

```
>> ngc_4e5e
```

```
Analyze Mars data or Lunar data? Enter "m" for Mars, "l" for Lunar: l
```

```
Analyzing Lunar data.
```

```
Analyzing File: C:\Projects\Nasa
```

```
SpaceApps\space_apps_2024_seismic_detection\space_apps_2024_seismic_detection\data\luna  
r\test\data\S16_GradeB\xa.s16.00.mhz.1973-08-25HR00_evid00443.mseed
```

```
Event Duration (Waveform Duration): 23:50:15
```

```
Dominant Frequency: 0.83 Hz
```

```
Event Type: High Frequency (HF) Event
```

```
Using lunar parameters.
```

```
Peak Velocity: 2.90076e-09 m/s
```

```
Estimated Energy: 6.22325e-15 Joules
```

```
Seismic Moment: 9.06488e-02 N·m
```

```
Moment Magnitude: -6.70
```

```
Signal-to-Noise Ratio (SNR): 1.81
```

```
Coda Q-Factor: 0.00
```

```
Spectral Ratio (S-Wave/P-Wave): 0.00
```

```
P-wave Arrival: 1973-08-25 10:31:30.709, S-wave Arrival: 1973-08-25 11:24:44.973
```

```
Estimated Distance: 22055.63 km
```

```
>> ngc_4e5e
```

```
Analyze Mars data or Lunar data? Enter "m" for Mars, "l" for Lunar: l
```

```
Analyzing Lunar data.
```

```
Analyzing File: C:\Projects\Nasa
```

```
SpaceApps\space_apps_2024_seismic_detection\space_apps_2024_seismic_detection\data\luna  
r\test\data\S16_GradeB\xa.s16.00.mhz.1973-12-18HR00_evid00487.mseed
```

```
Event Duration (Waveform Duration): 23:46:04
```

```
Dominant Frequency: 0.83 Hz
```

```
Event Type: High Frequency (HF) Event
```

```
Using lunar parameters.
```

```
Peak Velocity: 2.73325e-09 m/s
```

```
Estimated Energy: 3.30551e-15 Joules
```

```
Seismic Moment: 8.54141e-02 N·m
```

```
Moment Magnitude: -6.71
```

```
Signal-to-Noise Ratio (SNR): 4.80
```

```
Coda Q-Factor: 0.00
```

```
Spectral Ratio (S-Wave/P-Wave): 0.00
```

```
P-wave Arrival: 1973-12-18 21:10:15.472, S-wave Arrival: 1973-12-18 21:20:03.246
```

```
Estimated Distance: 4058.44 km
```

```
>> ngc_4e5e
```

```
Analyze Mars data or Lunar data? Enter "m" for Mars, "l" for Lunar: l
```

```
Analyzing Lunar data.
```

```
Analyzing File: C:\Projects\Nasa
```

```
SpaceApps\space_apps_2024_seismic_detection\space_apps_2024_seismic_detection\data\luna  
r\test\data\S16_GradeB\xa.s16.00.mhz.1974-11-14HR00_evid00587.mseed
```

```
Event Duration (Waveform Duration): 23:51:48
```

```
Dominant Frequency: 0.83 Hz
```

```
Event Type: High Frequency (HF) Event
```

```
Using lunar parameters.  
Peak Velocity: 1.43263e-09 m/s  
Estimated Energy: 2.84657e-15 Joules  
Seismic Moment: 4.47697e-02 N·m  
Moment Magnitude: -6.90  
Signal-to-Noise Ratio (SNR): 1.11  
Coda Q-Factor: 0.00  
Spectral Ratio (S-Wave/P-Wave): 0.01  
P-wave Arrival: 1974-11-14 20:42:55.397, S-wave Arrival: 1974-11-14 20:48:31.397  
Estimated Distance: 2320.00 km  
>>
```