

STABILITY OF MONITORING WEAK CHANGES IN MULTIPLY SCATTERING MEDIA WITH AMBIENT NOISE CORRELATION : LABORATORY EXPERIMENTS



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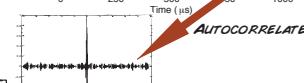
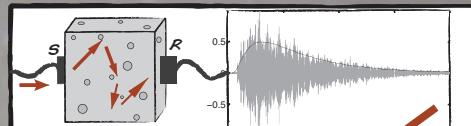
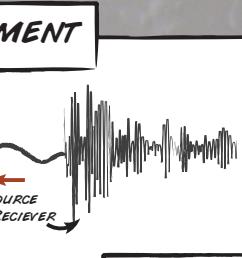
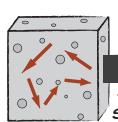
LABORATOIRE DE GEOPHYSIQUE INTERNE ET TECTONOPHYSIQUE,

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THE EXPERIMENT

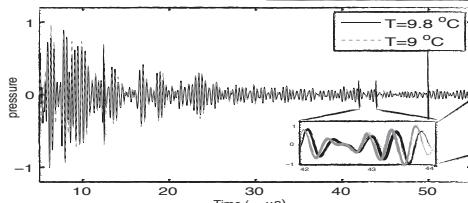


ACTIVE

MEANWHILE..

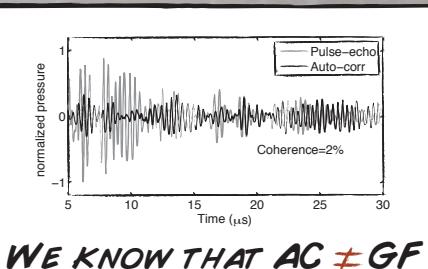
PASSIVE

TREATMENT : STRETCHING

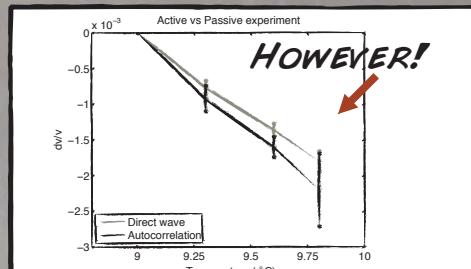


$$S(\tau) = S_{\text{REF}}[T(1-E)]$$

$$\frac{DV}{V} = \frac{-DT}{T}$$



WE KNOW THAT $AC \neq GF$



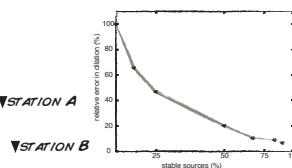
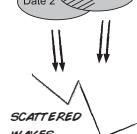
HOWEVER!

MOVING SOURCES : STORM!

NOISE SOURCES

Date 2

Date 1



CONCLUSIONS

COMPLETE RECONSTRUCTION
GREEN FUNCTION UNNECESSARY
FOR MONITORING
AT LEAST 1/2 OF SOURCES MUST BE
(SPATIALLY) STABLE

► PAPER IN PREPARATION

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★ WEAVER, LOBKIS, "ULTRASONICS WITHOUT A SOURCE: THERMAL FLUCTUATION CORRELATIONS AT LMHz FREQUENCIES", PRB 87, 134301

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