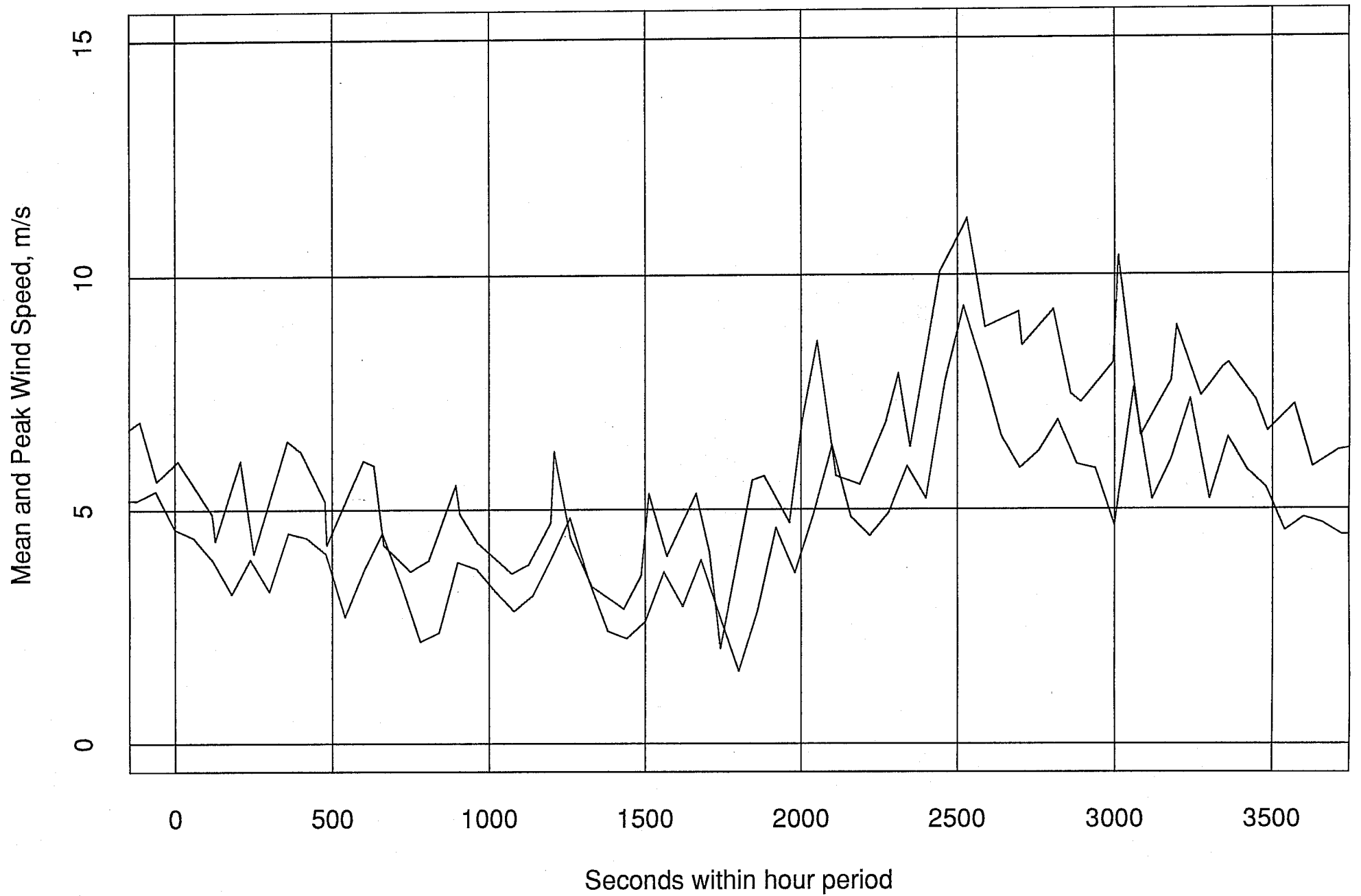


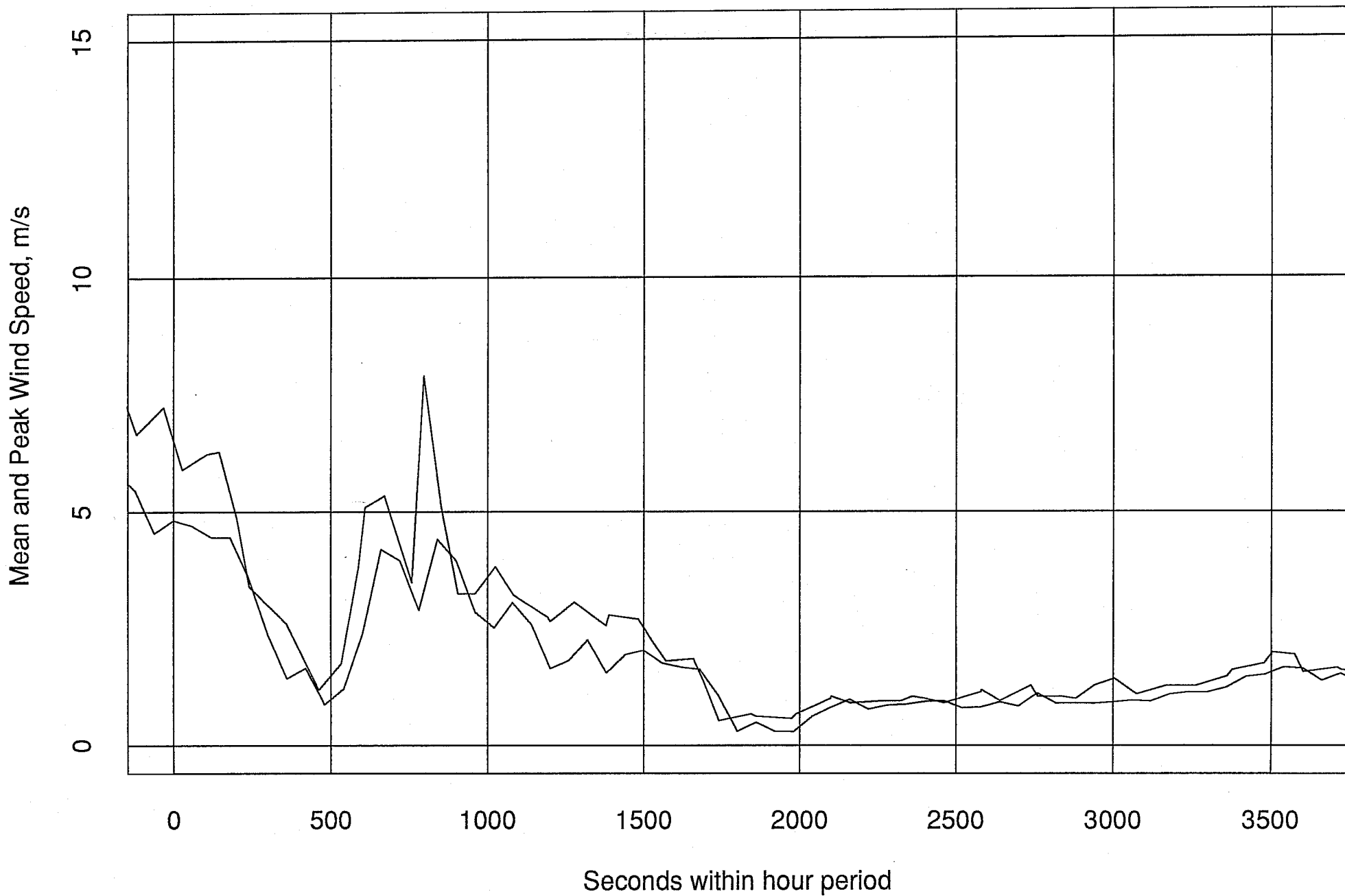
# Mean and Peak Wind Speeds, Day 343 Hour 06:00 GMT LIGO-C950580-00-0



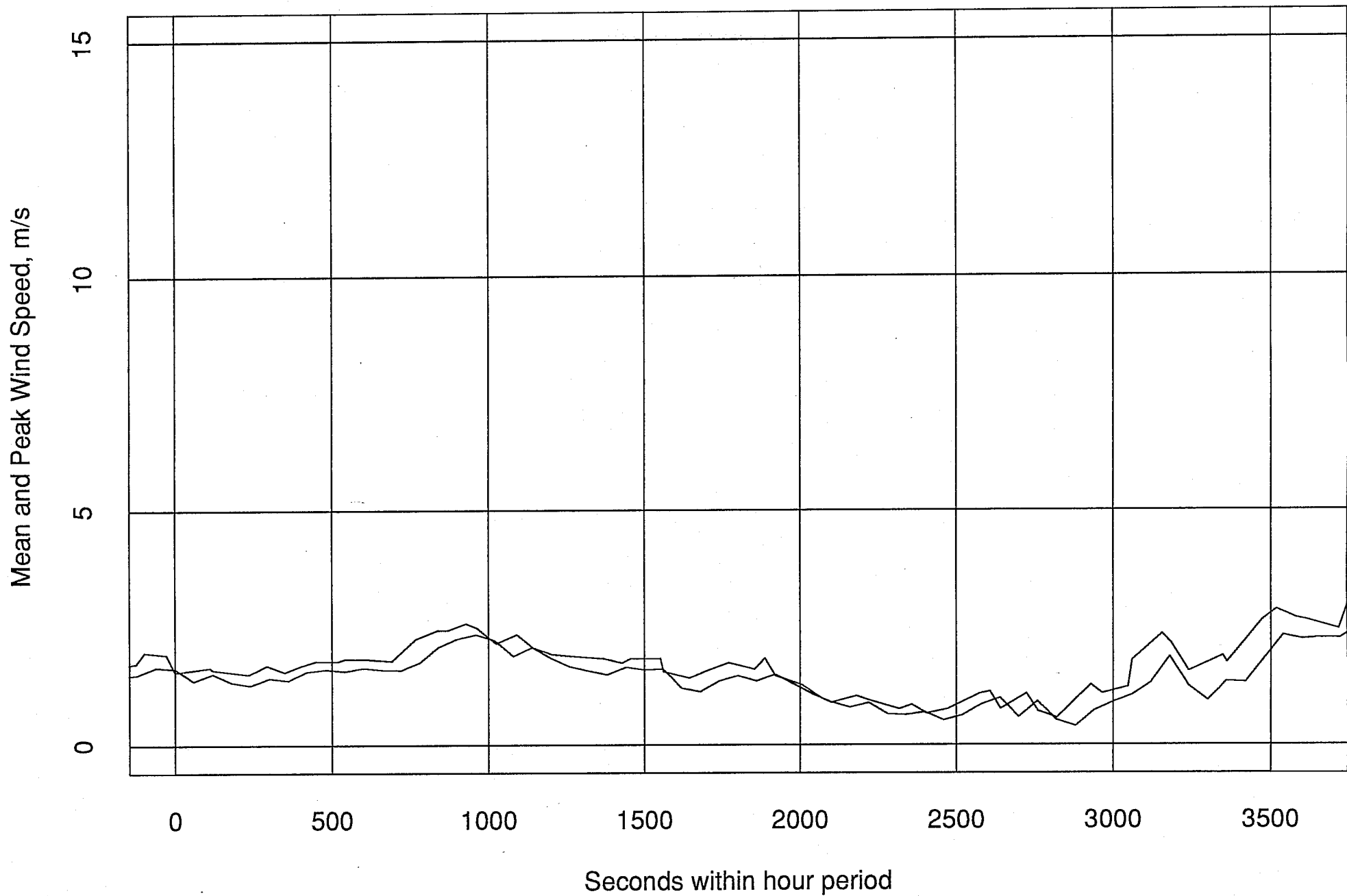


# Mean and Peak Wind Speeds, Day 343 Hour 07:00 GMT LIGO-C950580-00-0

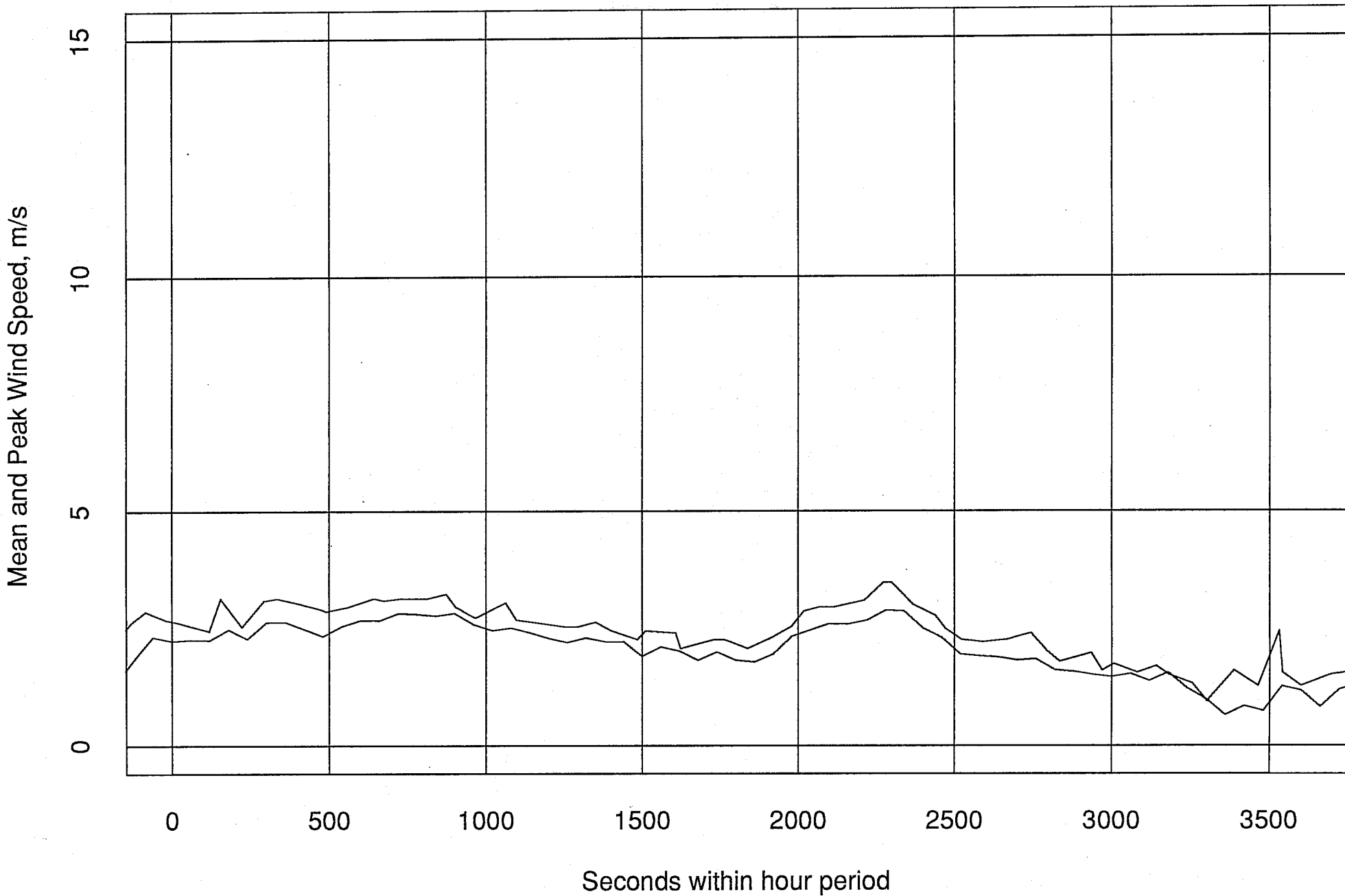




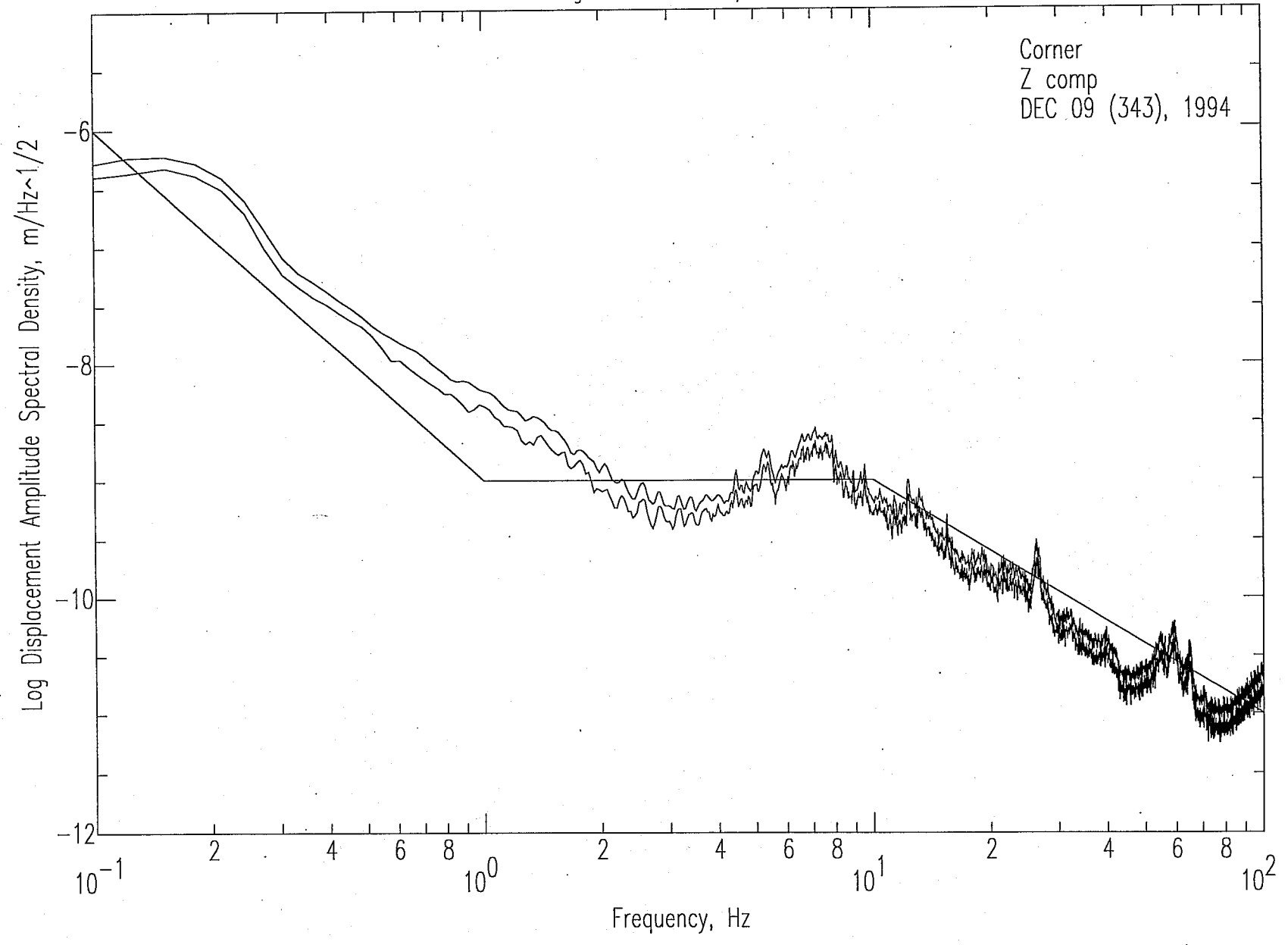
# Mean and Peak Wind Speeds, Day 343 Hour 09:00 GMT LIGO-C950580-00-0



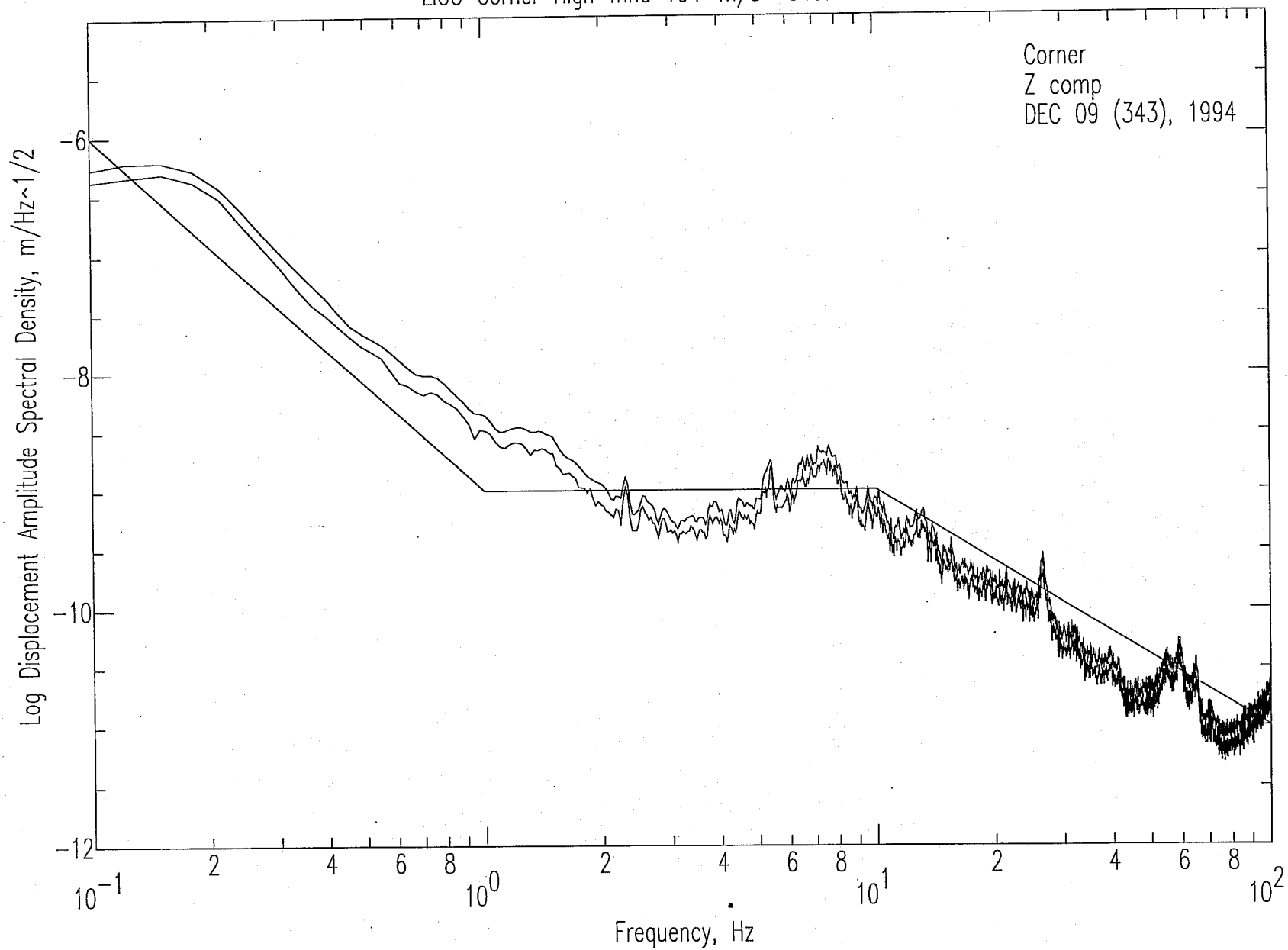
# Mean and Peak Wind Speeds, Day 343 Hour 10:00 GMT LIGO-C950580-00-0



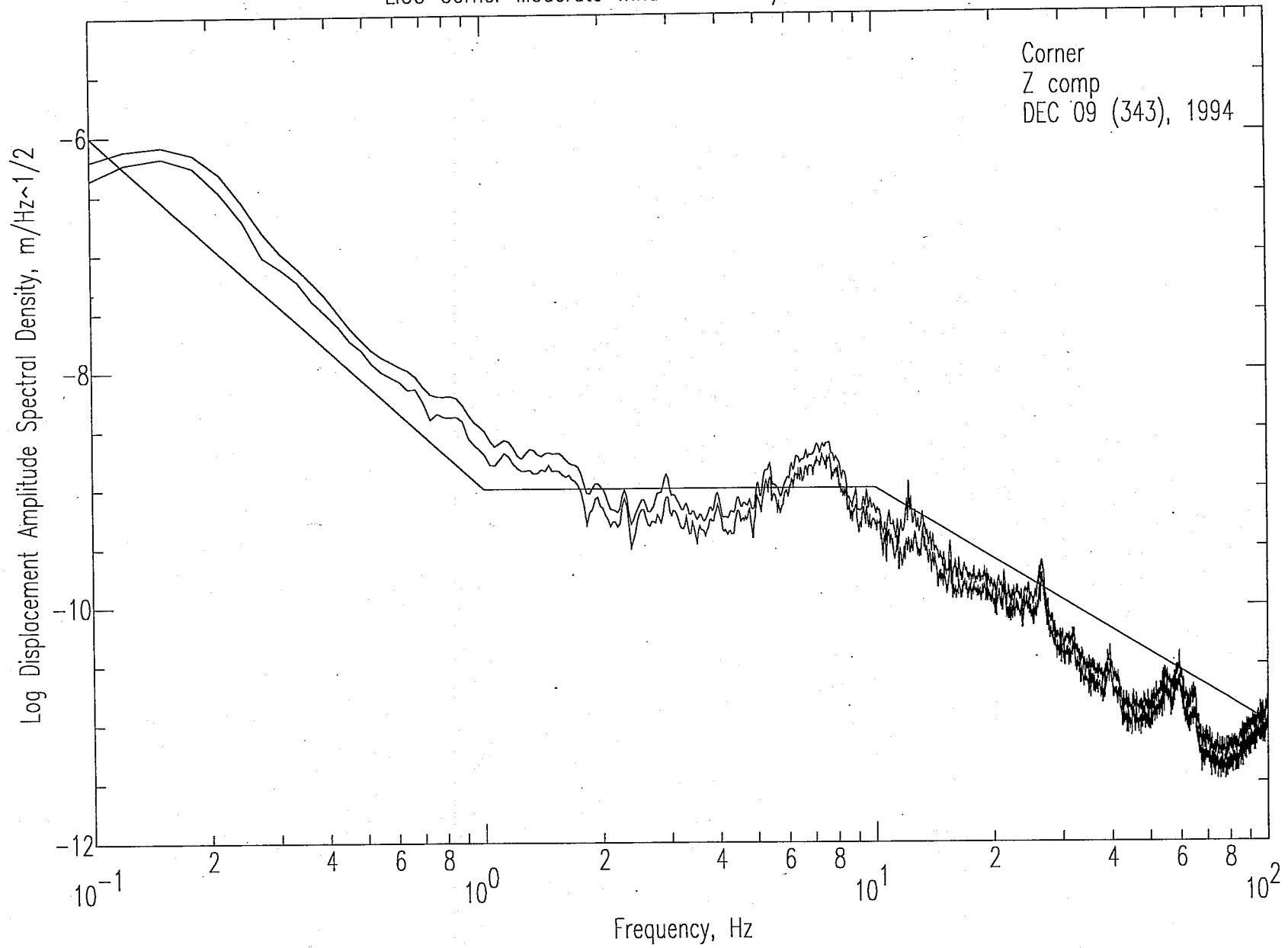
LIGO Corner High Wind 10+ m/s 343.03.1.2200



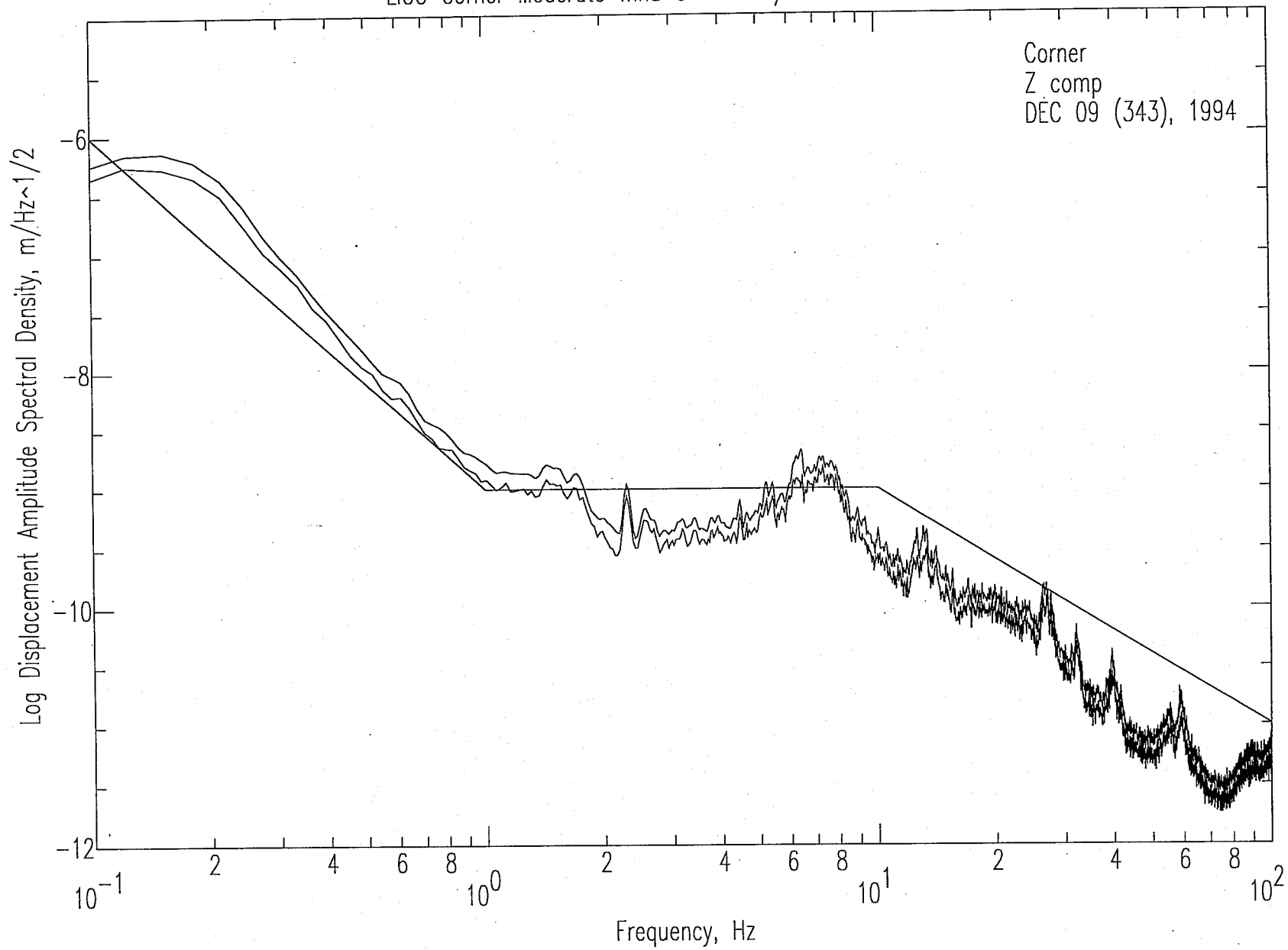
LIGO Corner High Wind 10+ m/s 343.04.1.1600



LIGO Corner Moderate Wind 6 - 8 m/s 343.05.1.1400

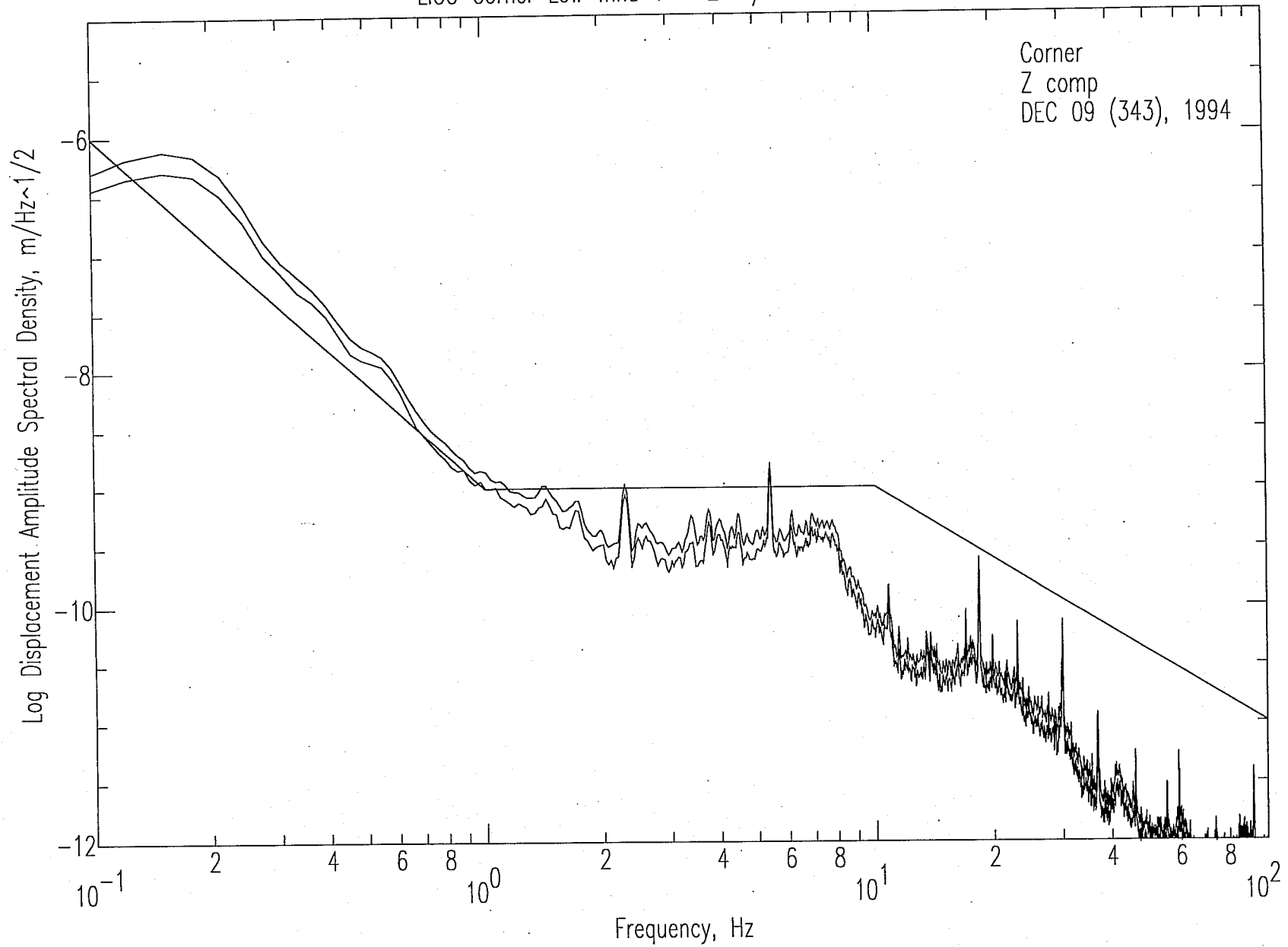


LIGO Corner Moderate Wind 6 - 8 m/s 343.06.1.0400

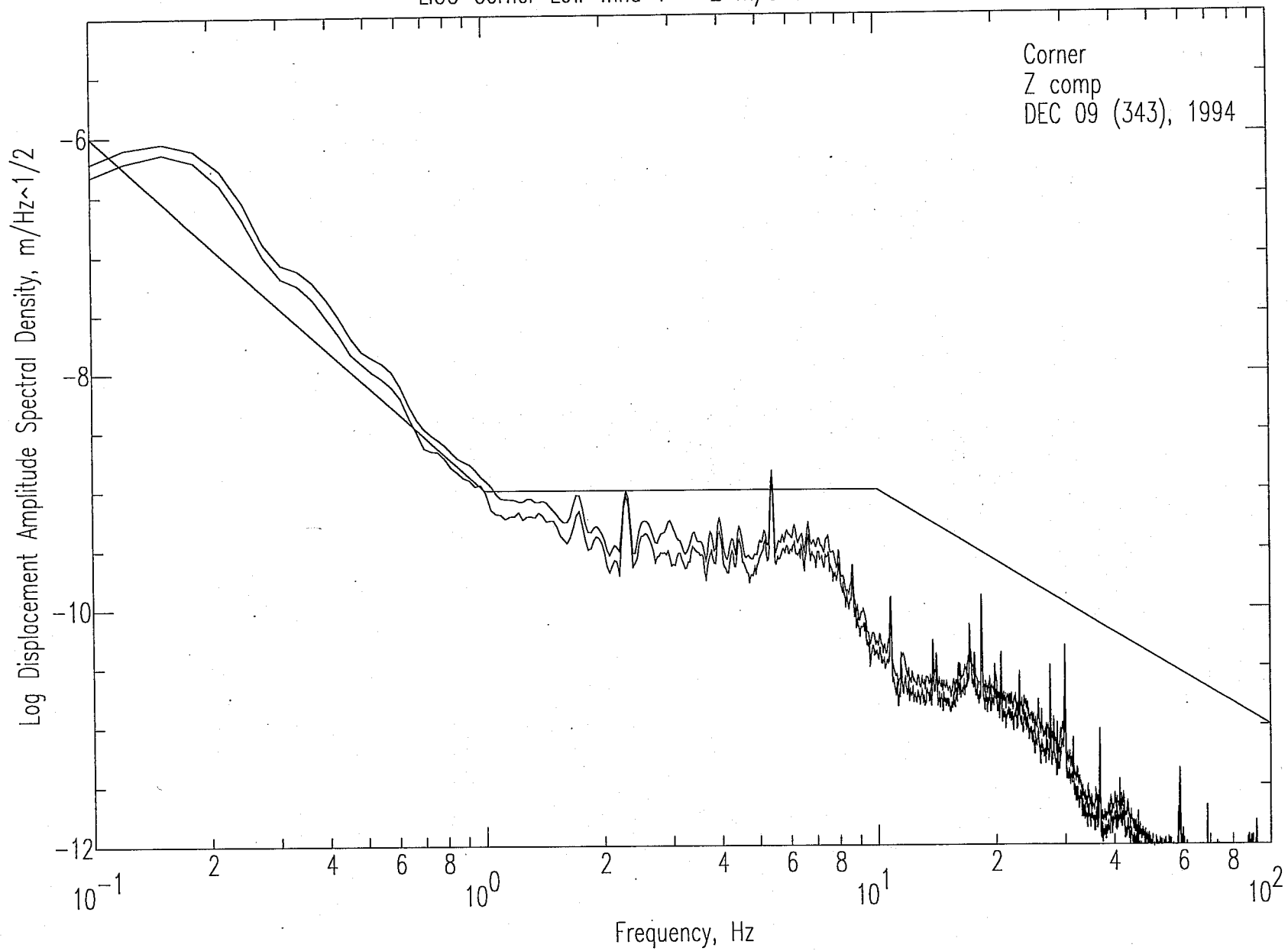




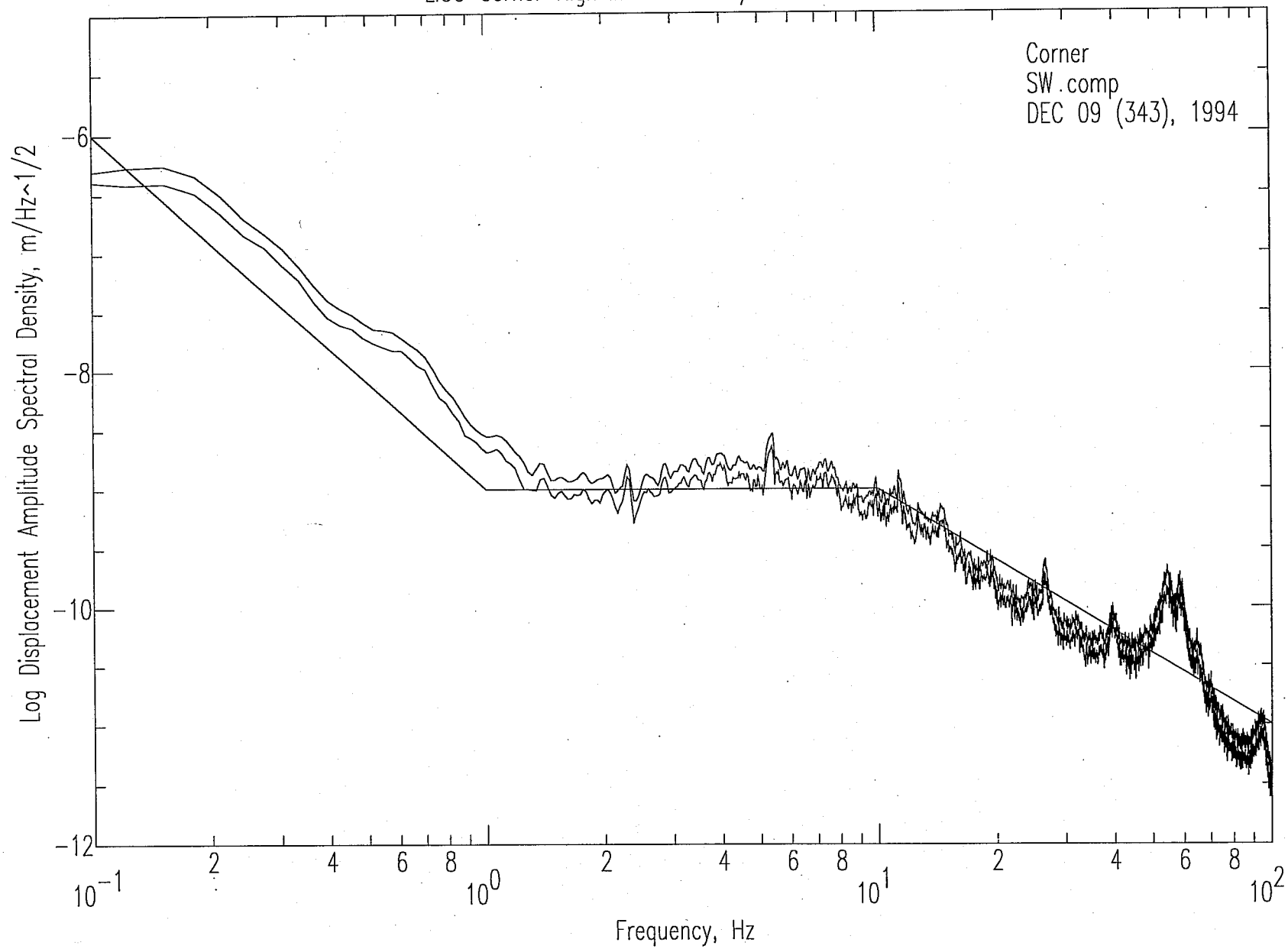
LIGO Corner Low Wind 1 - 2 m/s 343.08.1.1900



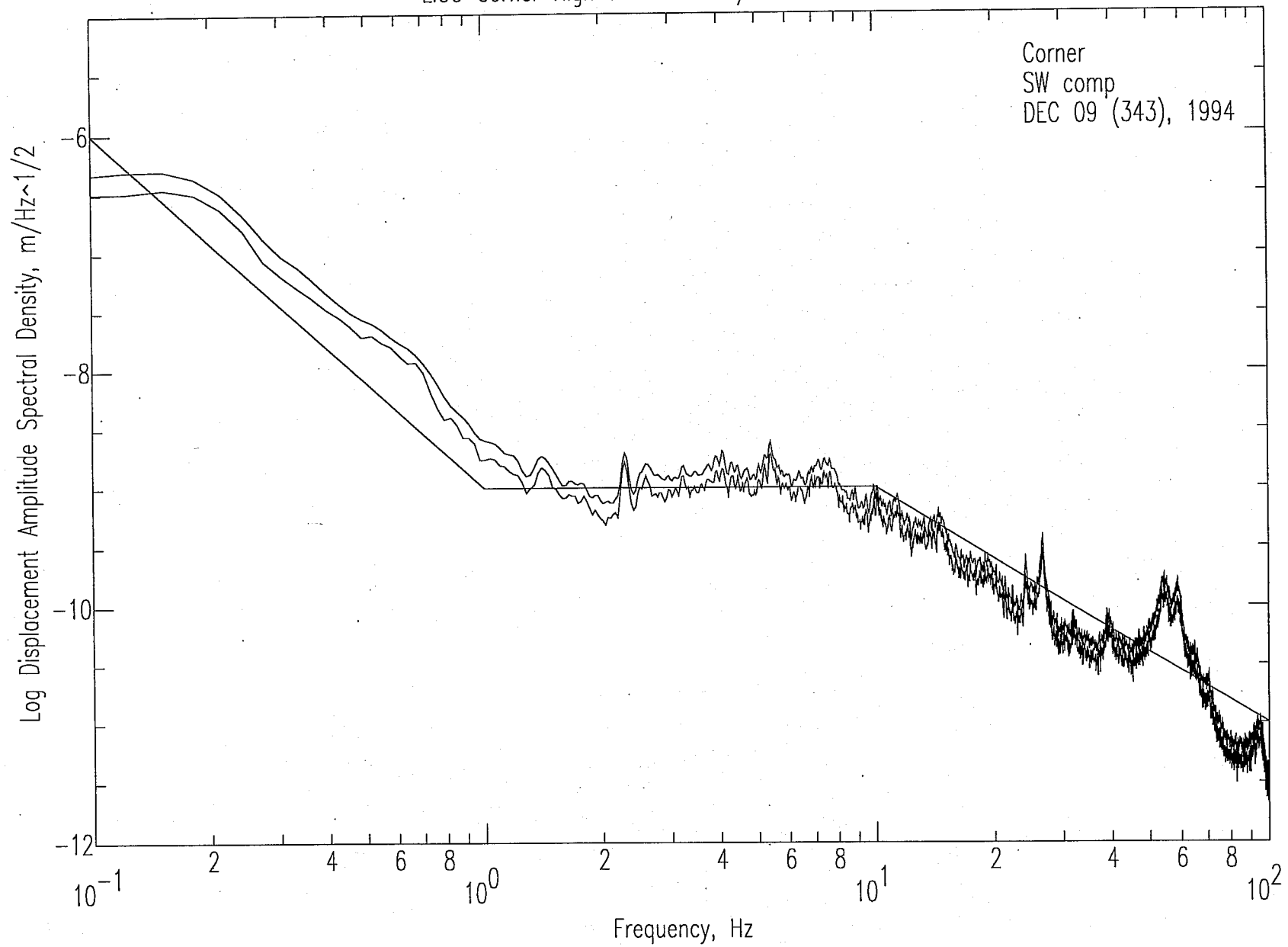
LIGO Corner Low Wind 1 - 2 m/s 343.09.1.2640



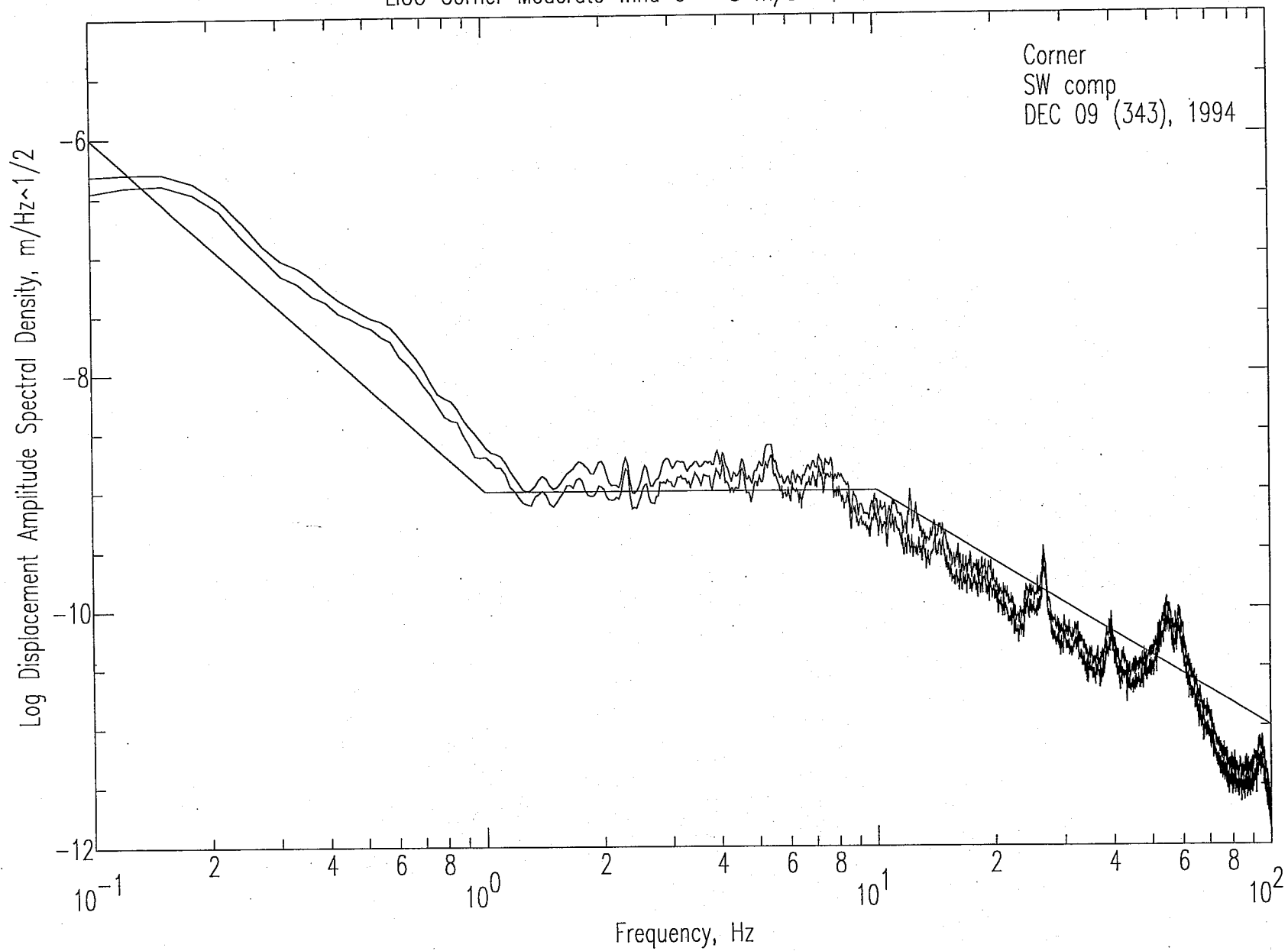
LIGO Corner High Wind 10+ m/s 343.03.3.2200



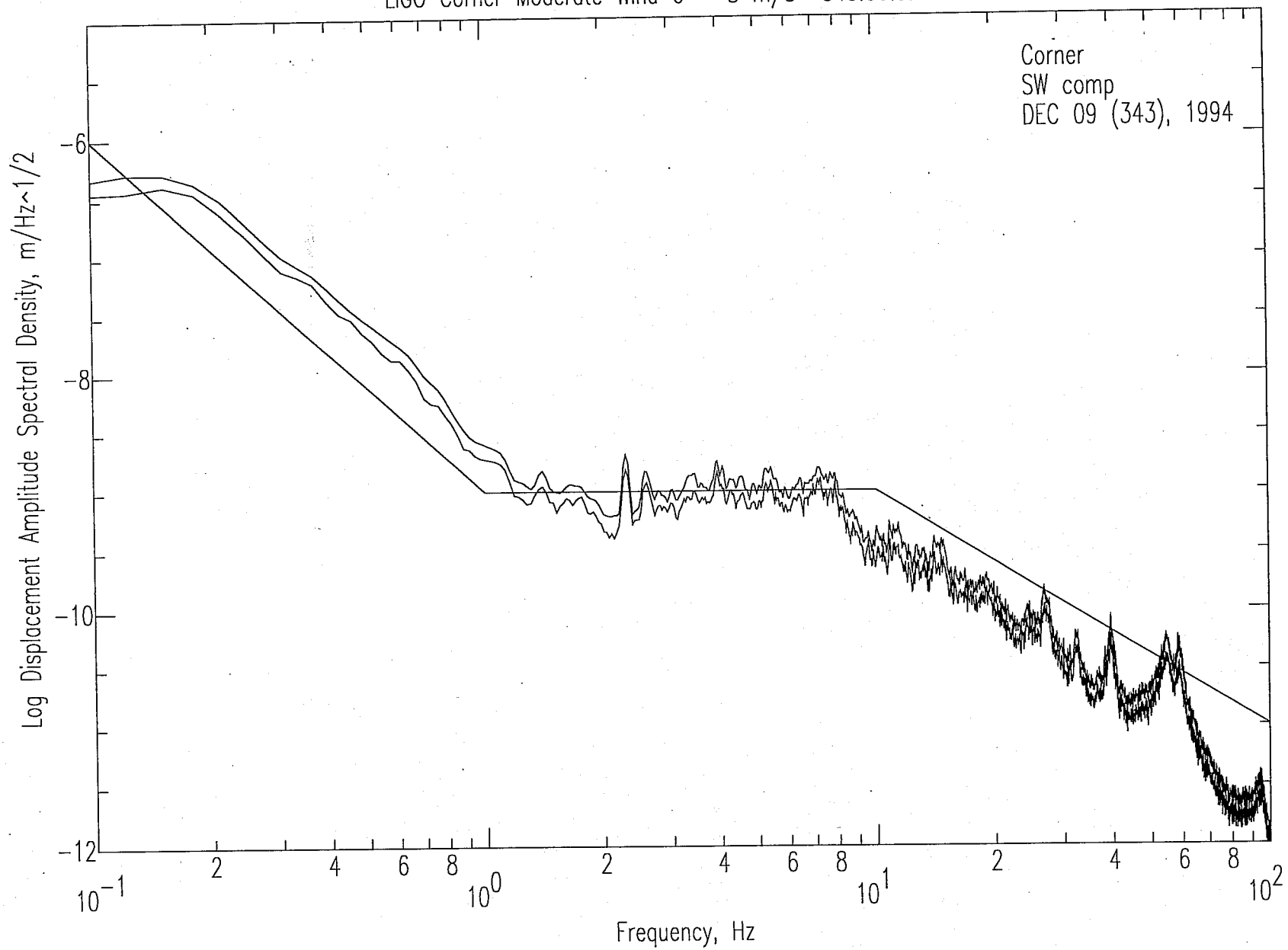
LIGO Corner High Wind 10+ m/s 343.04.3.1600



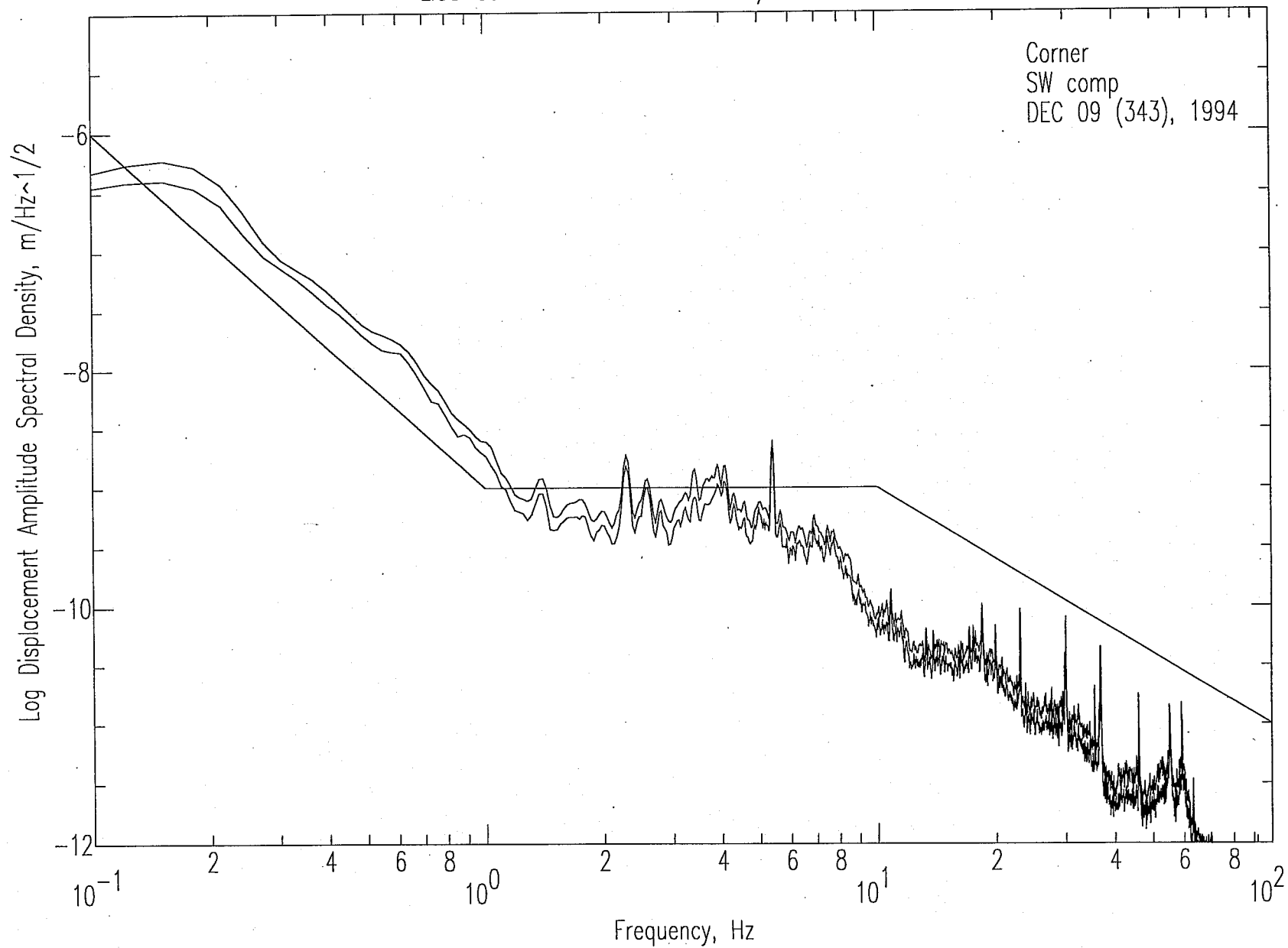
LIGO Corner Moderate Wind 6 - 8 m/s 343.05.3.1400



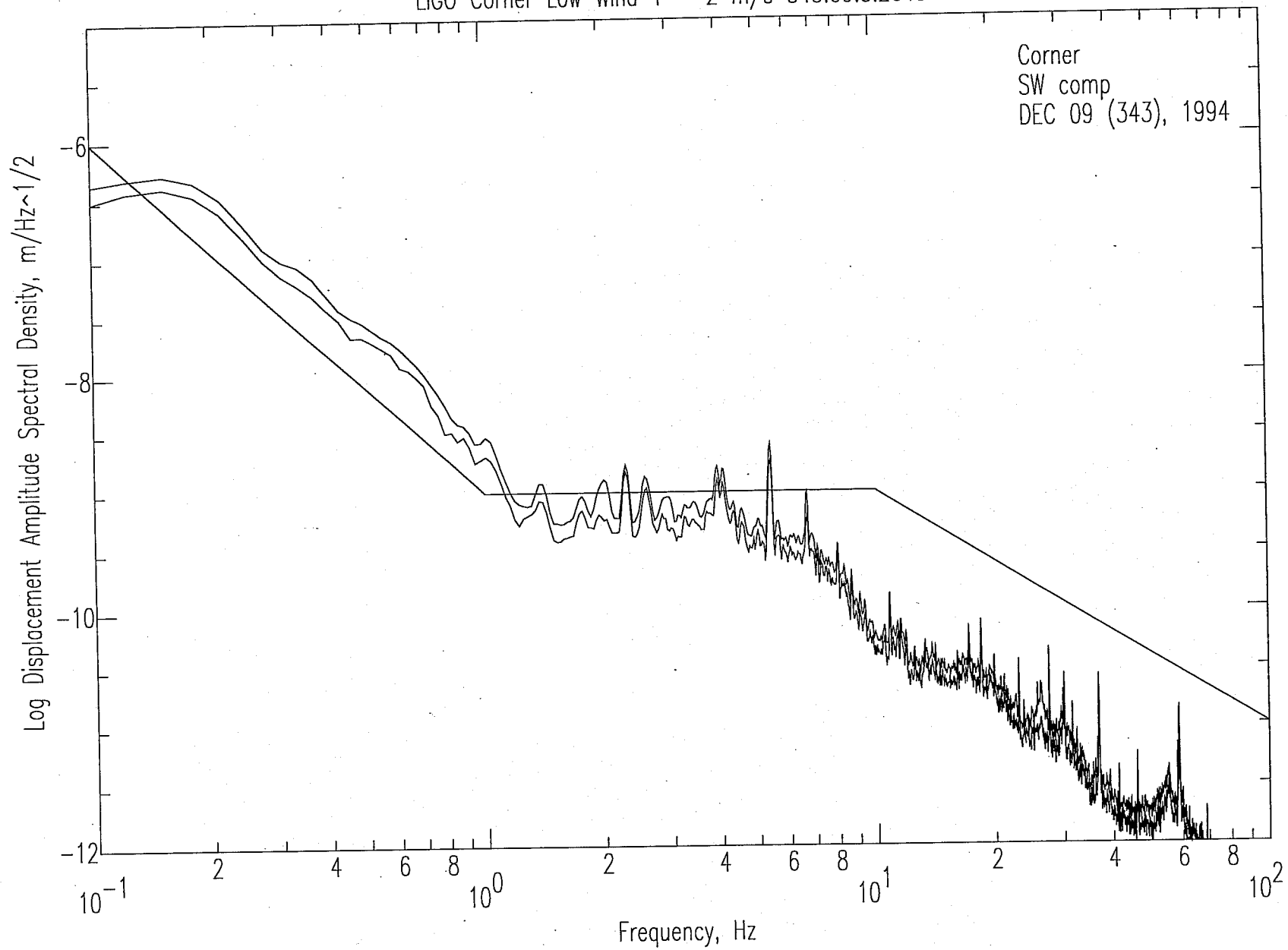
LIGO Corner Moderate Wind 6 - 8 m/s 343.06.3.0400



LIGO Corner Low Wind 1 - 2 m/s 343.08.3.1900

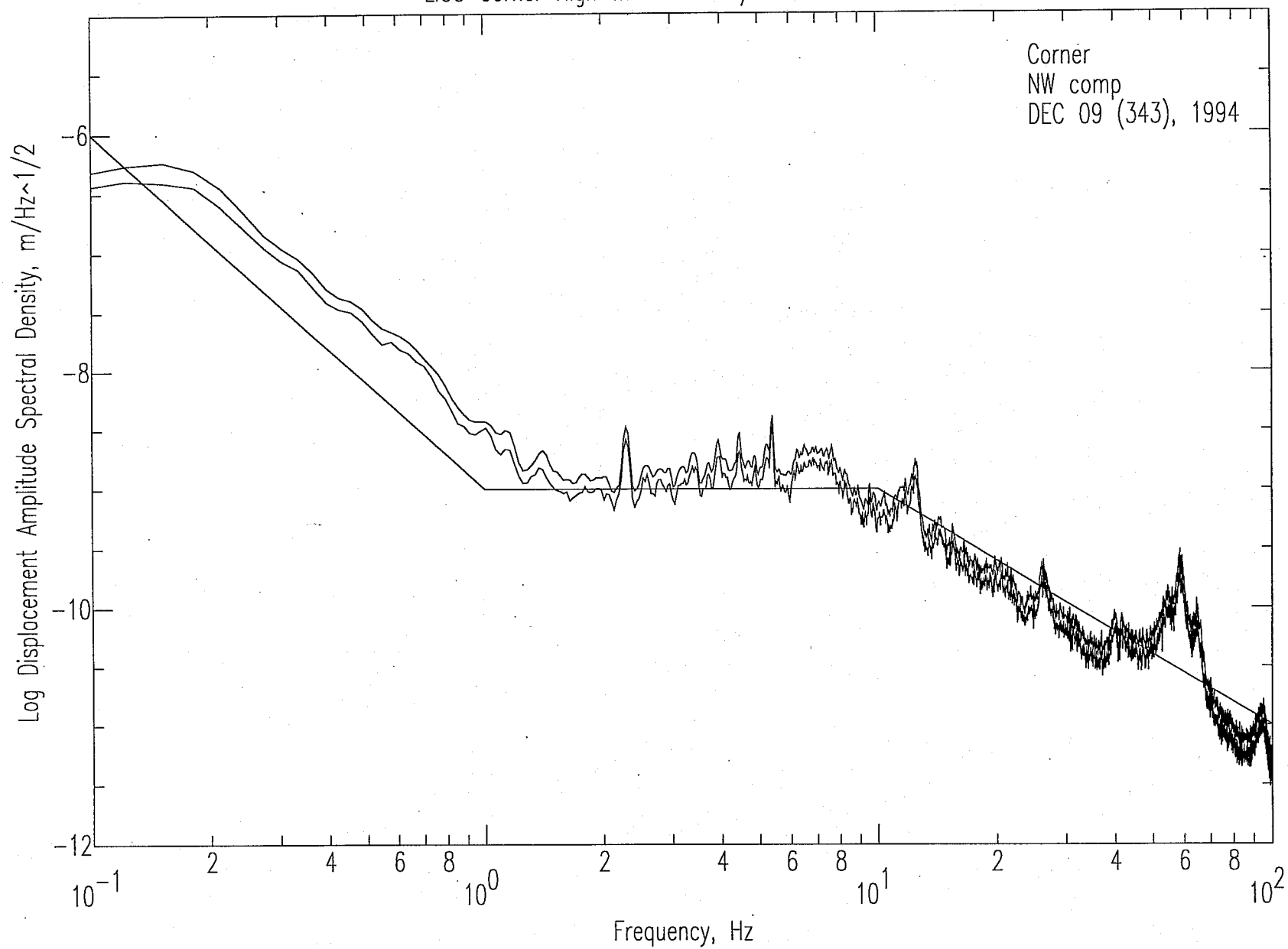


LIGO Corner Low Wind 1 - 2 m/s 343.09.3.2640

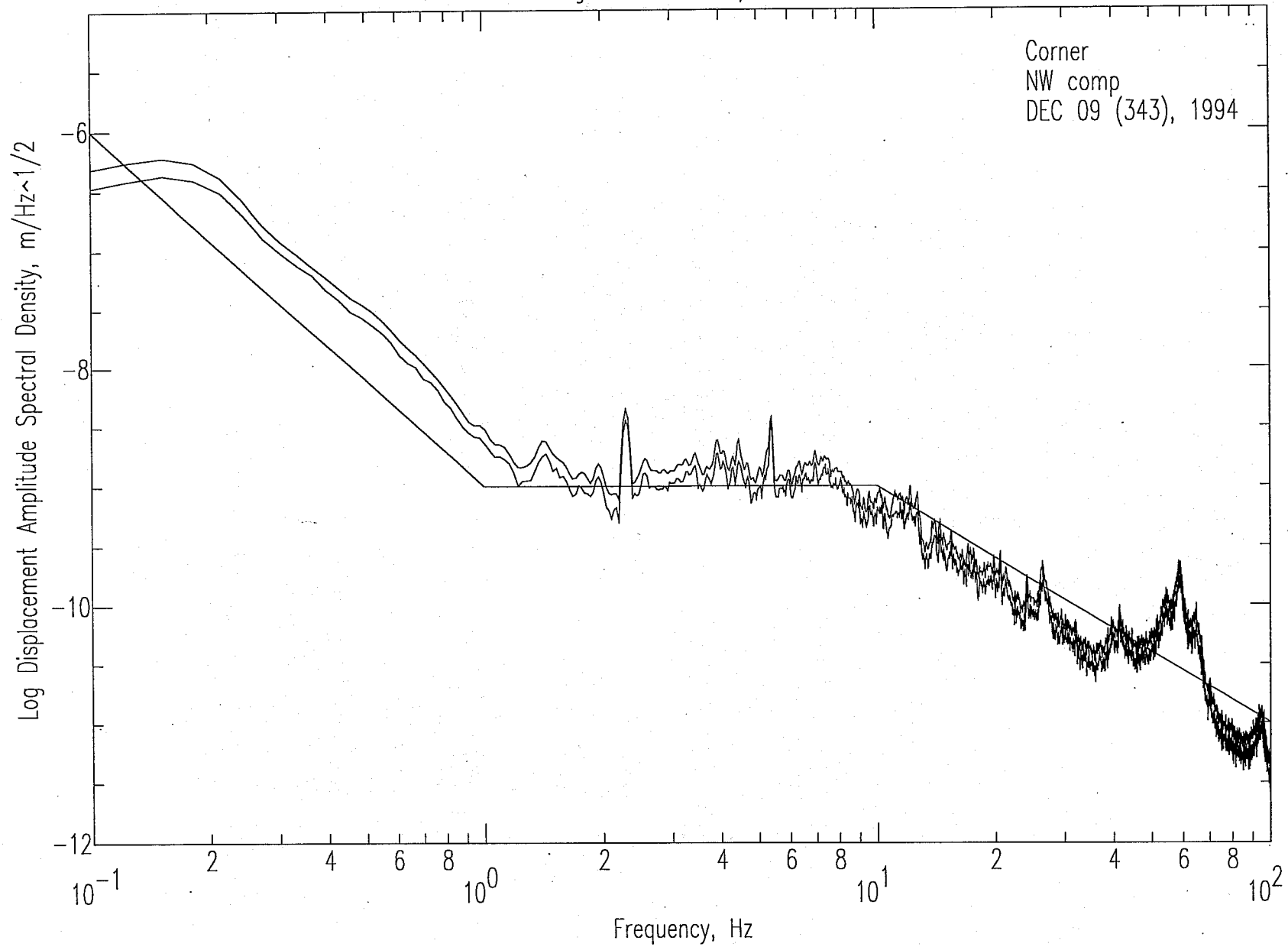




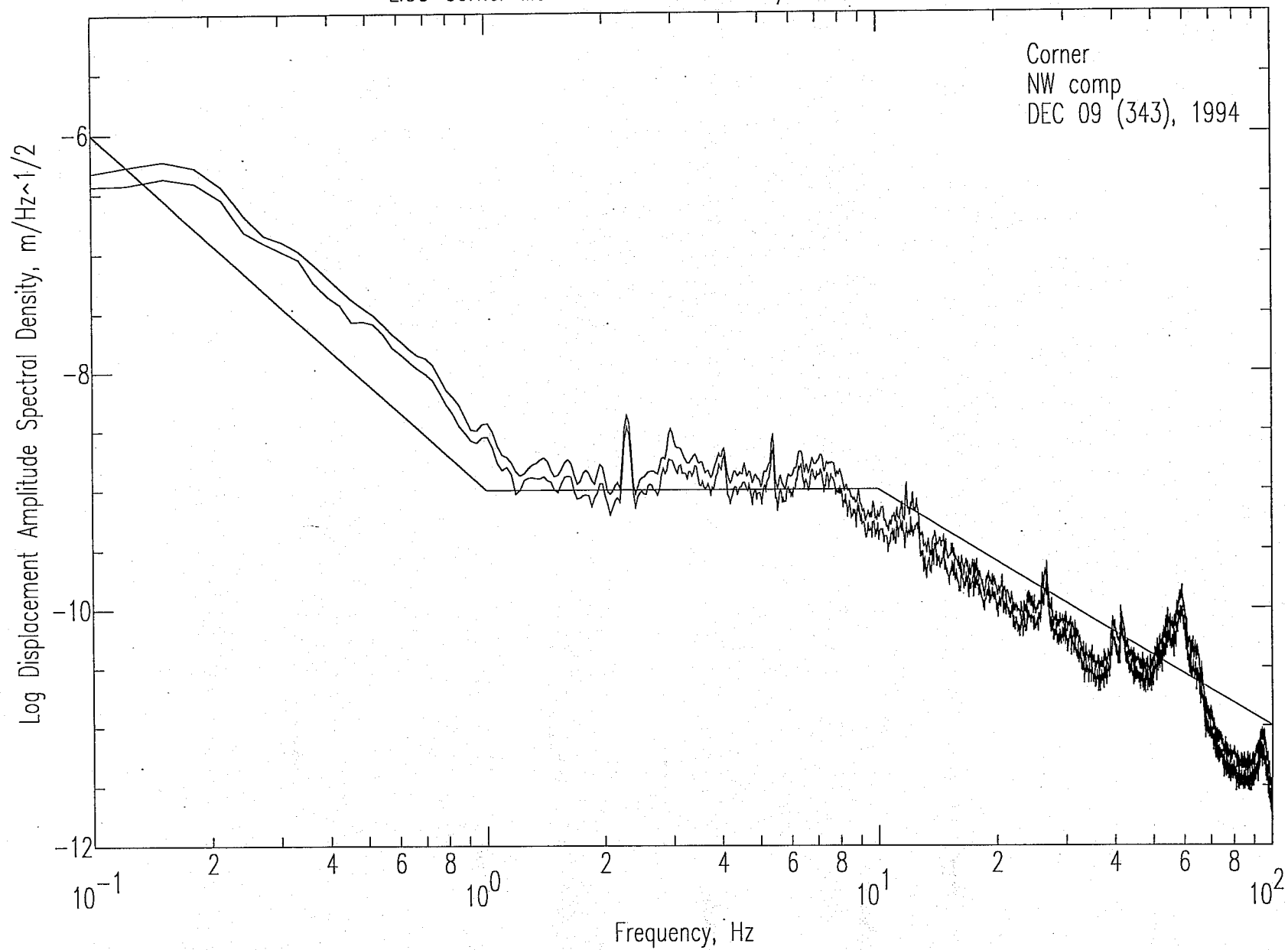
LIGO Corner High Wind 10+ m/s 343.03.2.2200



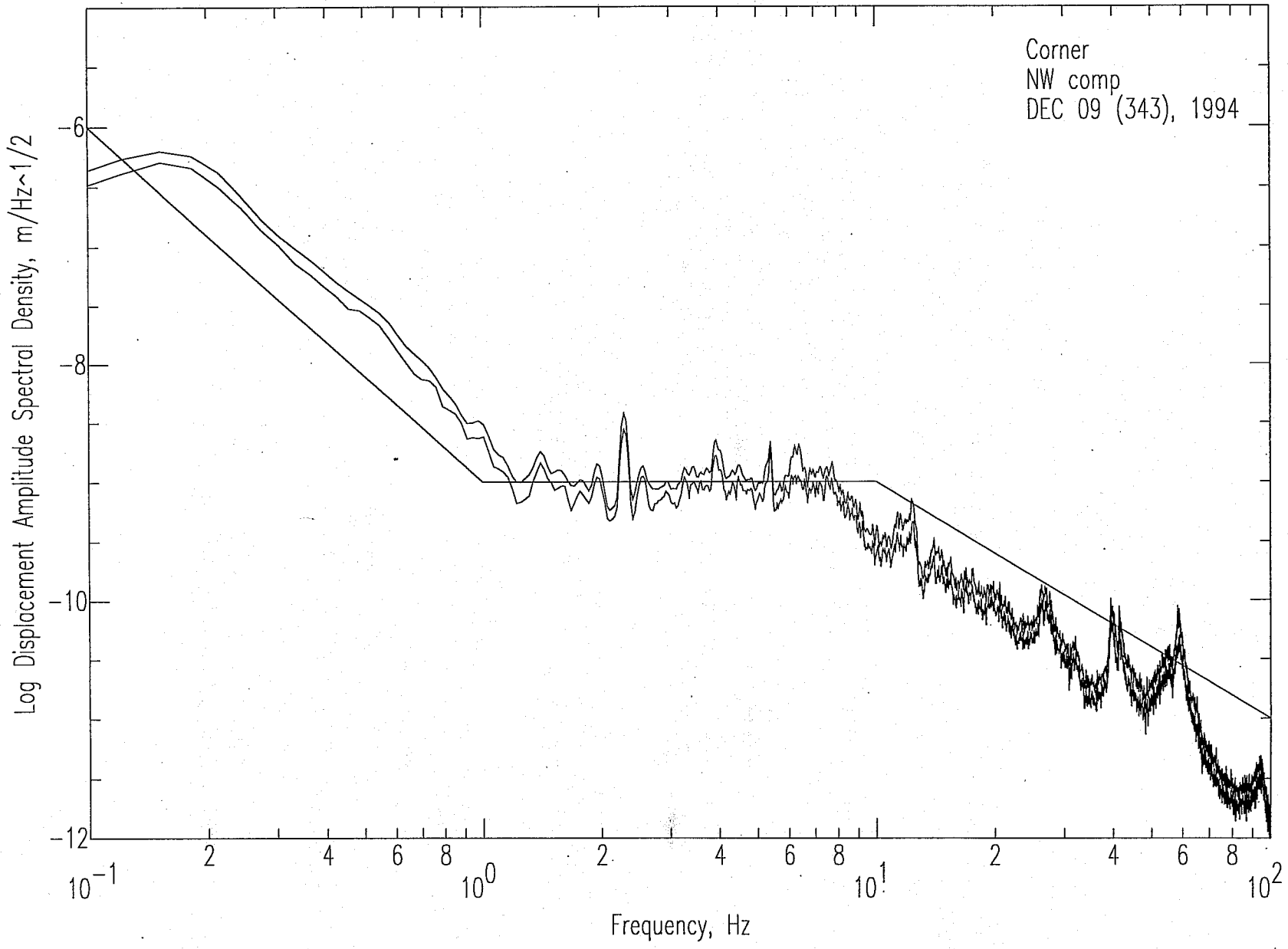
LIGO Corner High Wind 10+ m/s 343.04.2.1600



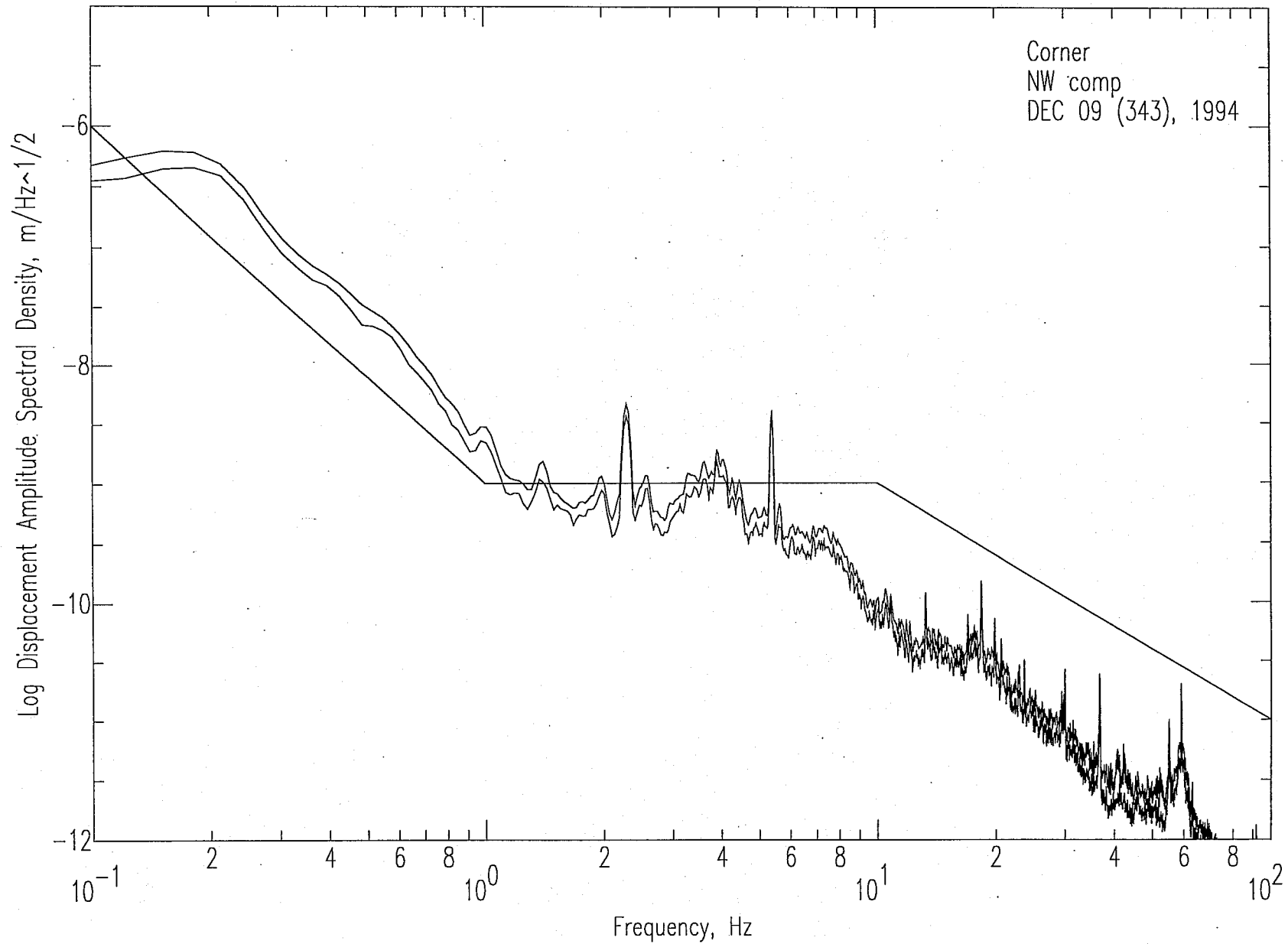
LIGO Corner Moderate Wind 6 - 8 m/s 343.05.2.1400



LIGO Corner Moderate Wind 6 - 8 m/s 343.06.2.0400



LIGO Corner Low Wind 1 - 2 m/s 343.08.2.1900



LIGO Corner Low Wind 1 - 2 m/s 343.09.2.2640

