Sum of 2 Cosines (even spacing)

Expression

Time [hours]

Lomb–Scargle Periodogram

Normalized Power Spectral Density

Frequency [1/hour]

Peak Significance

Probability

Frequency [1/hour]

Period at Peak = 21.4 hours

p = 7.07e−006 at Peak
Sum of 2 Cosines (not even spacing)

Lomb–Scargle Periodogram

Period at Peak = 21.1 hours

Peak Significance

p = 4.3e−006 at Peak
Sum of 2 Cosines + N(0, 0.10)

Lomb–Scargle Periodogram

Period at Peak = 21.4 hours

Peak Significance

p = 1.65e−006 at Peak
The data shows a sum of 2 cosines plus a normal distribution $N(0, 0.25)$. The time expression has a period of 21.1 hours at peak significance $p = 0.000194$. The Lomb-Scargle periodogram displays the normalized power spectral density with a peak at 0.04 frequency [1/hour].
Sum of 2 Cosines + N(0, 0.50)

Lomb–Scargle Periodogram
Period at Peak = 22.2 hours

Peak Significance
p = 1.52e−005 at Peak
Sum of 2 Cosines + N(0, 0.75)

Lomb–Scargle Periodogram

Period at Peak = 21.8 hours

Peak Significance

p = 0.00426 at Peak
**Sum of 2 Cosines + N(0, 1.0)**

![Graph showing expression over time](image)

- **Time [hours]**
  - N = 48

**Lomb–Scargle Periodogram**

- **Period at Peak = 21.4 hours**

**Peak Significance**

- **p = 0.0413 at Peak**

![Graph showing Lomb–Scargle Periodogram](image)

- **Frequency [1/hour]**
  - **Normalized Power Spectral Density**
  - **Probability**

**Expression**

- **Normalized Power Spectral Density**
  - **Probability**

- **Probability**
Sum of 2 Cosines + $N(0, 1.5)$

Lomb–Scargle Periodogram

Period at Peak = 21.4 hours

Peak Significance

$p = 0.0145$ at Peak
Sum of 2 Cosines ($N=48$)

Lomb–Scargle Periodogram

Period at Peak = 22.2 hours

Peak Significance

$p = 4.71e-008$ at Peak
**Sum of 2 Cosines (N=48)**

![Graph showing sum of 2 cosines with N=48]

**Lomb-Scargle Periodogram**

- Period at Peak = 52.2 hours
- Peak Significance: $p = 2.08 \times 10^{-7}$ at Peak

Sum of 2 Cosines (N=48)

Lomb–Scargle Periodogram

Period at Peak = 50 hours

Peak Significance

p = 1.09e−008 at Peak
Sum of 2 Cosines (N=48)

Lomb–Scargle Periodogram

Period at Peak = 50 hours

Peak Significance

p = 4.52e−009 at Peak
Sum of 2 Cosines (N=48)

Lomb–Scargle Periodogram

Period at Peak = 52.2 hours

Peak Significance

p = 2.08e−007 at Peak
Sum of 2 Cosines (N=48)

Lomb–Scargle Periodogram
Period at Peak = 22.2 hours

Peak Significance
p = 4.71e−008 at Peak

Normalized Power Spectral Density
Frequency [1/hour]

Probability
Frequency [1/hour]
Sum of 2 Cosines (N=48)

Lomb–Scargle Periodogram
Period at Peak = 23.1 hours

Peak Significance
p = 6.74e−009 at Peak
Sum of 2 Cosines (N=48)

Lomb–Scargle Periodogram

Period at Peak = 23.5 hours

Peak Significance

p = 3.94e−009 at Peak