Analysing the Spectral Content of MOSES Images Using Cross Correlation

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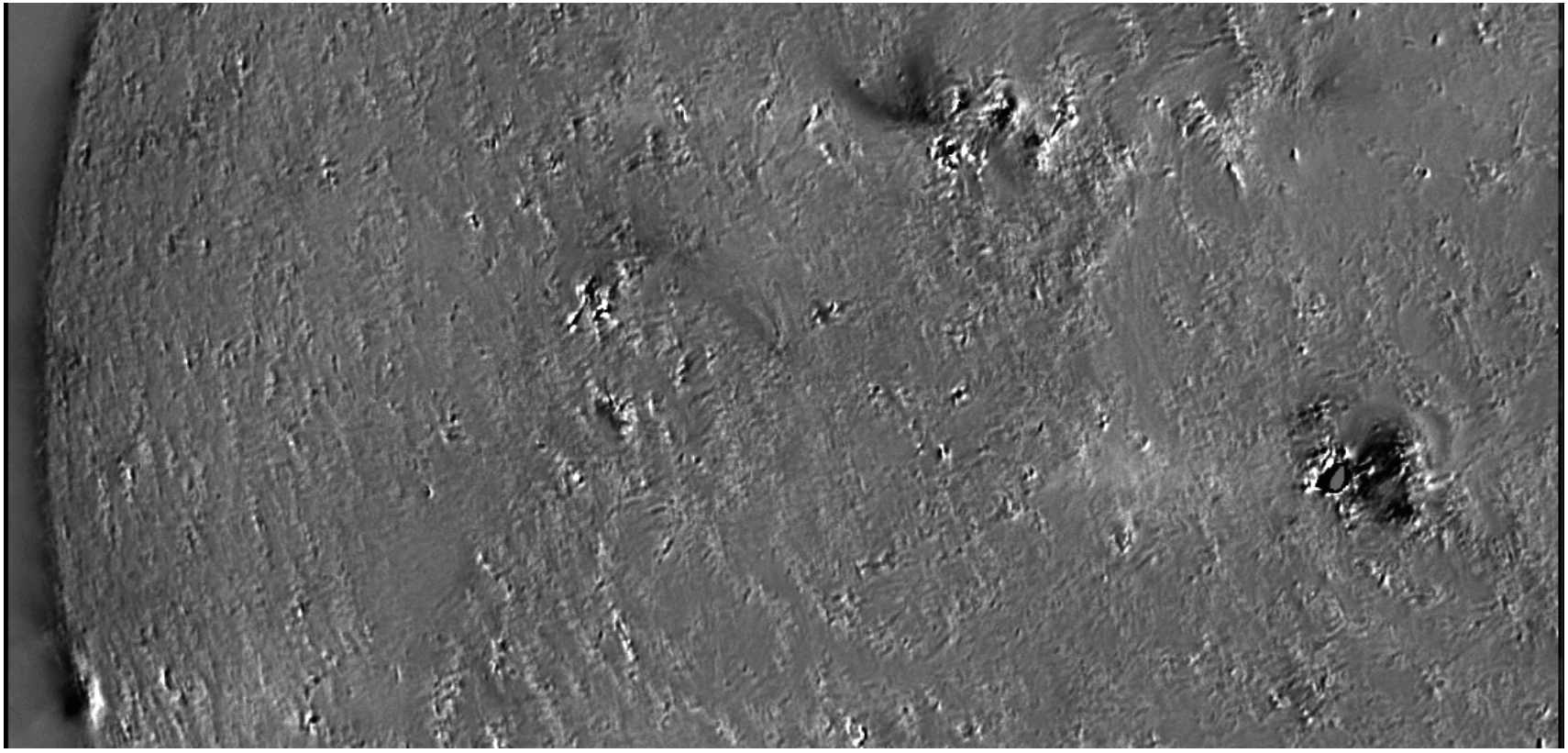
Subtracted MOSES Images



Cross Correlation

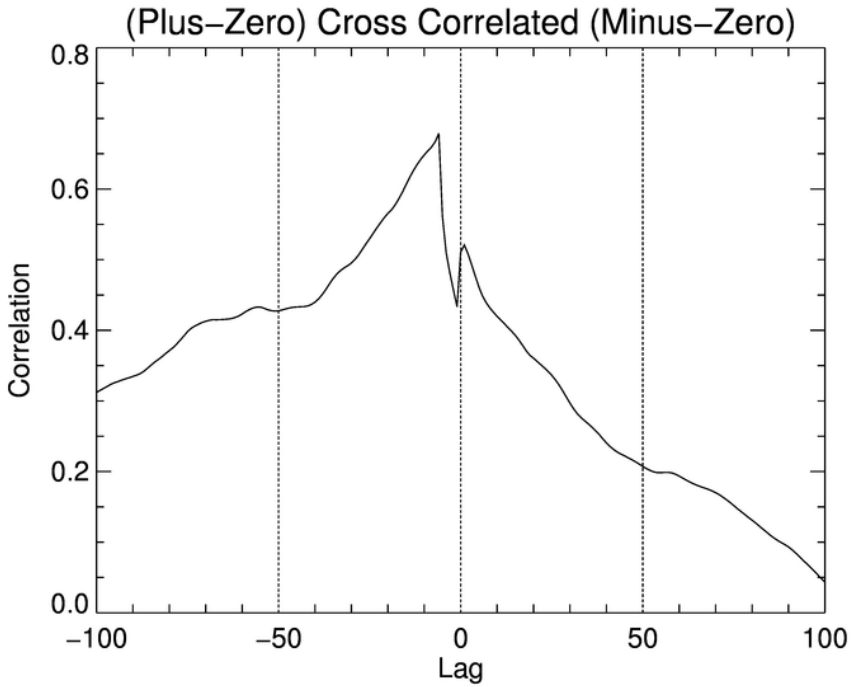
Continuous Definition

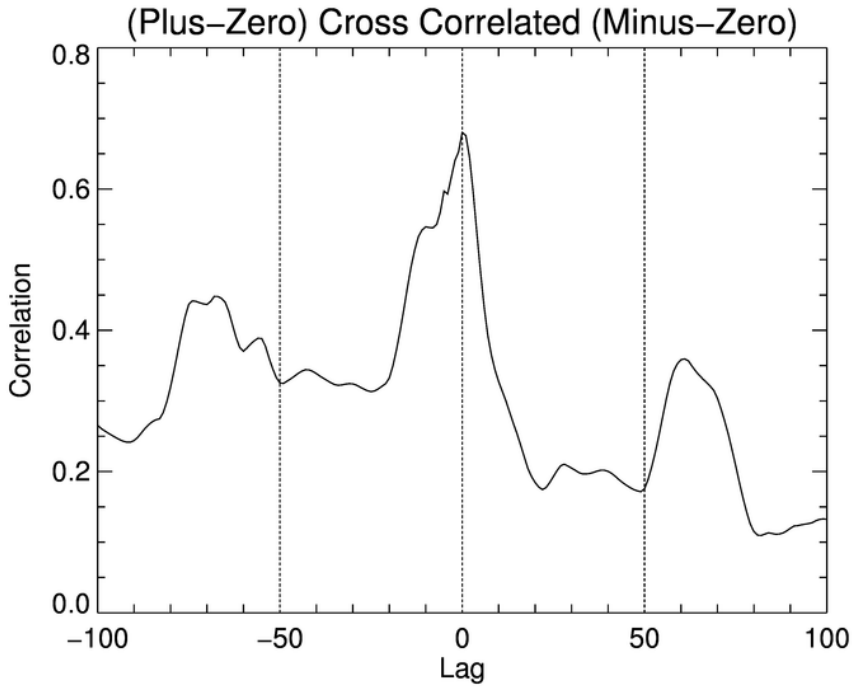
- $(f \otimes g)(z) \equiv \int_{-\infty}^{\infty} f^*(x)g(x+z)dx$
- $(f \otimes g)(z) \equiv \mathcal{F}^{-1}\{\tilde{f}^*(k)\tilde{g}(k)\}$

Finite Definition

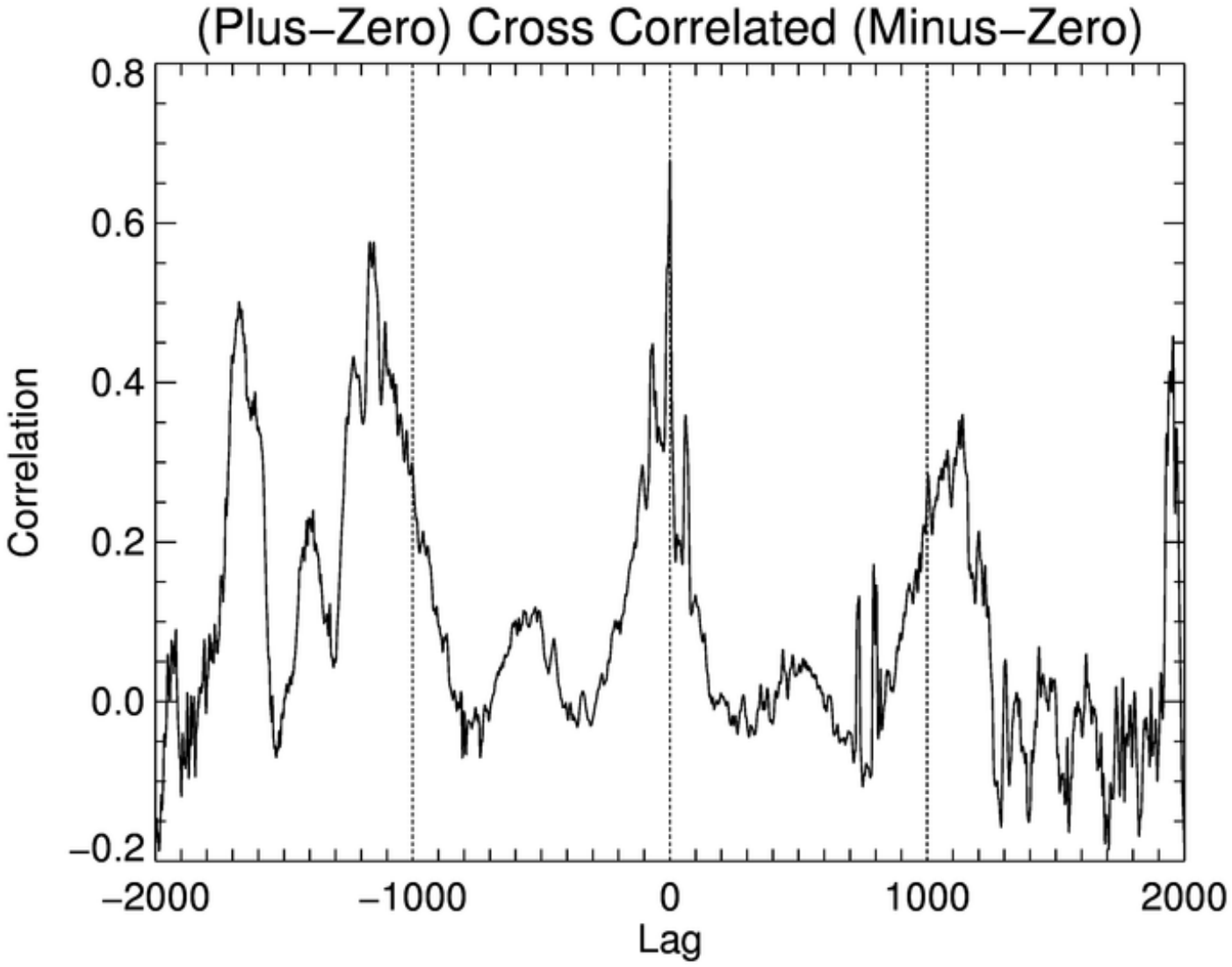
$$(x \otimes y)(z) \equiv \frac{\sum_{n=0}^{N-z-1}(x_n - \bar{x}_n)(y_{n+z} - \bar{y}_{n+z})}{\sqrt{[\sum_{n=0}^{N-1-L}(x_n - \bar{x}_n)^2][\sum_{n=0}^{N-z-1}(y_{n+z} - \bar{y}_{n+z})^2]}}$$

Correlation Functions





Correlation for Large Lag



MOSES Throughput