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**COHERENT SEISMIC NOISE ATTENUATION USING THE WAVE ATOMS TRANSFORM.**

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The wave atoms has becoming a very useful tool in image processing in the last decade, it has demonstrated its power to detected any directional phenomenon with considering its scaling properties (Demanet and Ying, 2007). Here we suggest the use of this technique to attenuate the ground roll from Seismic data recorded in the Algeria. The wave atoms transform is applied to the seismic data, then the ground roll characterized by low frequency and high energy in a given direction are identified and attenuated, after that the origin seismic data are reconstructed using the wave atoms inverse transform. Obtained results demonstrate the power of this technique to attenuate complex coherent noises such as the dispersive ground roll.

**References**

[1] L.Demanet and L. Ying, 2007, Wave Atoms and Sparsity of Oscillatory Patterns, Appl. Comput. Harmon. Anal., vol. 23(3) pp.368-387.