



 POLITECNICO DI MILANO



Preliminary evaluation of long-period ground motion in L'Aquila during the M_w 6.3 Apr 6 2009 earthquake based on strong motion records

Prof. Roberto Paolucci

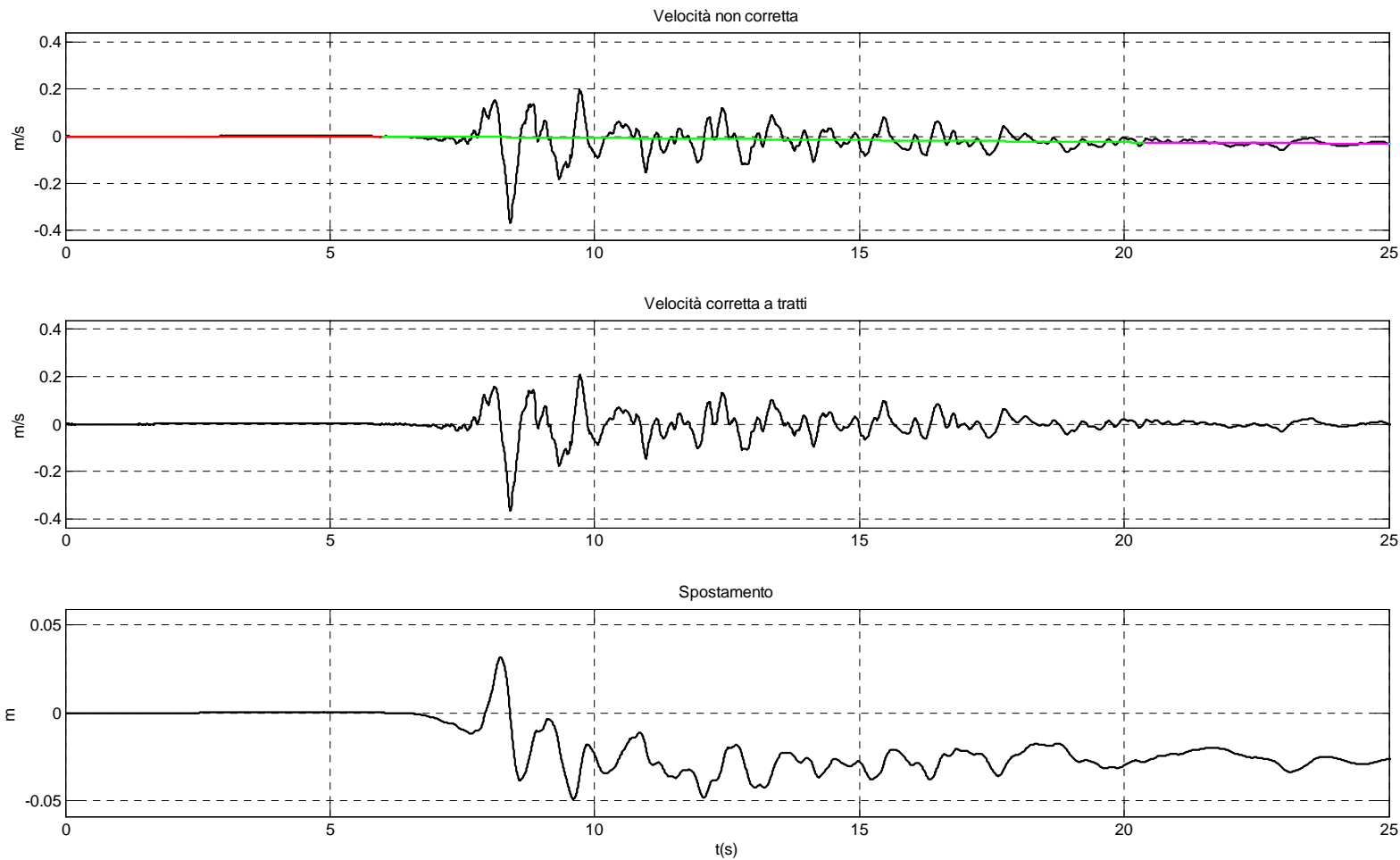
Department of Structural Engineering
Politecnico Milano, Italy





Tri-partite baseline correction on velocity records

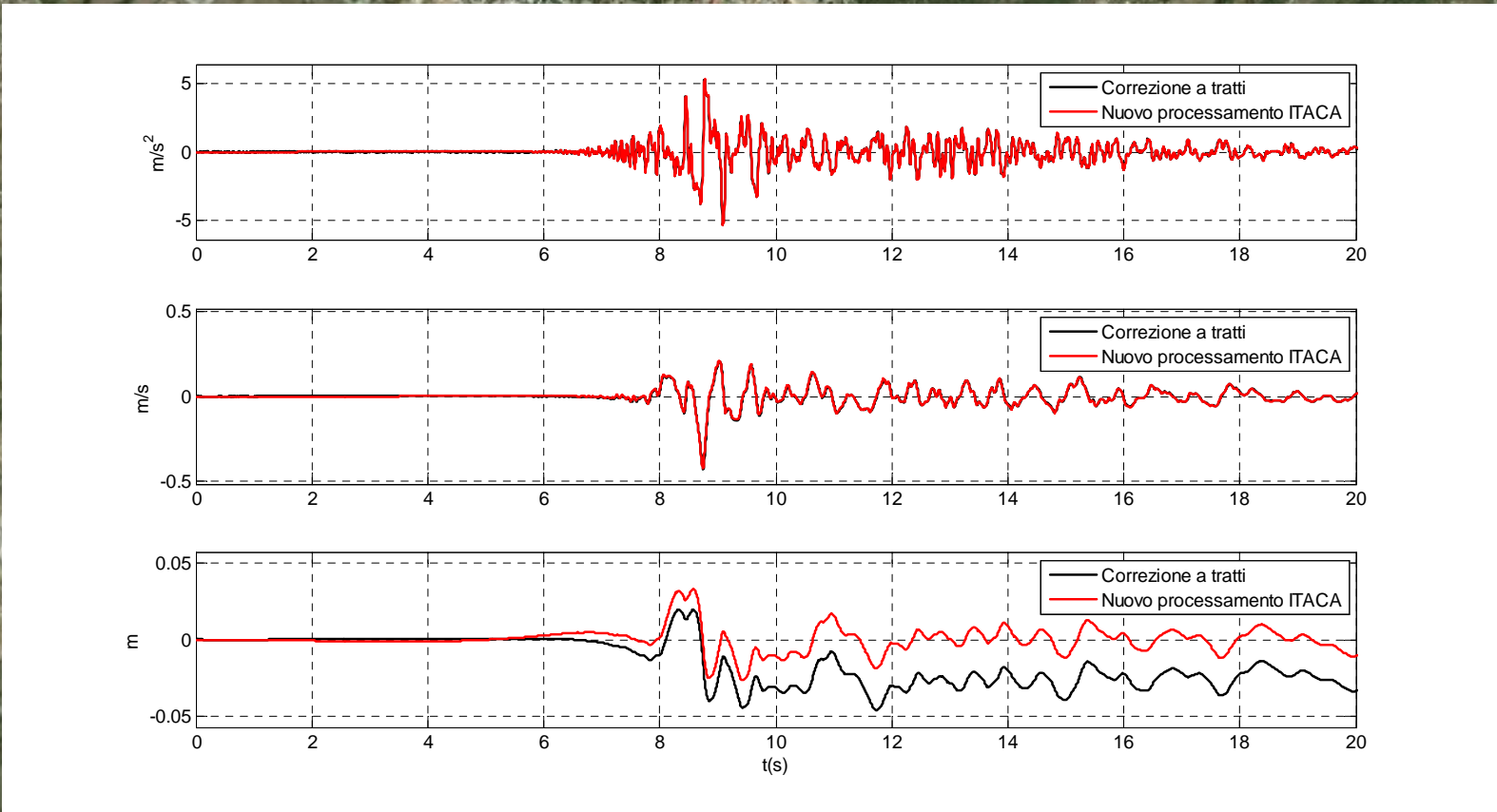
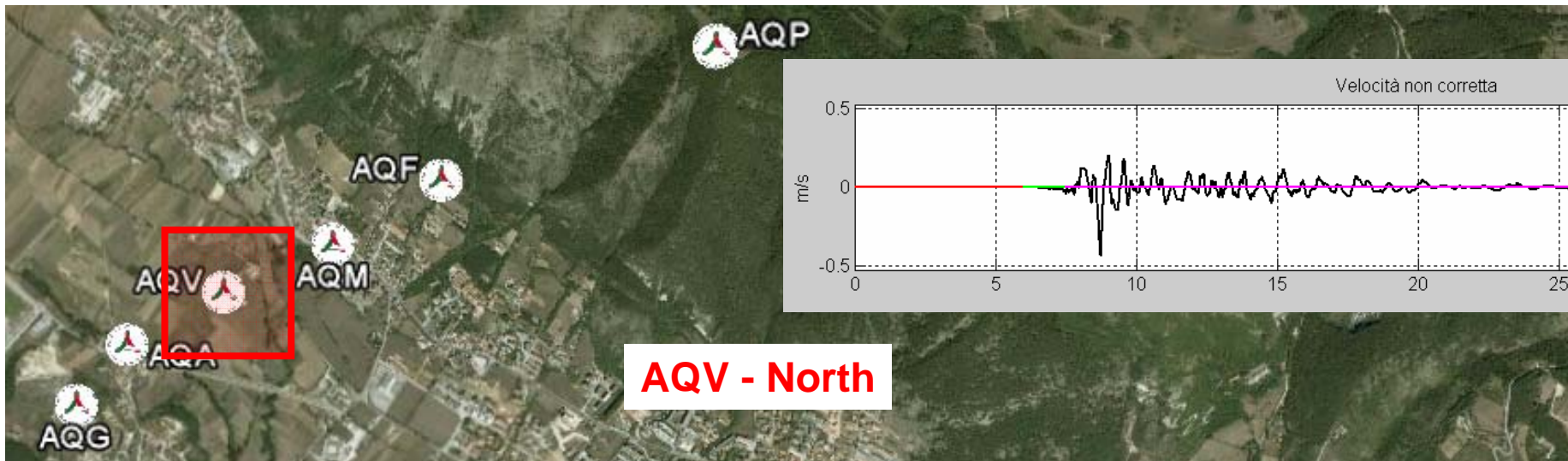
Example: AQG – NS component

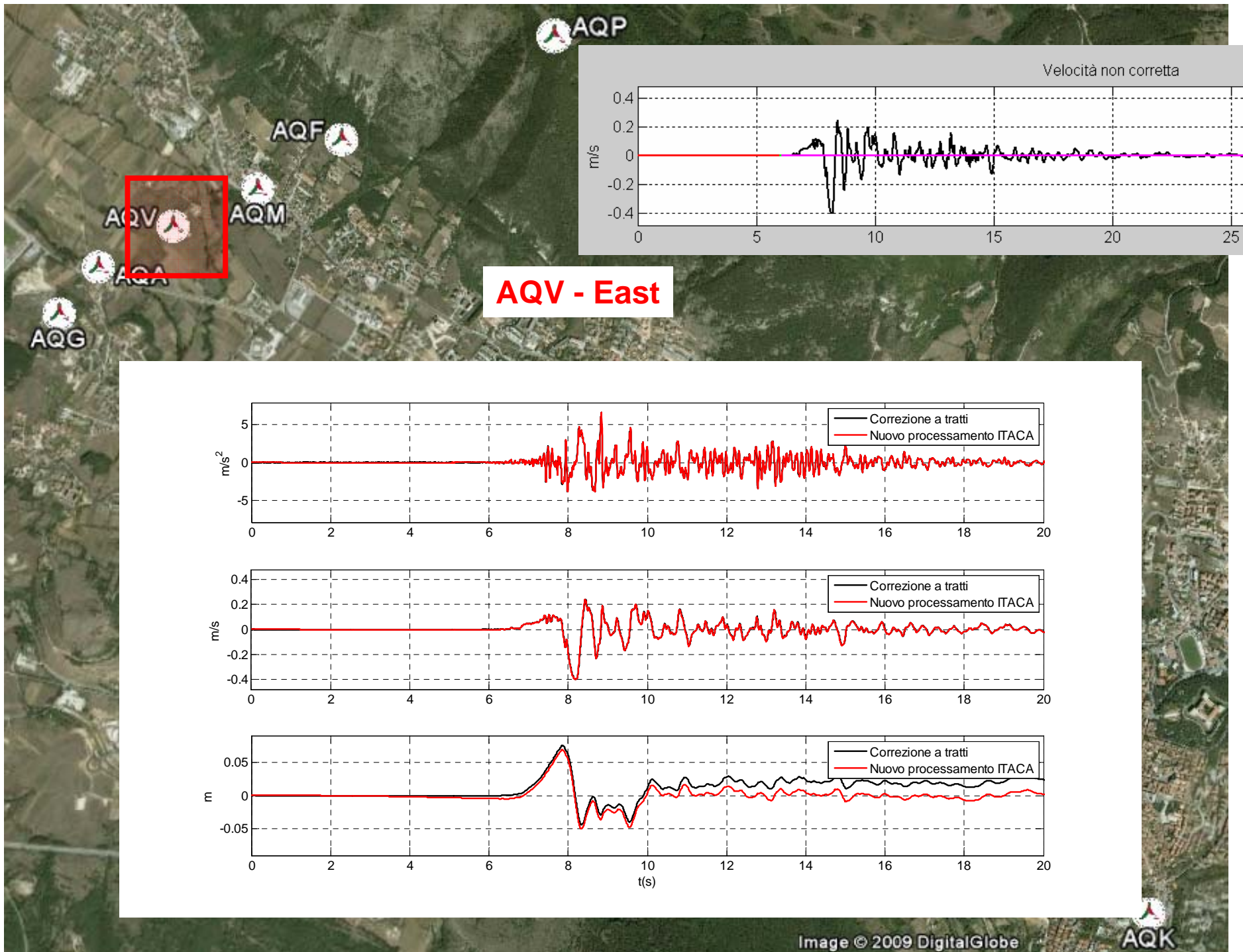




Comparison of velocities and displacements with the filtered ones using the ITACA processing procedure

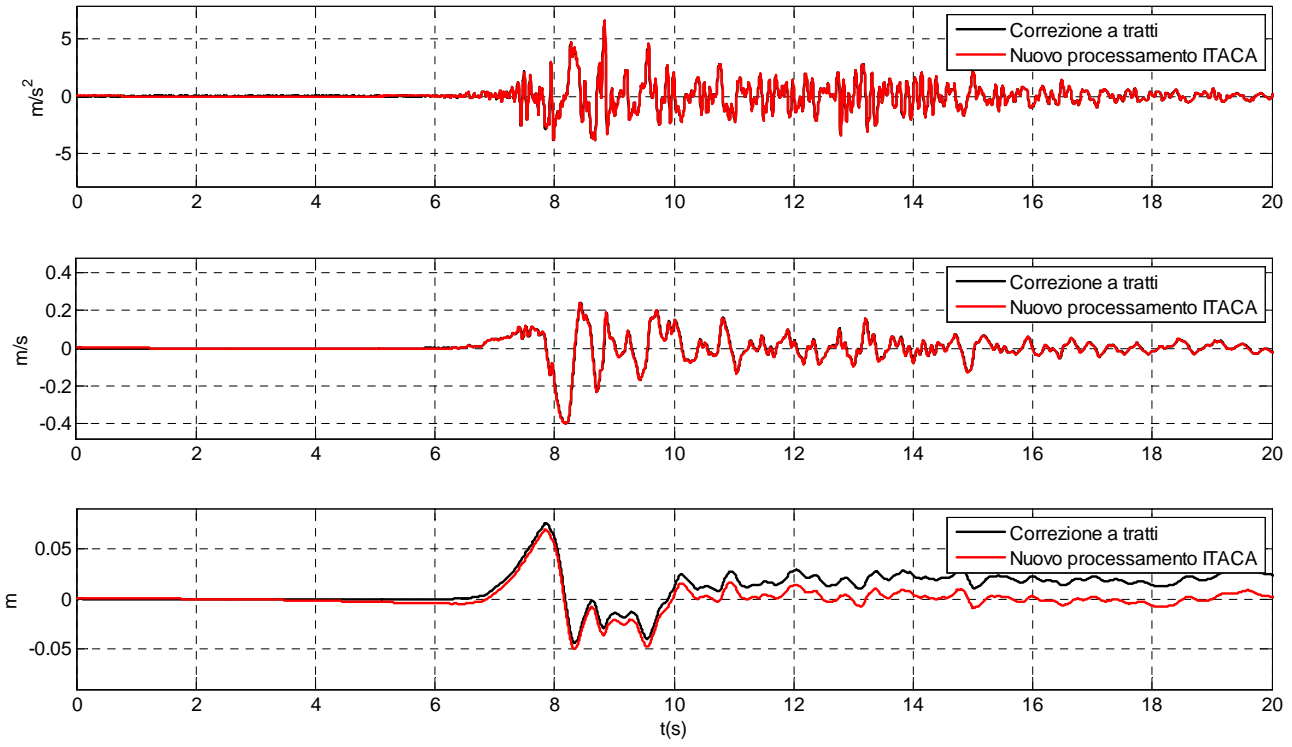
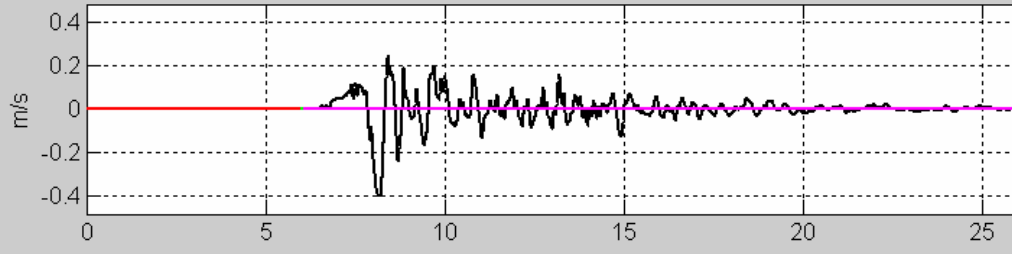
Band-pass Butterworth filter (Hp: 0.1 Hz – Lp : 50 Hz)

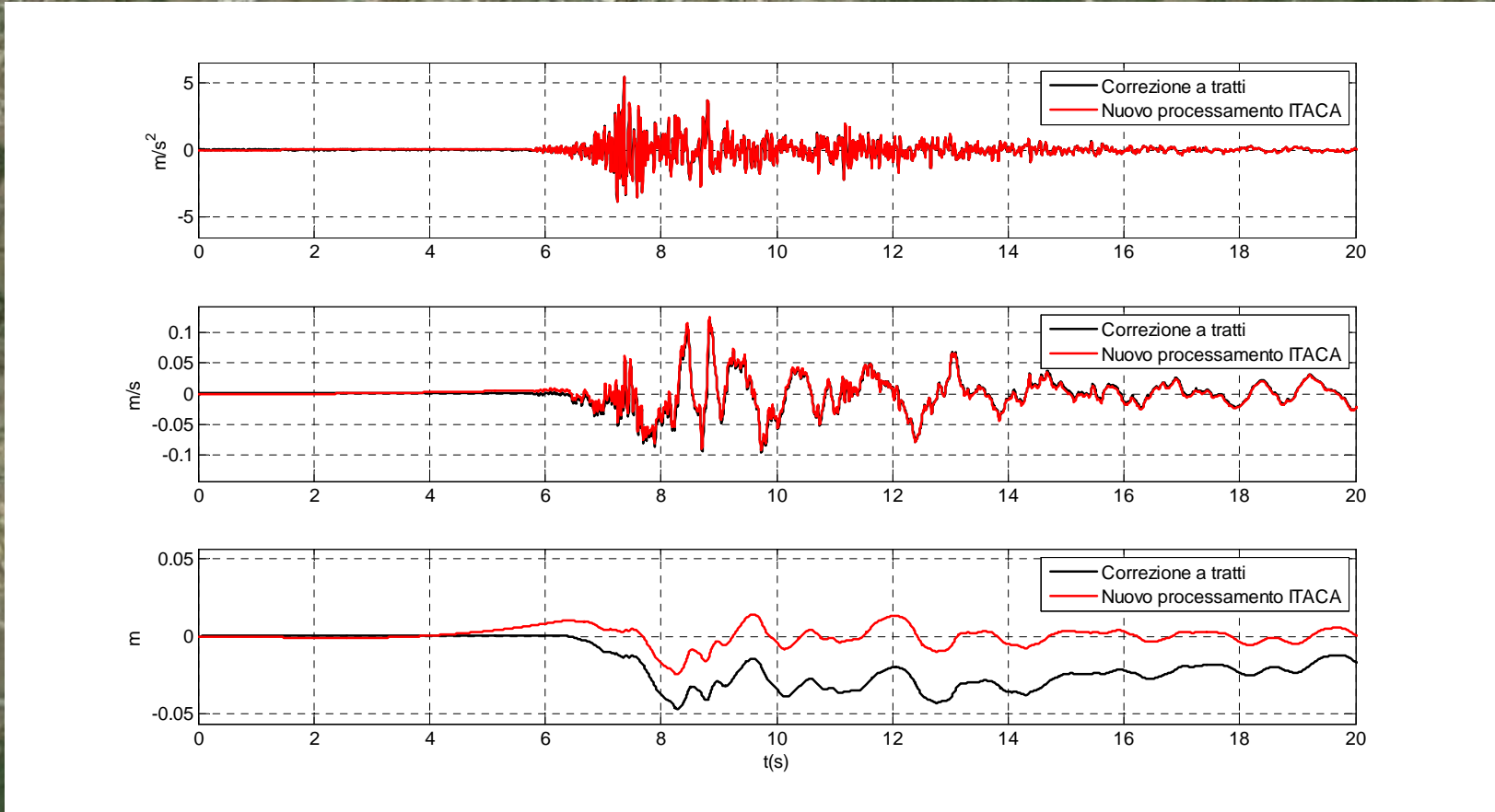


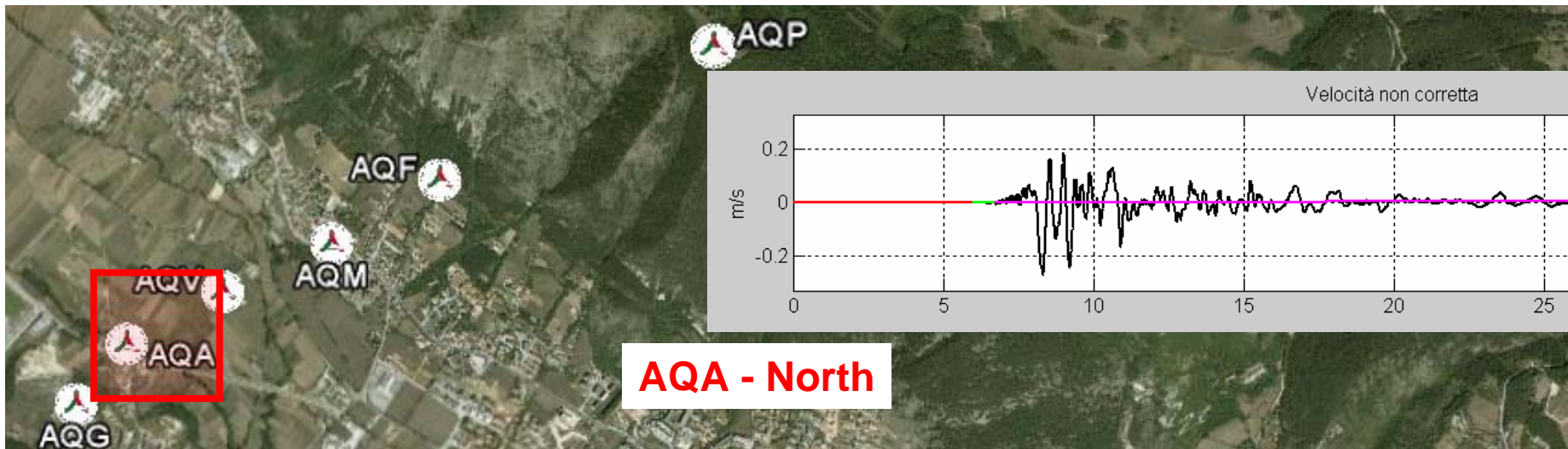


AQV - East

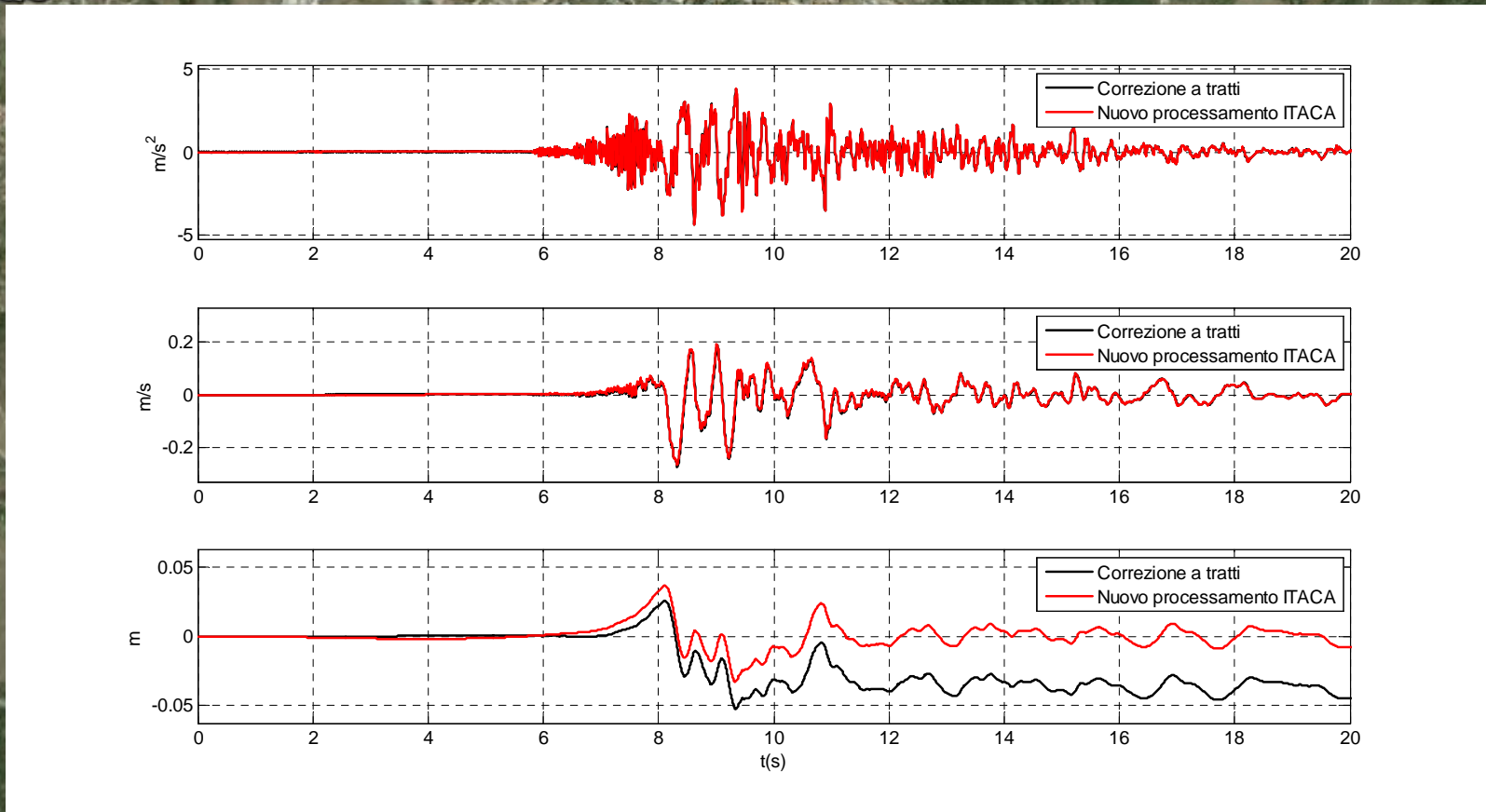
Velocità non corretta

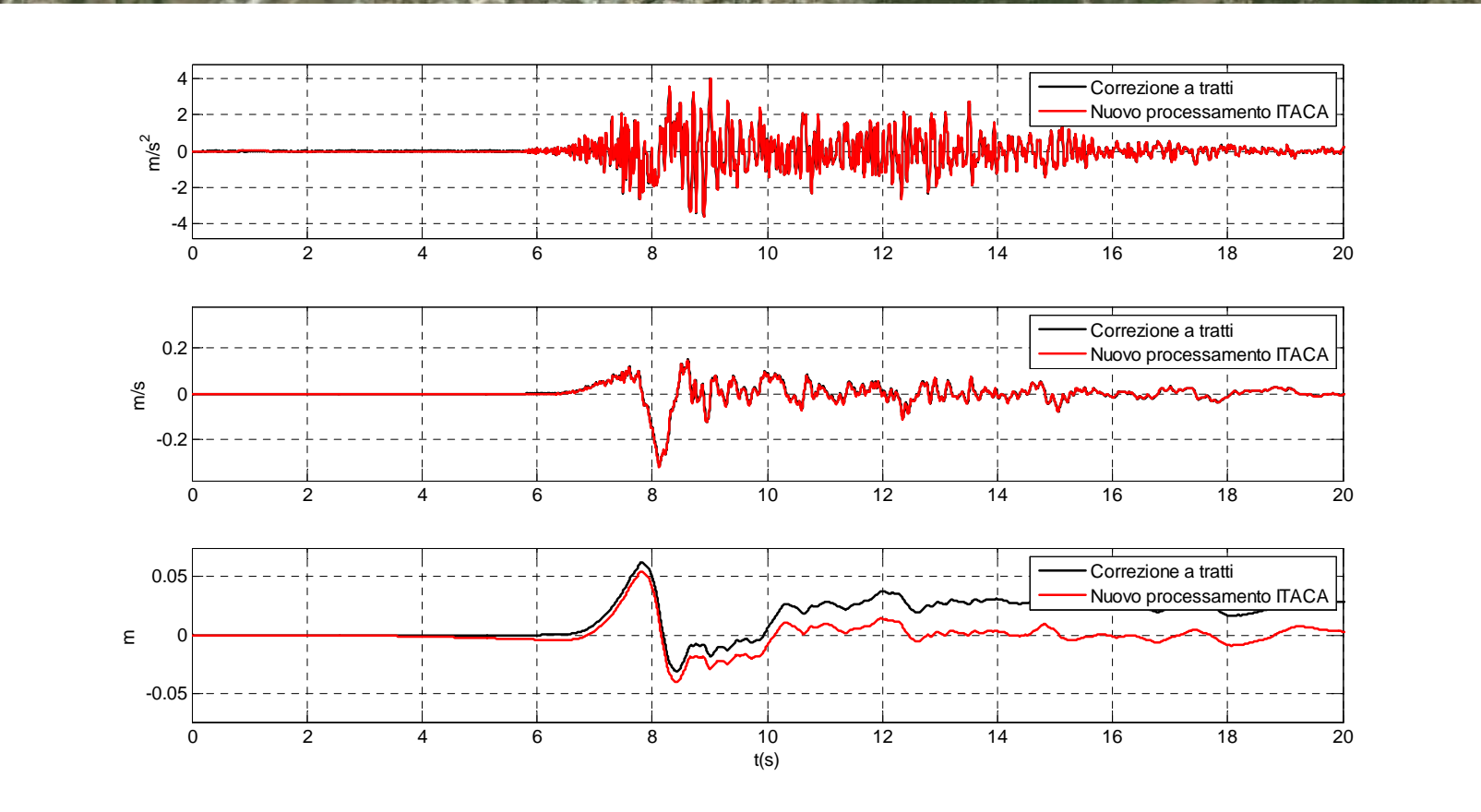
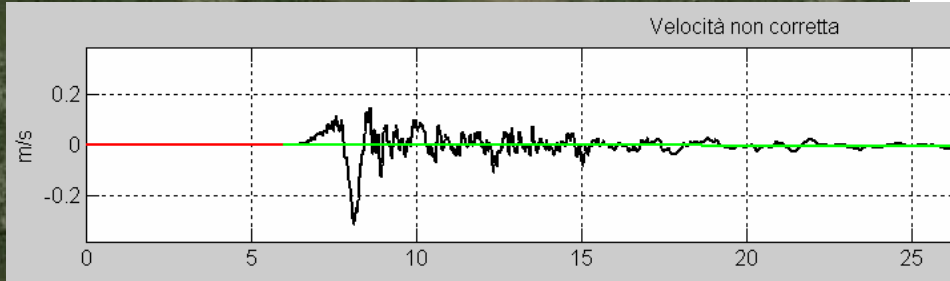
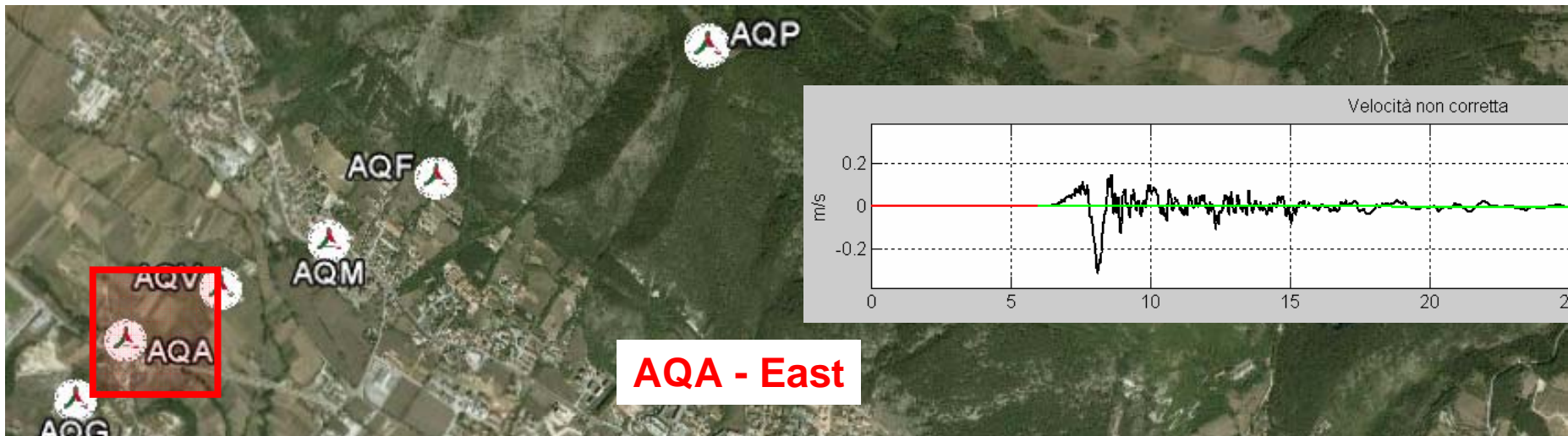


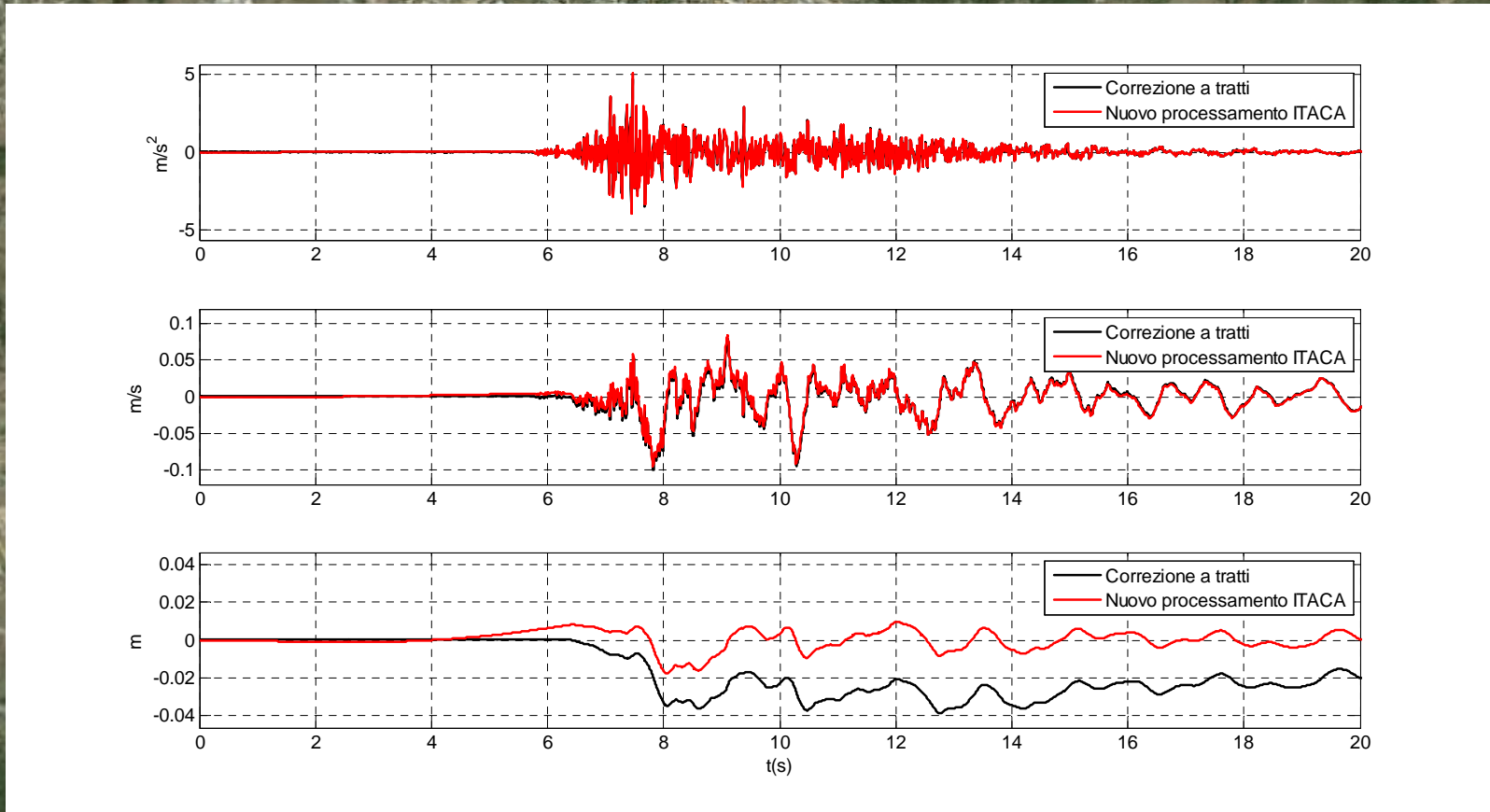
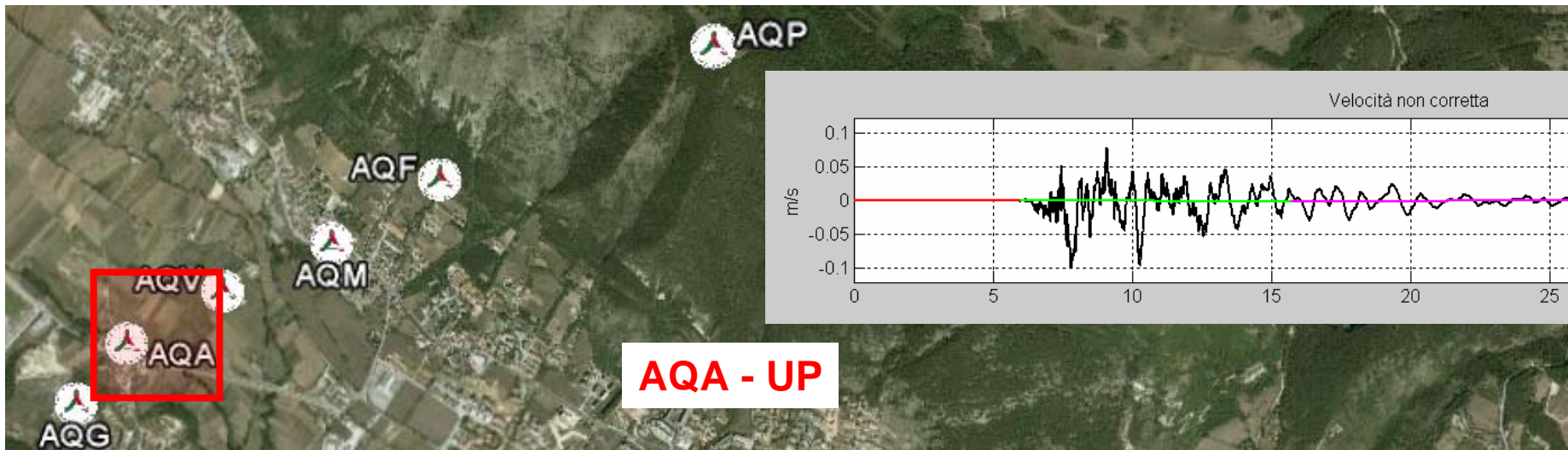


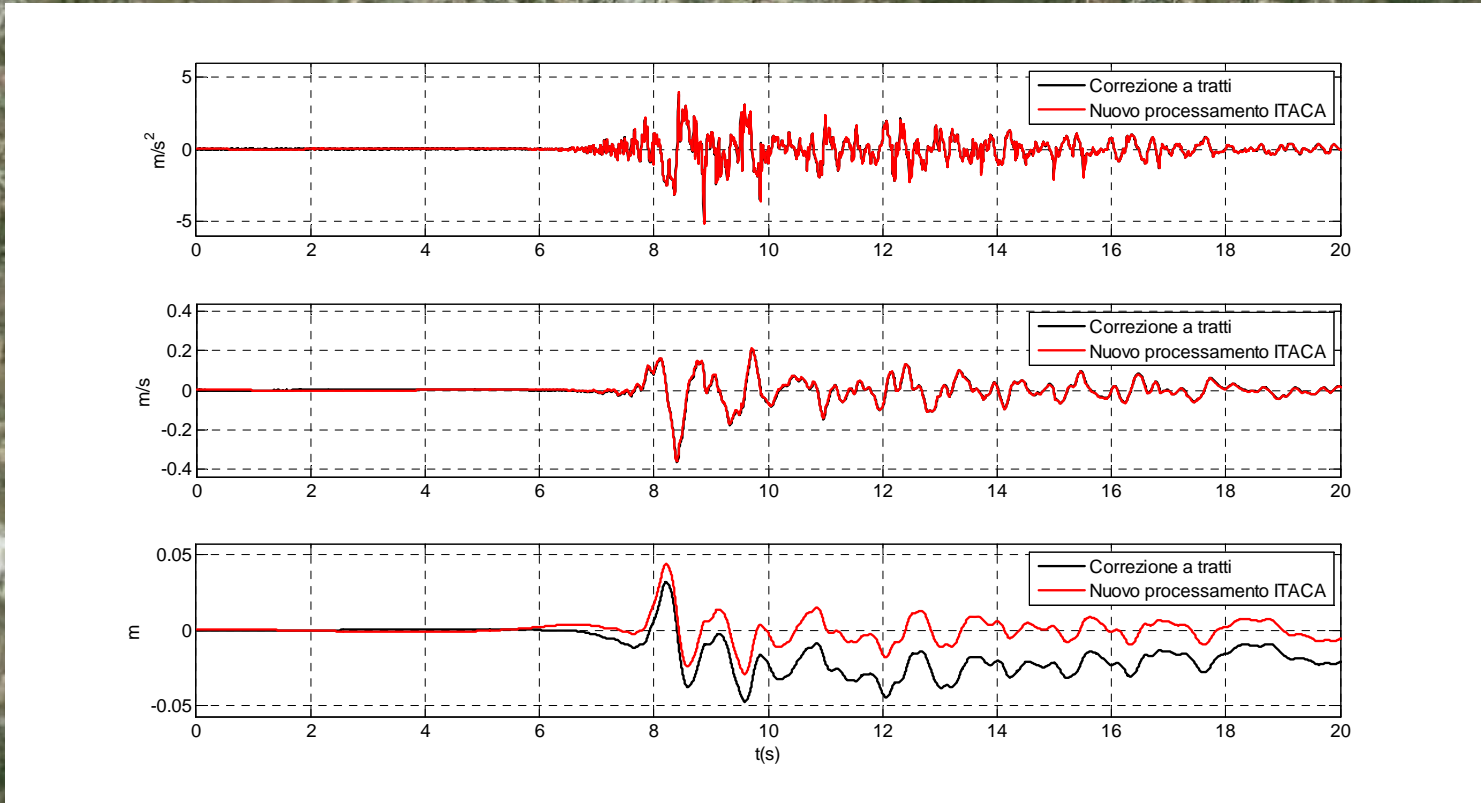
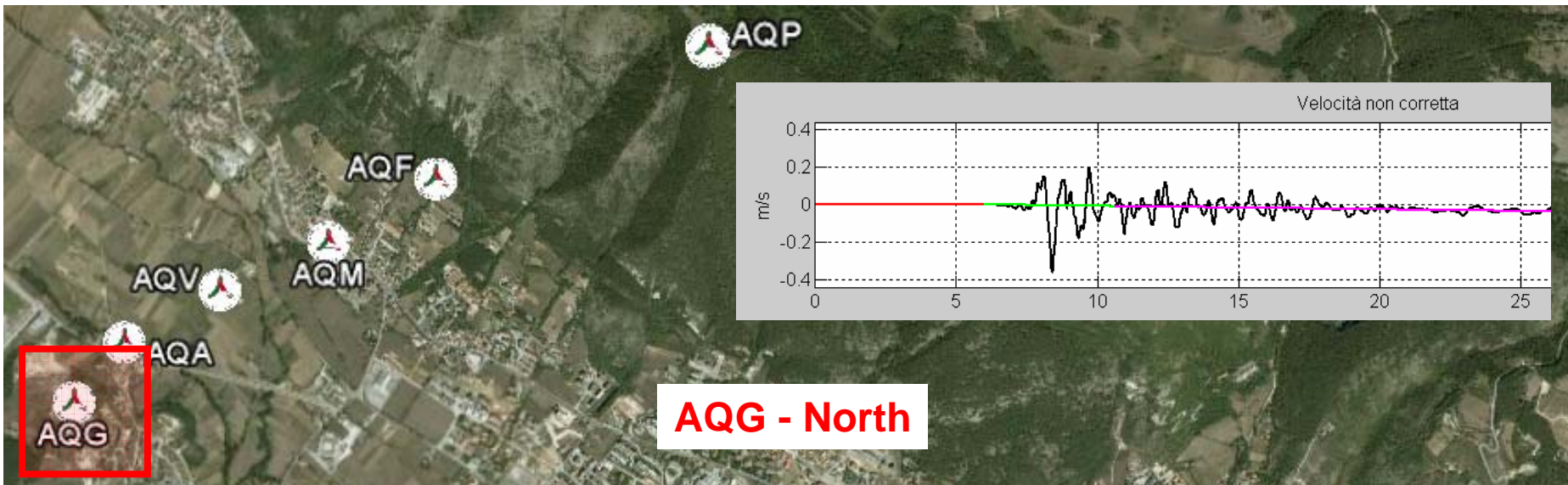


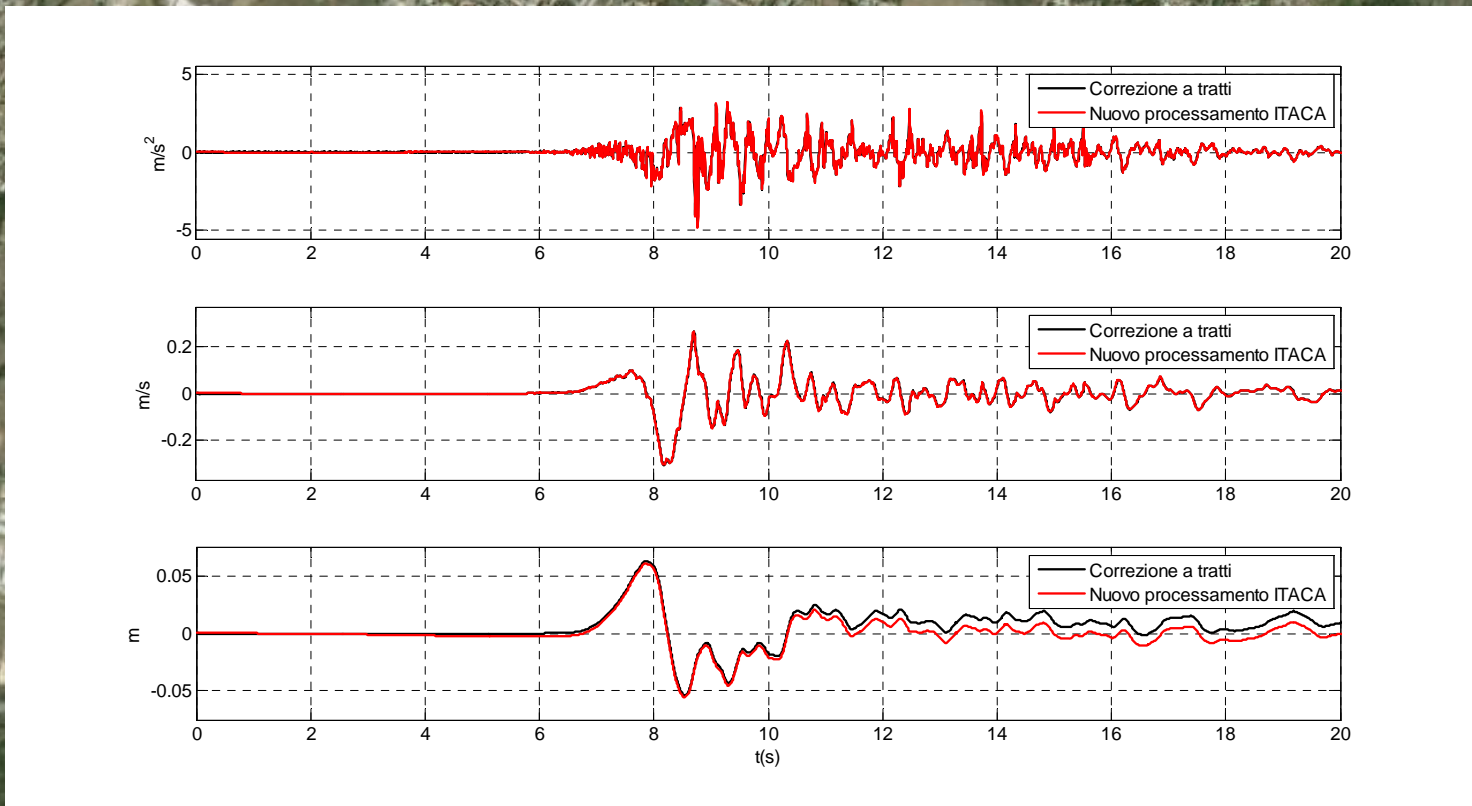
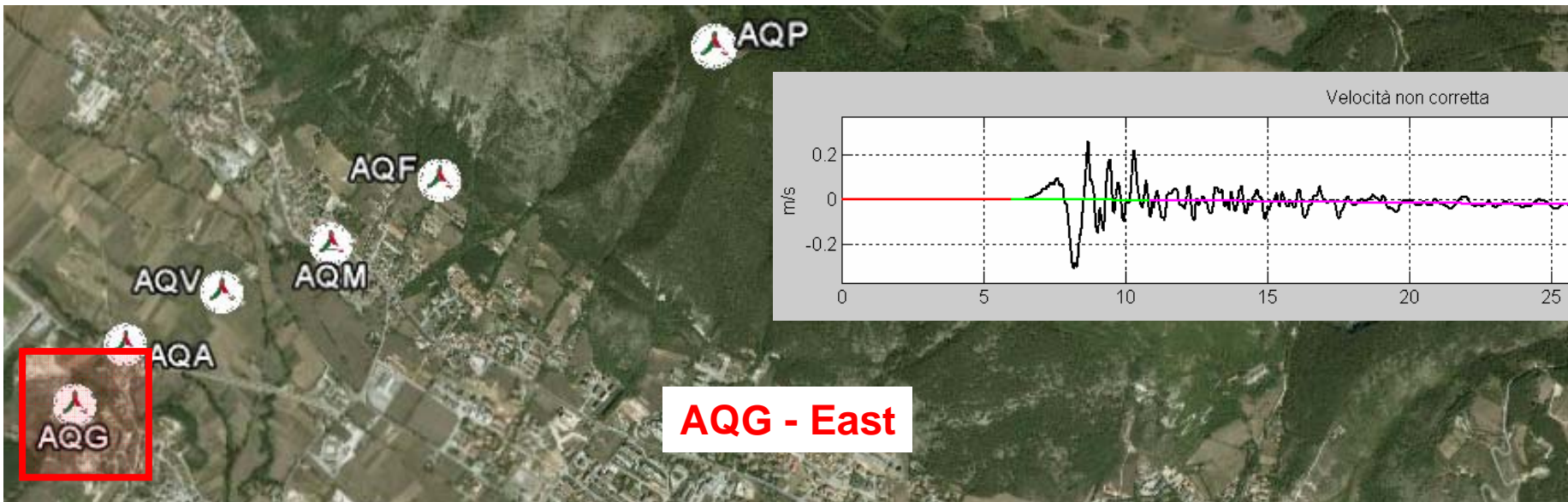
AQA - North

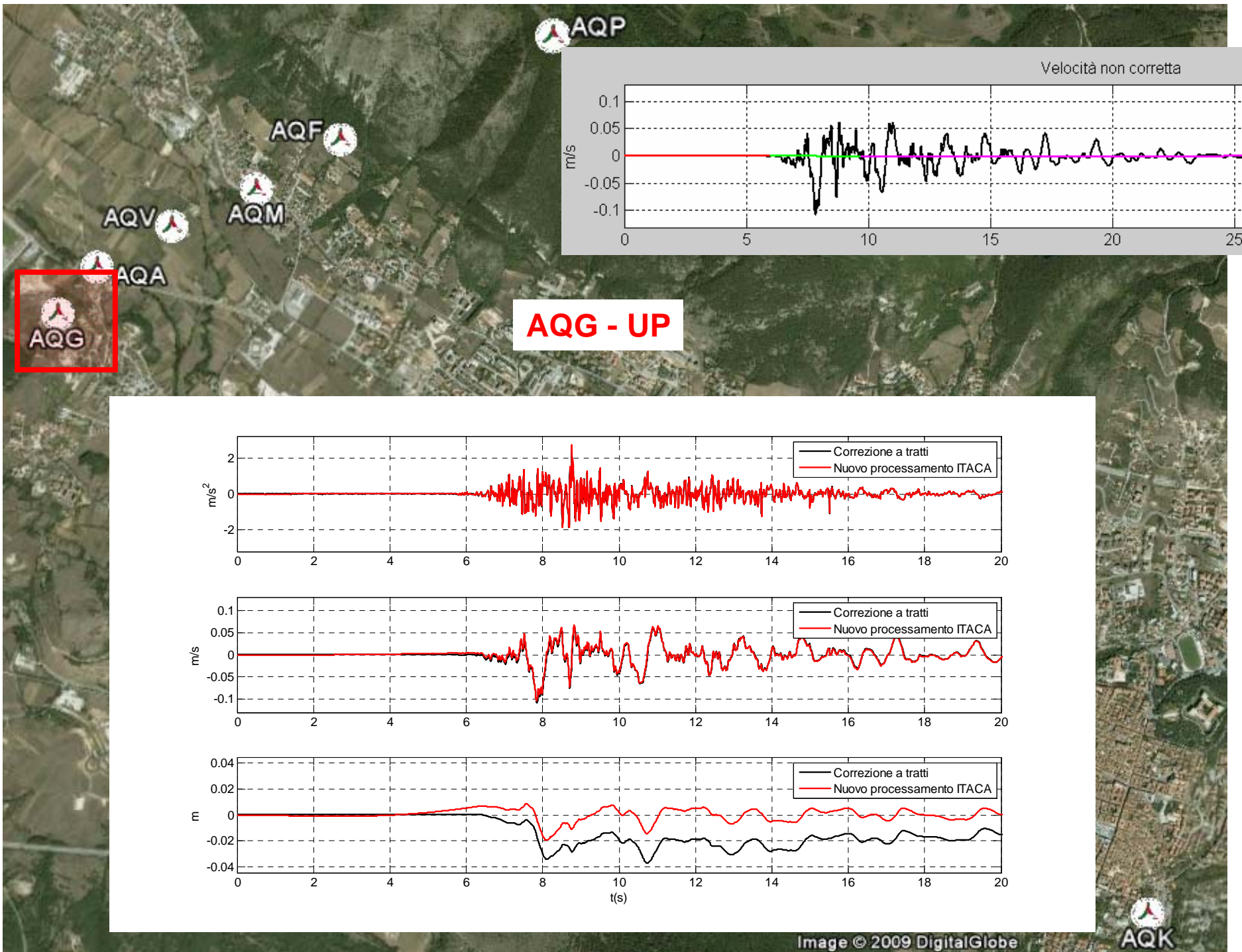


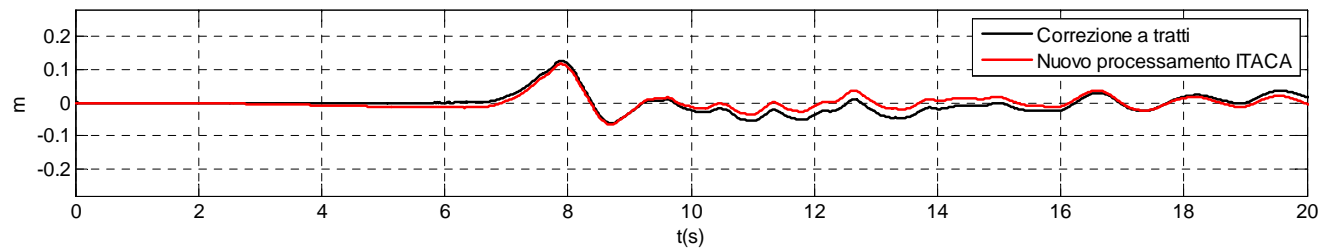
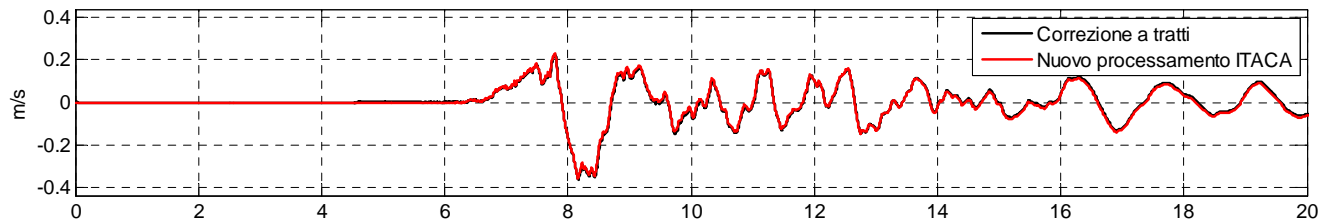
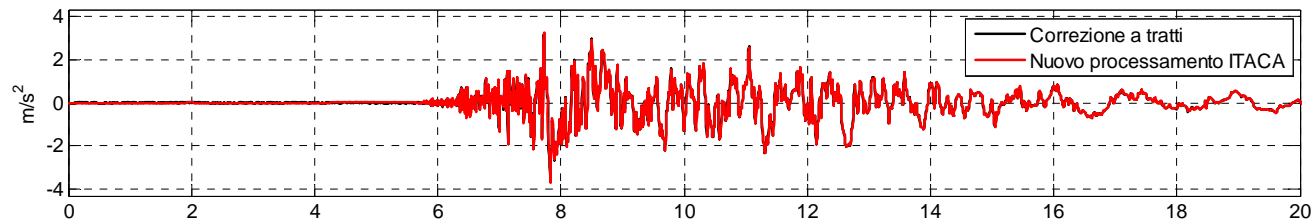
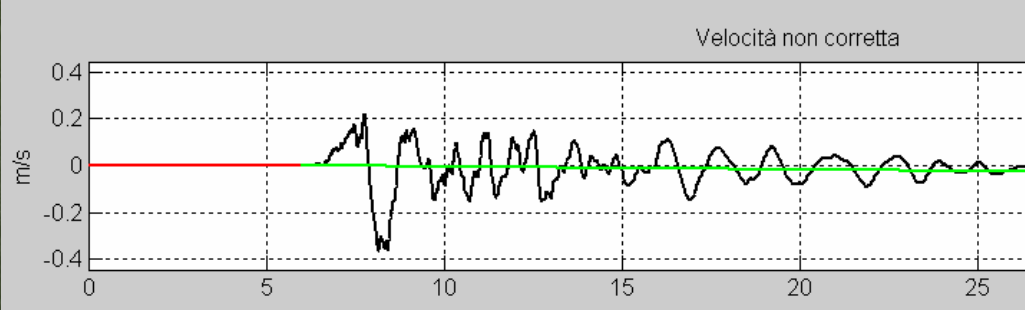
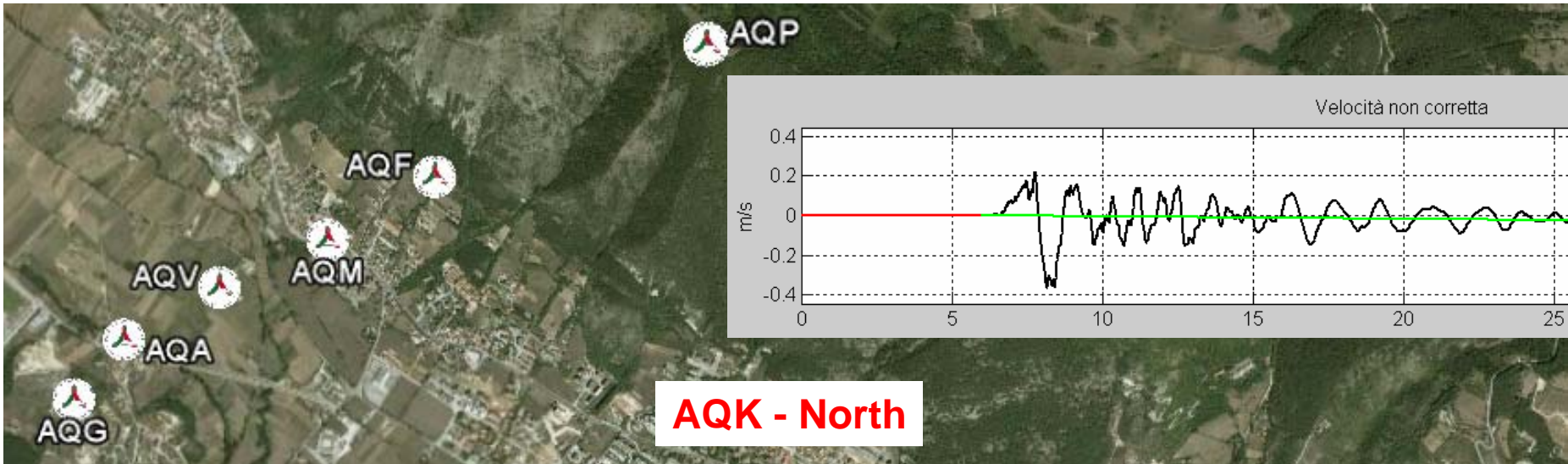


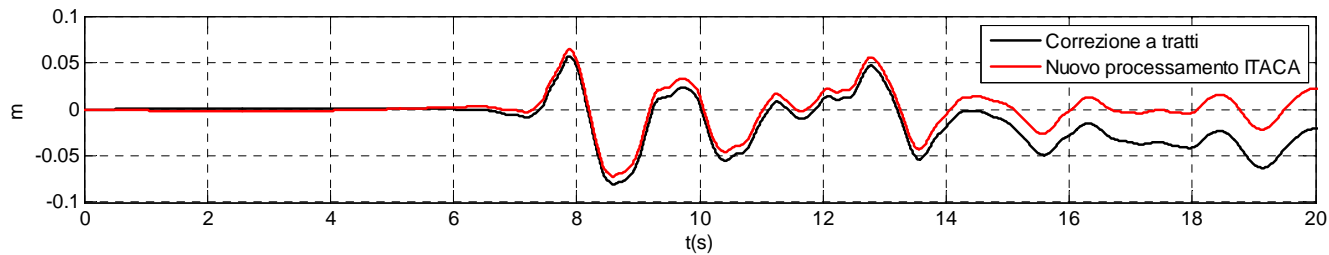
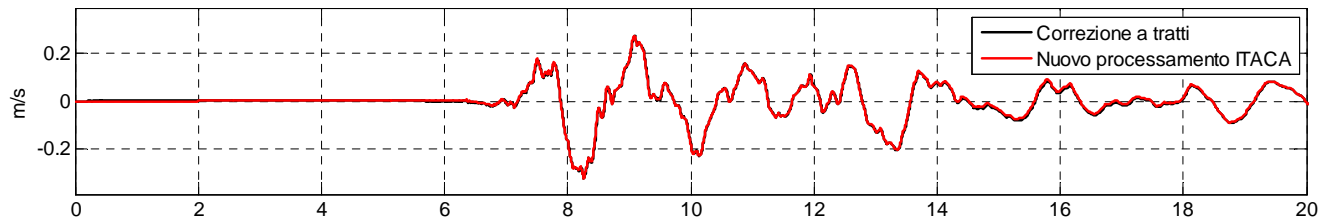
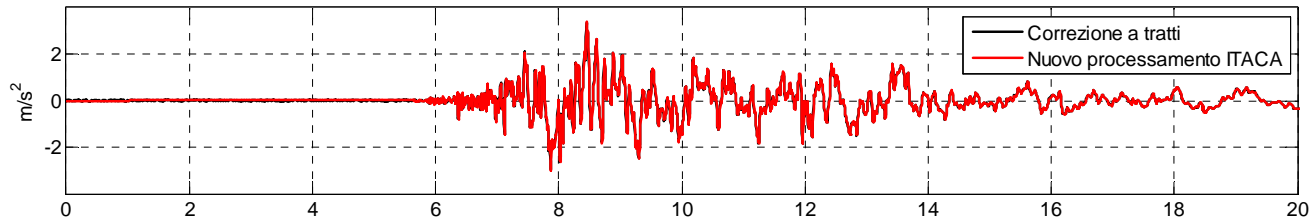
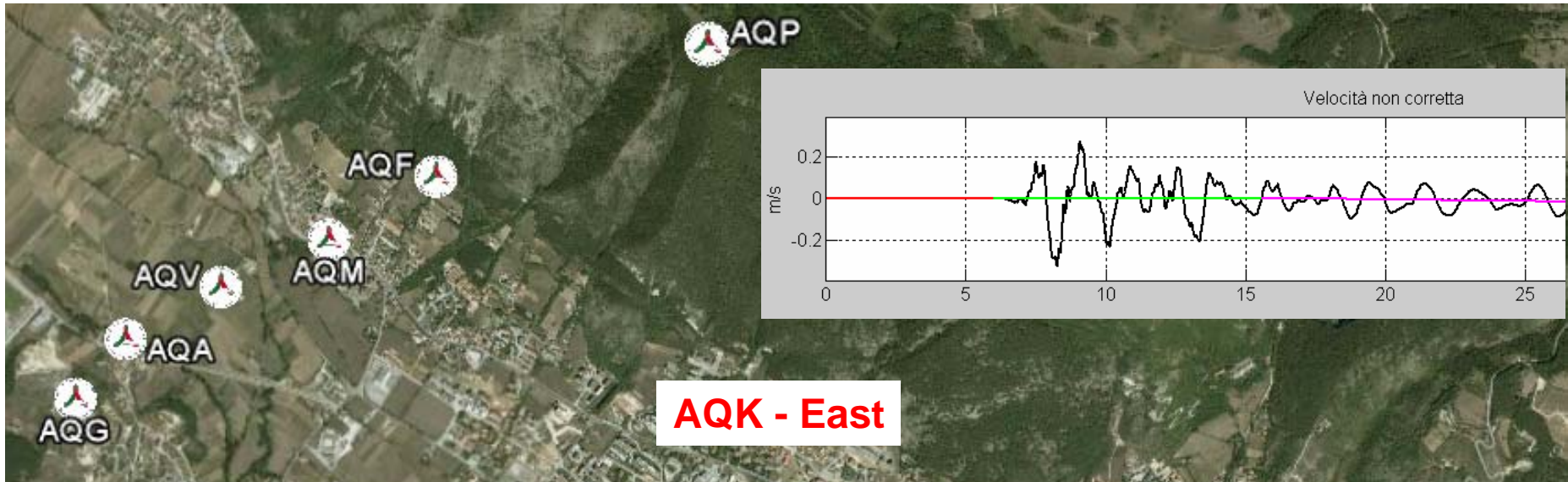


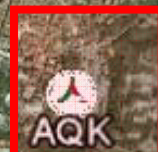
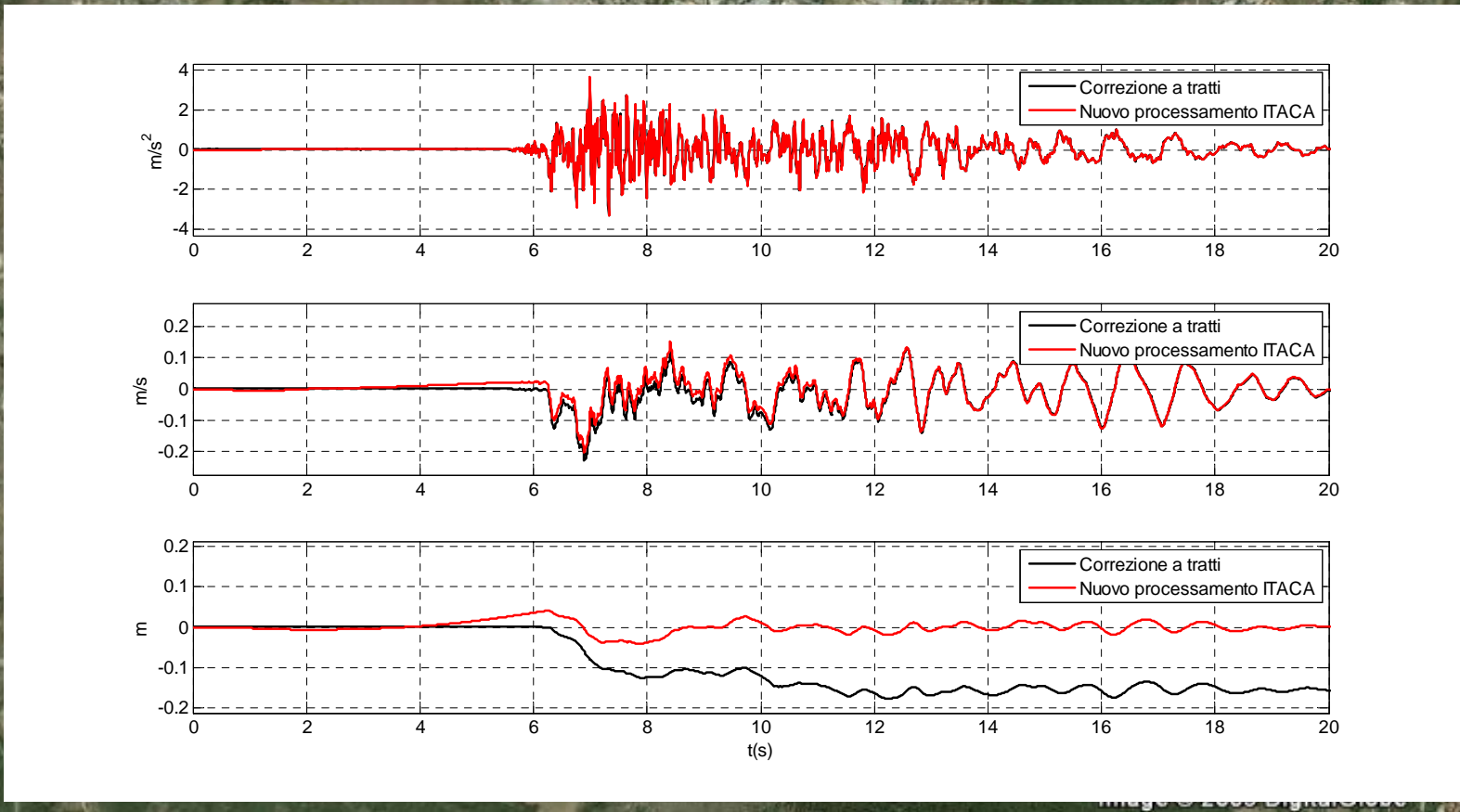
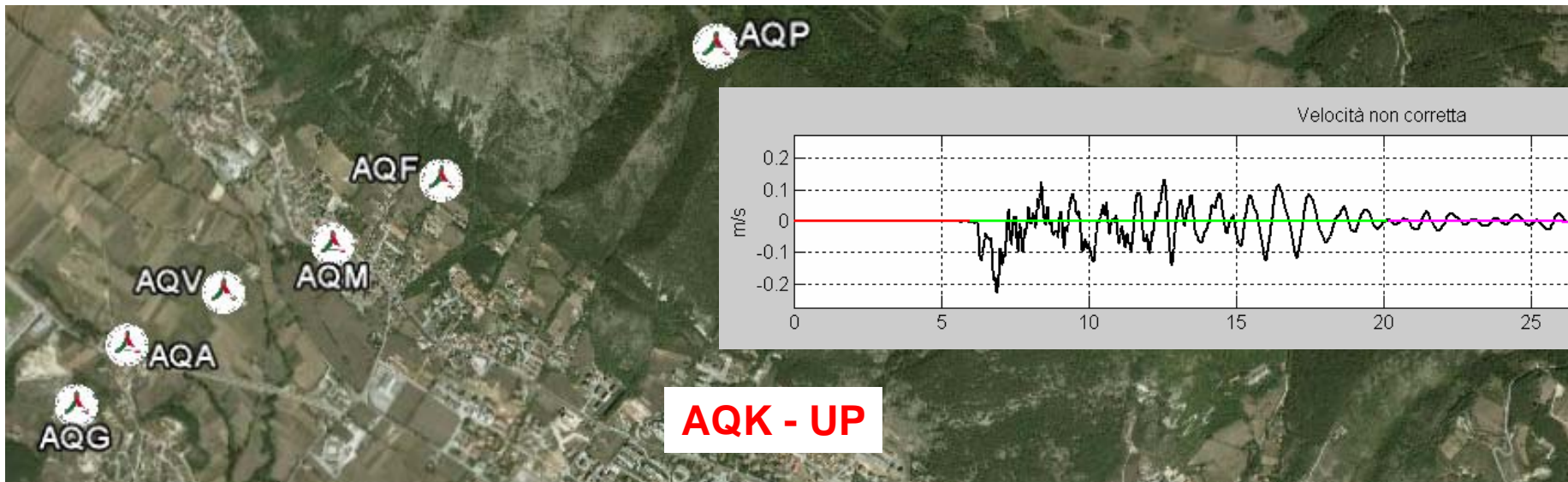






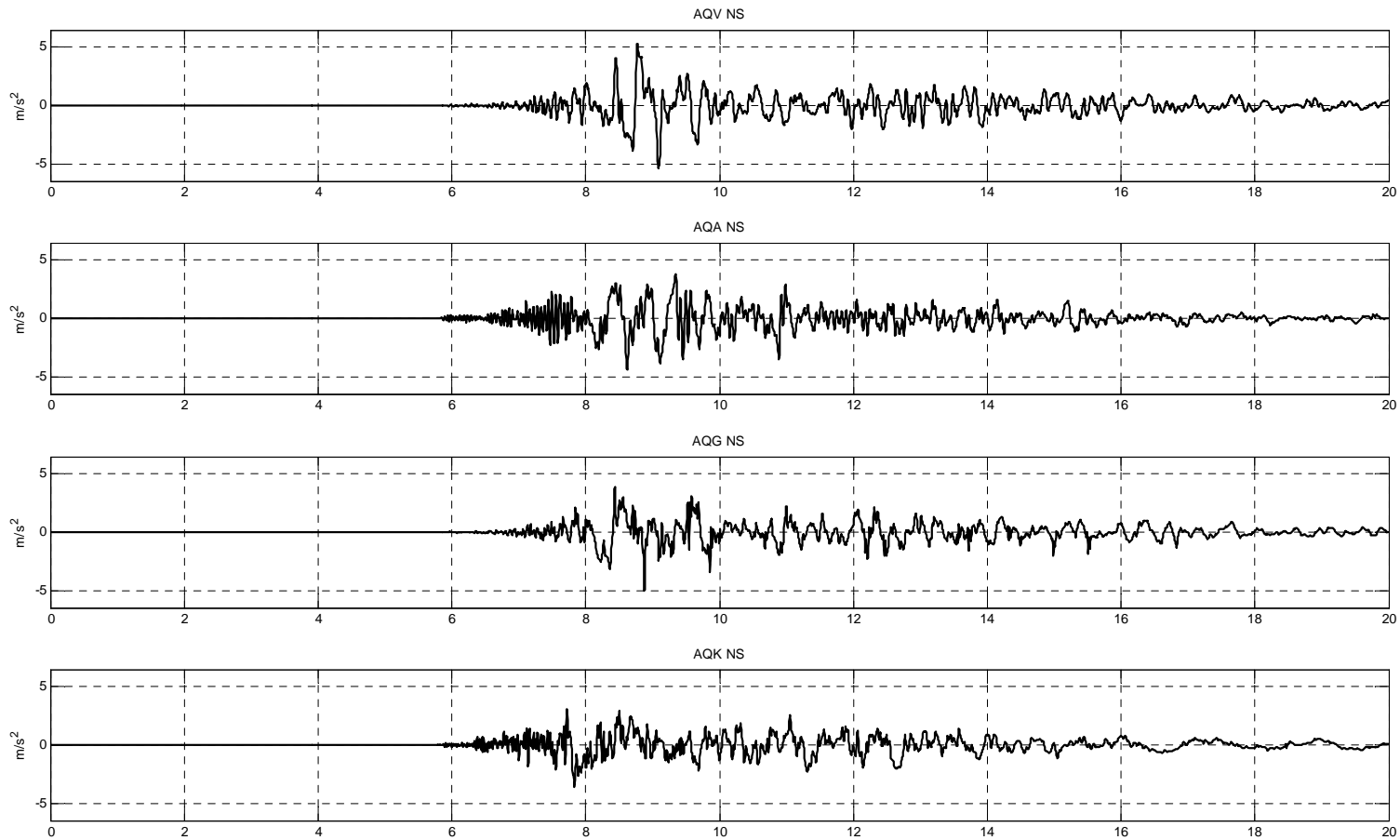






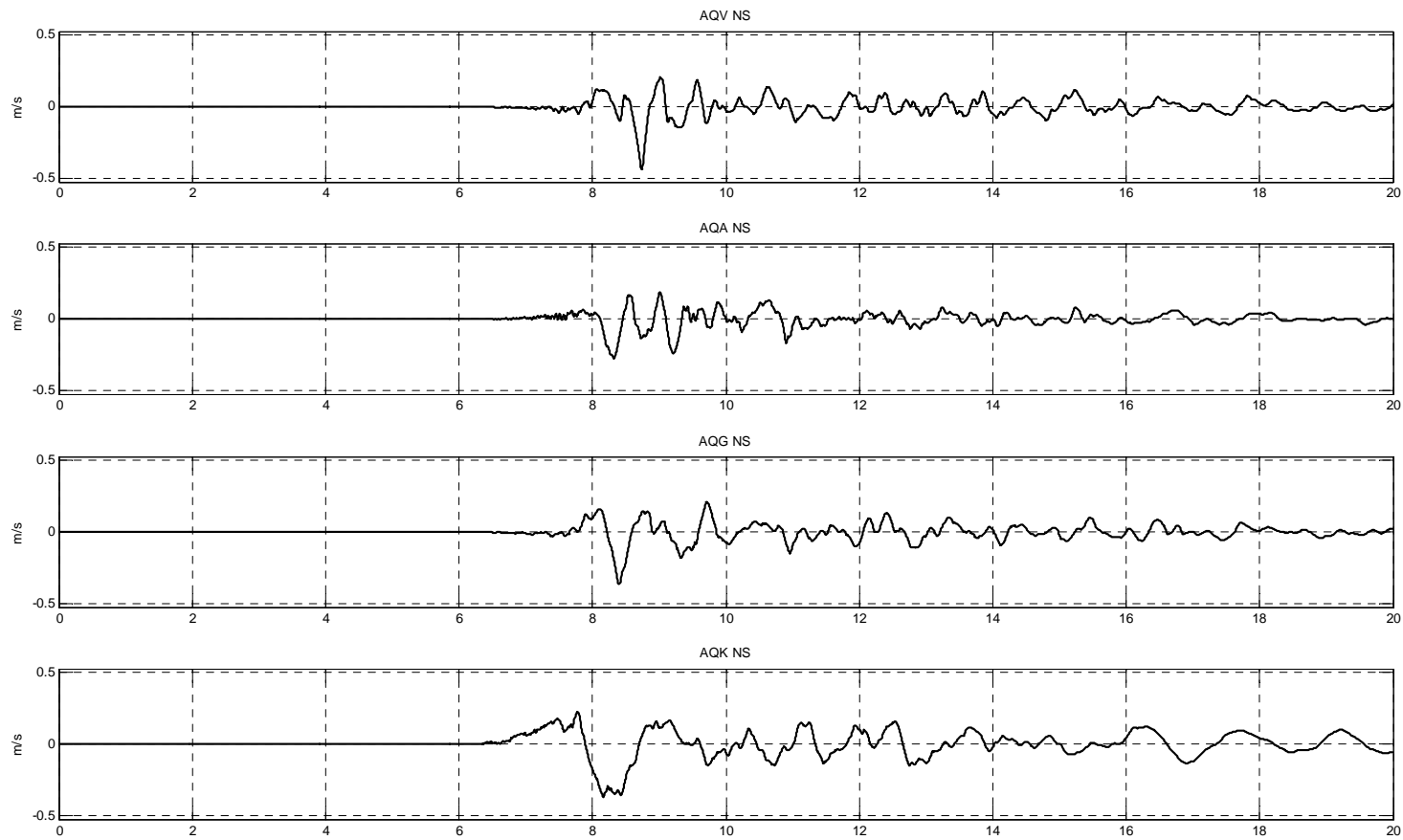


NS - Acceleration



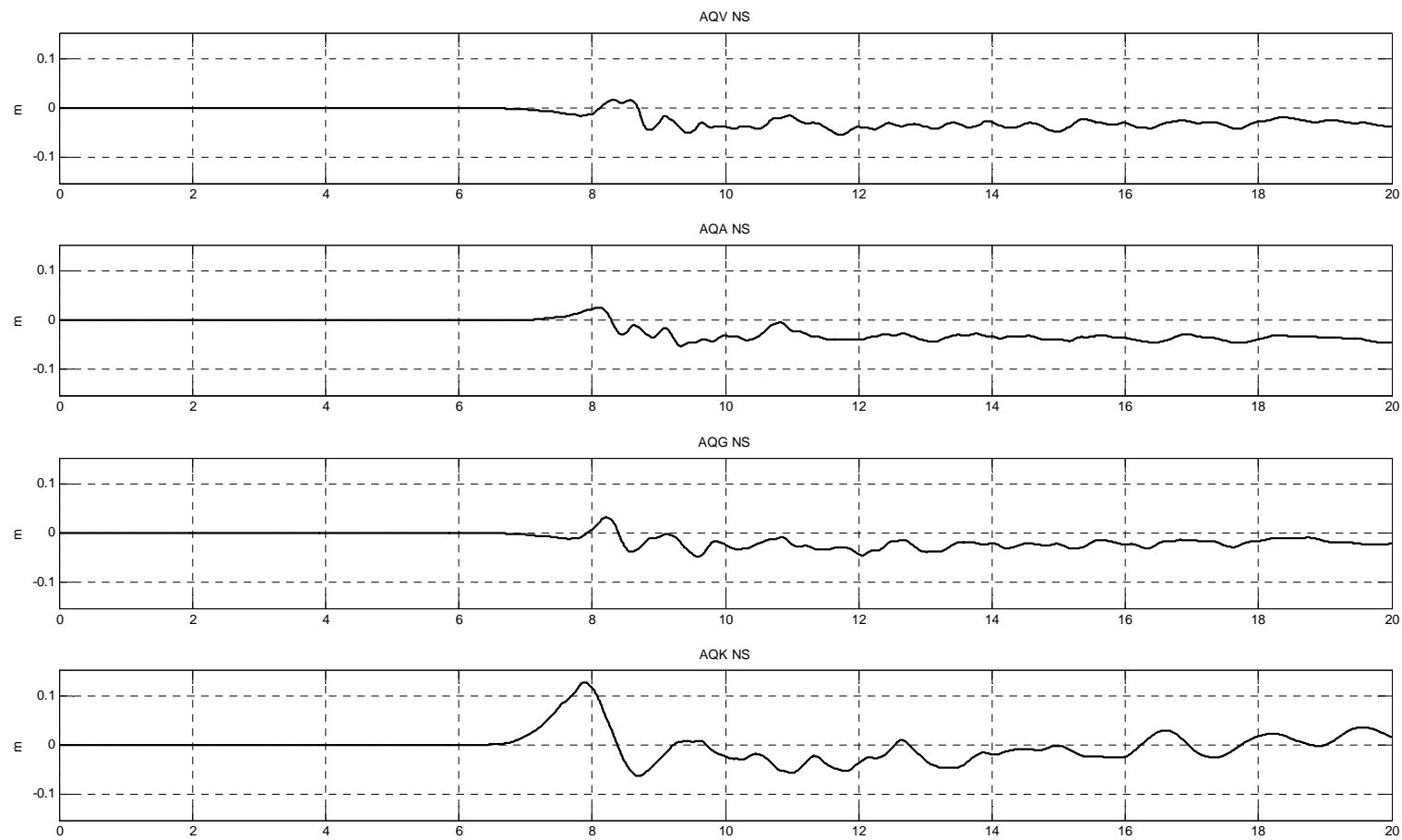


NS - Velocity



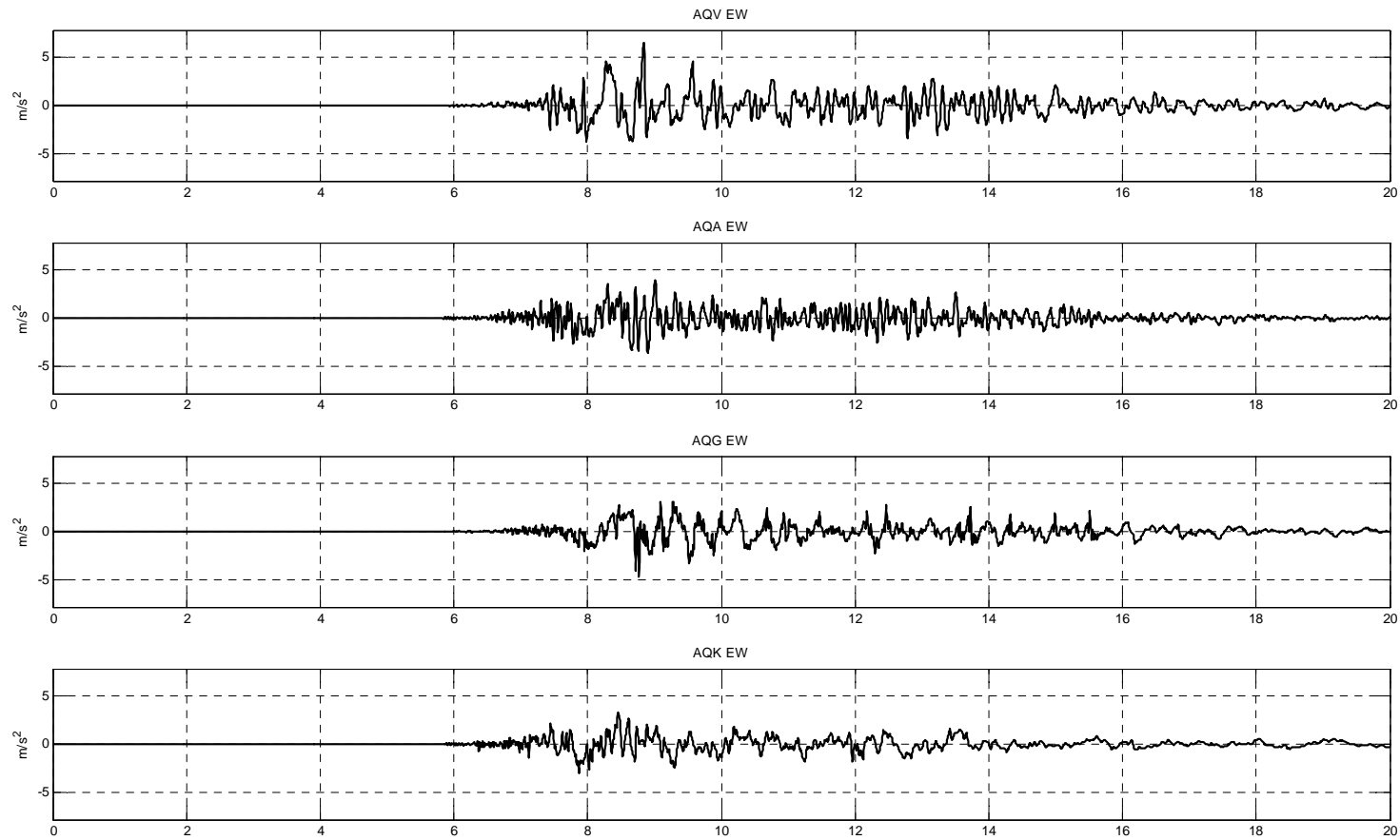


NS - Displacement



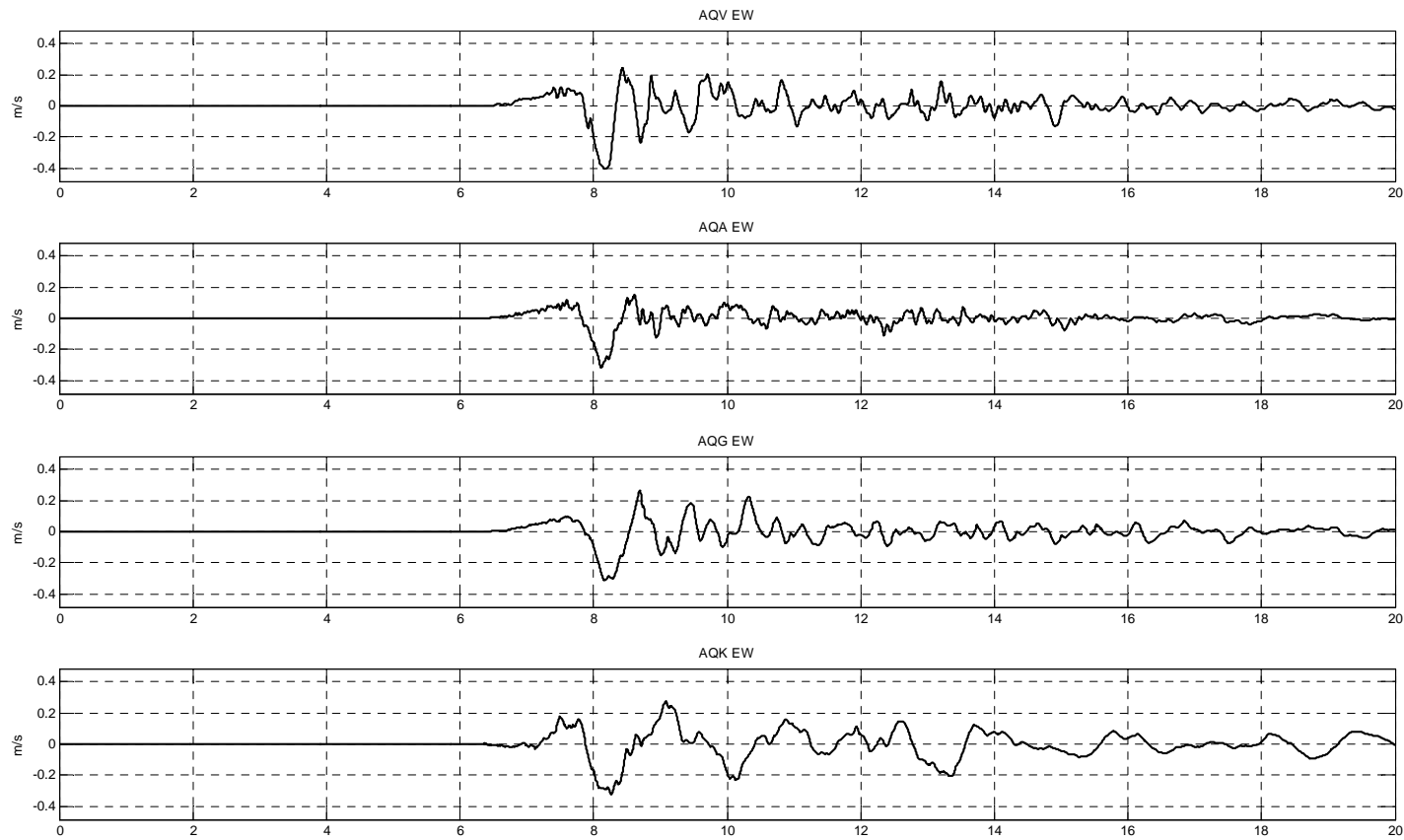


EW - Acceleration



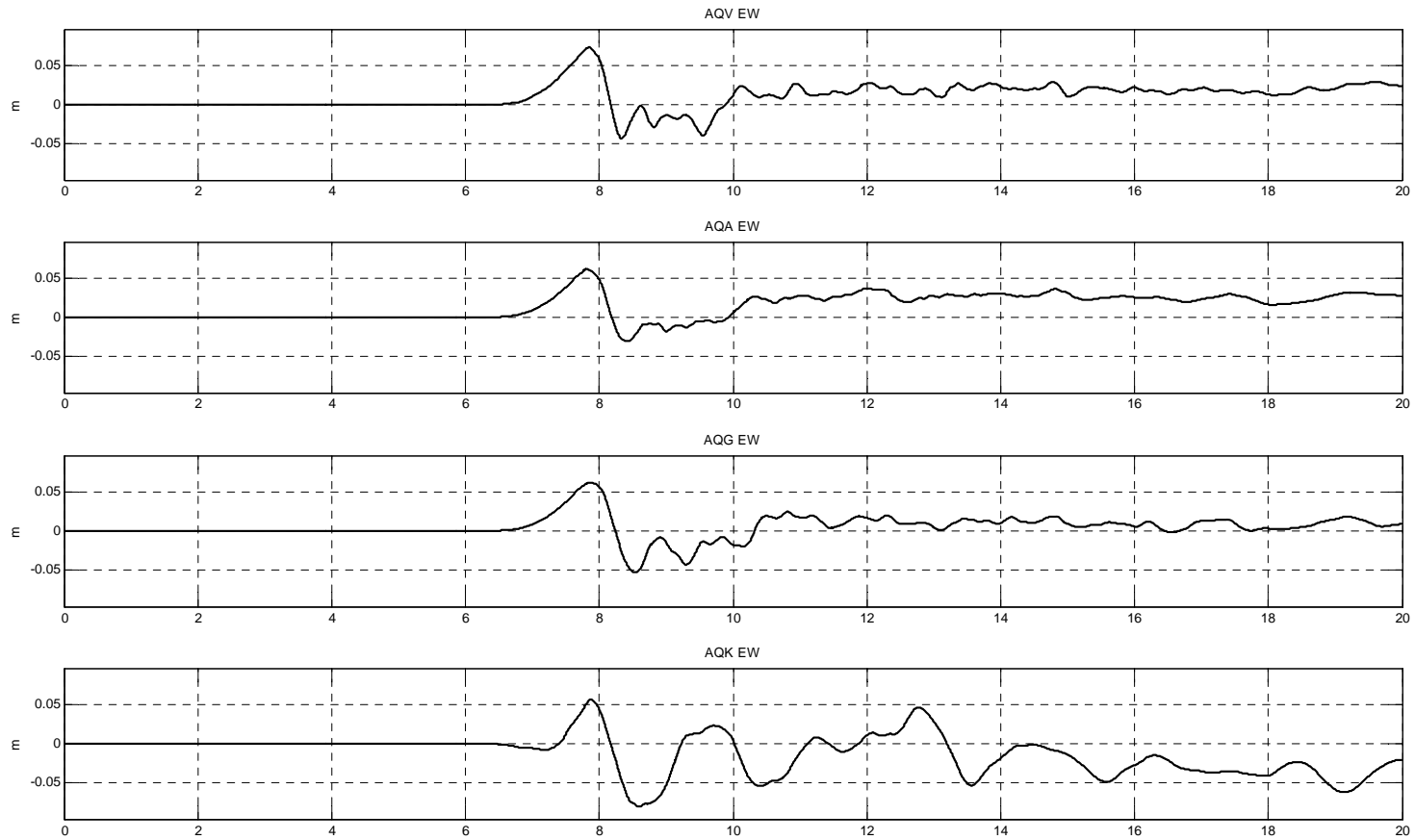


EW - Velocity



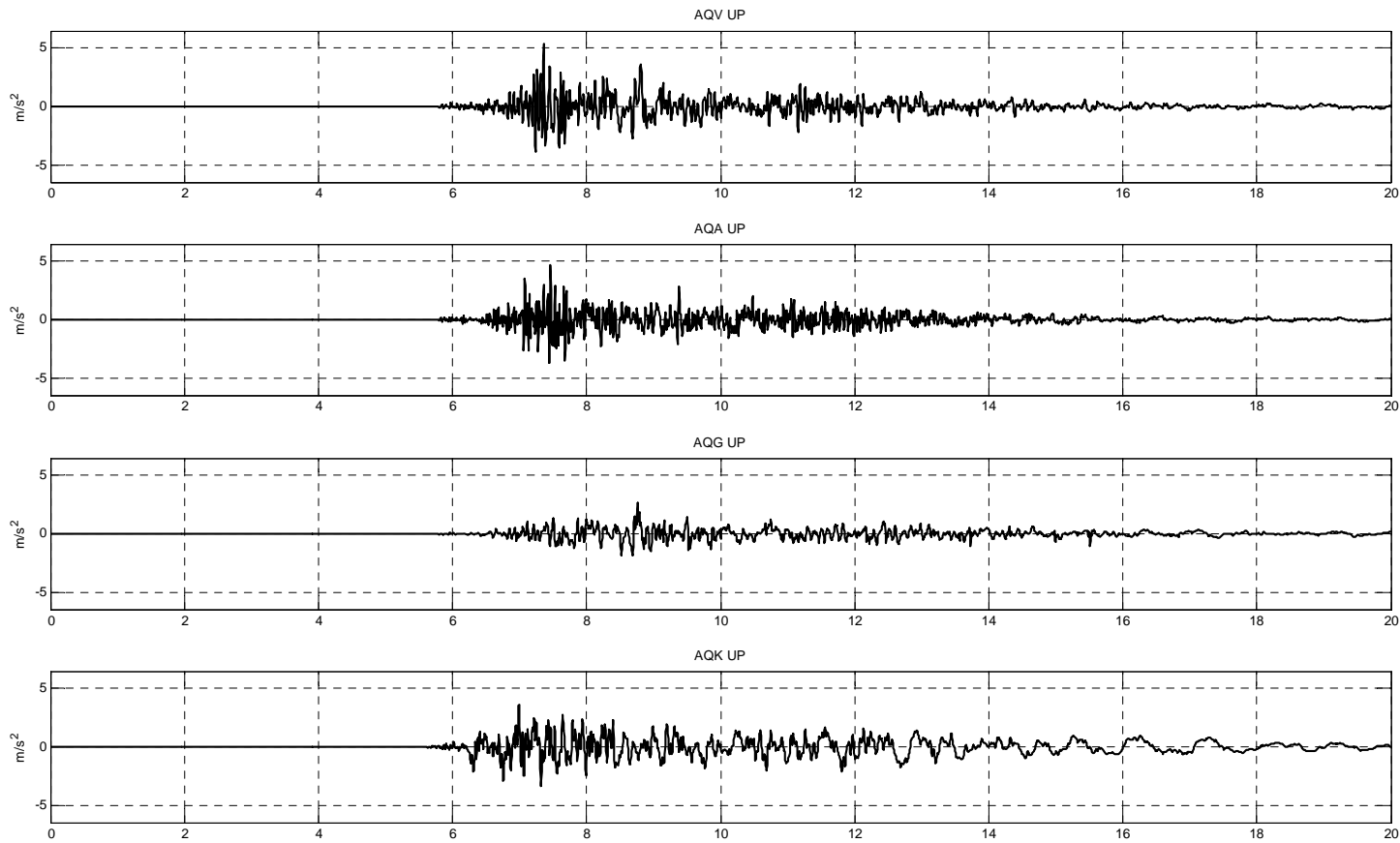


EW - Displacement



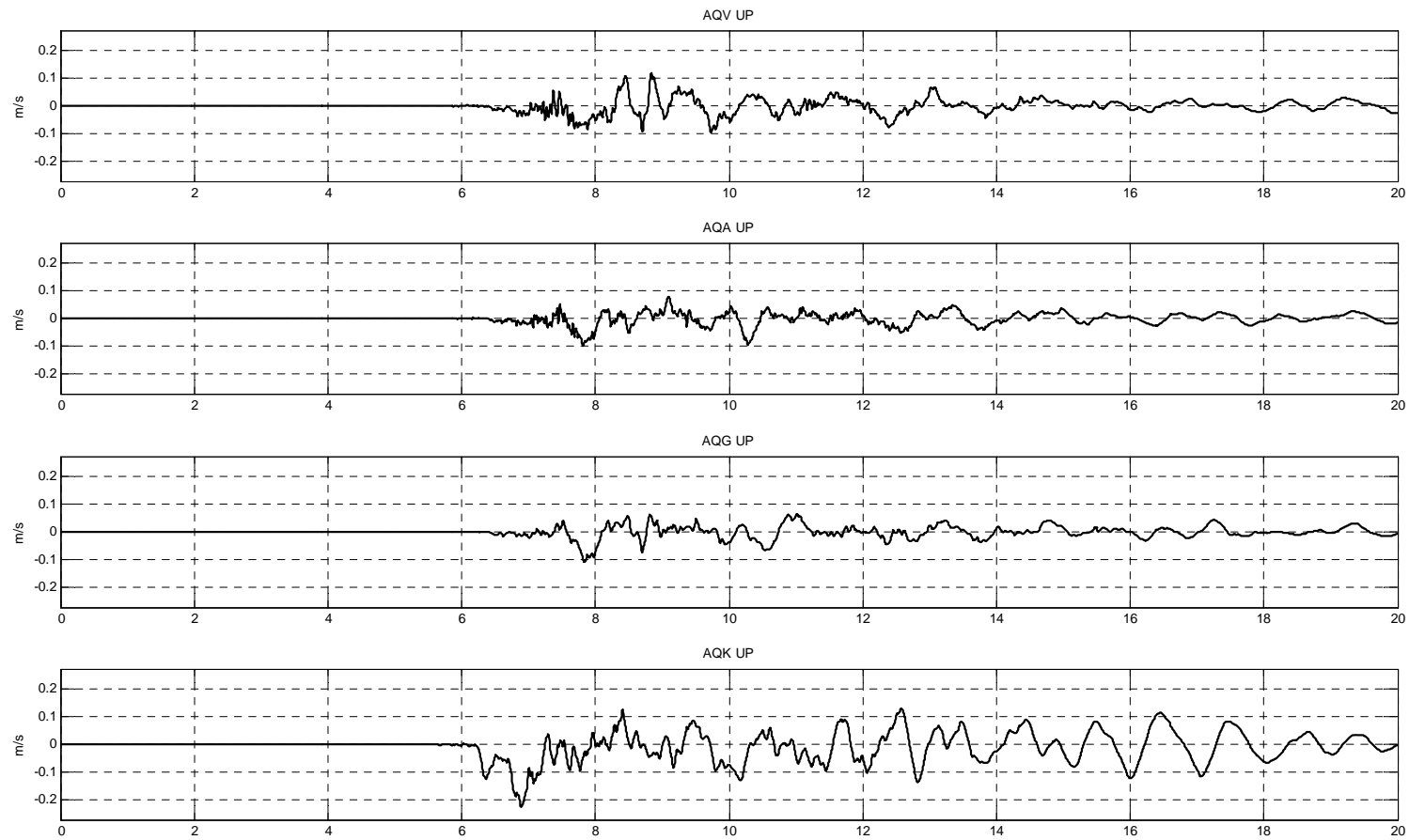


UP - Acceleration



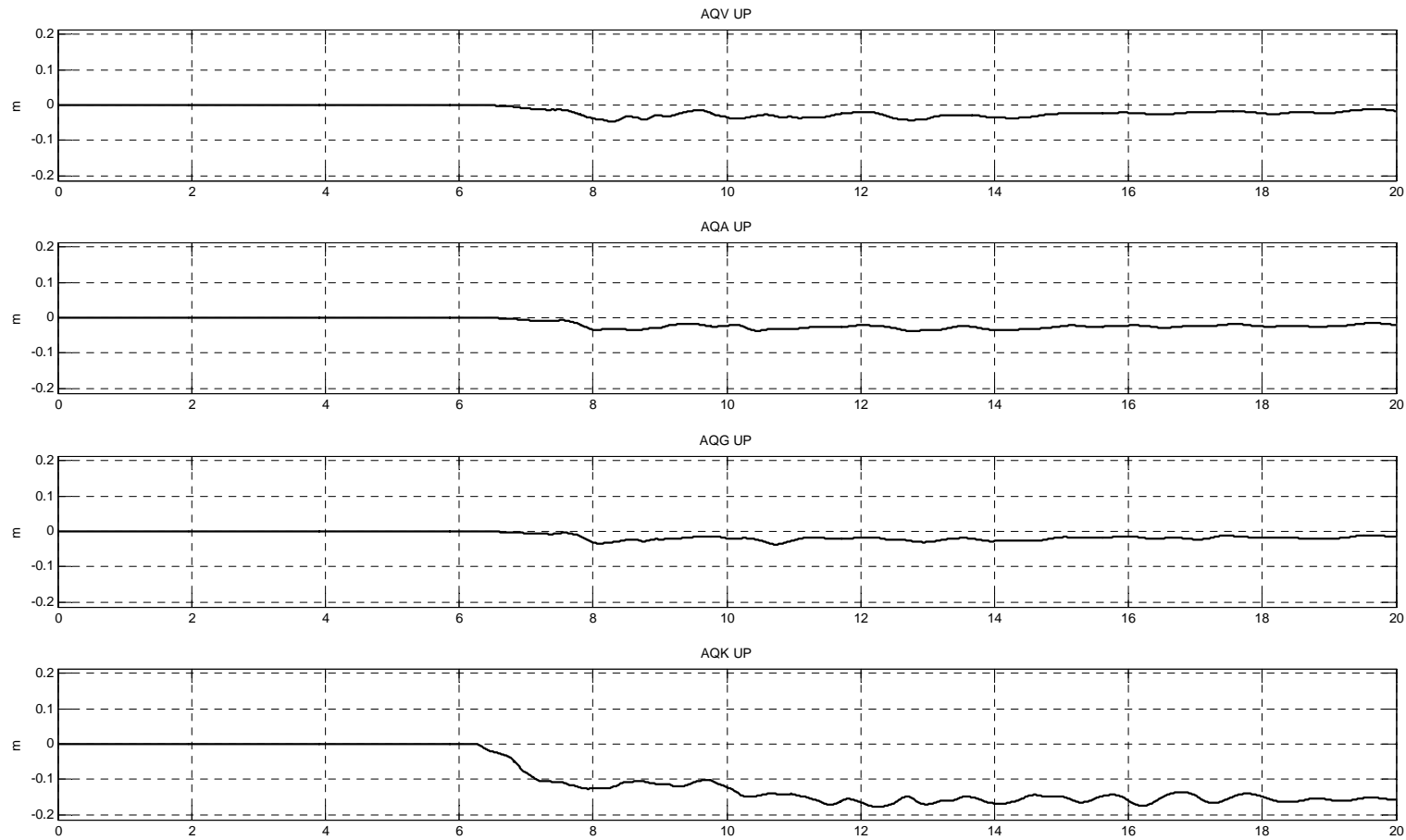


UP - Velocity



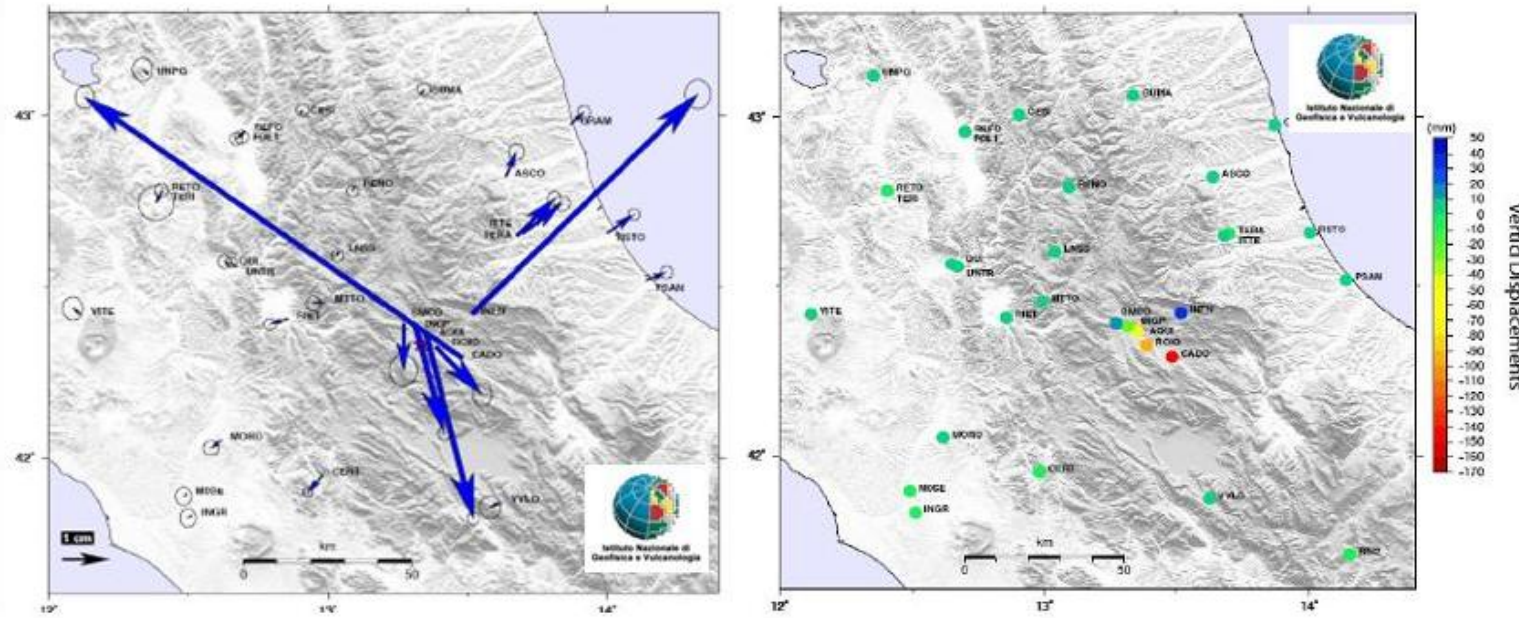


UP - Displacement





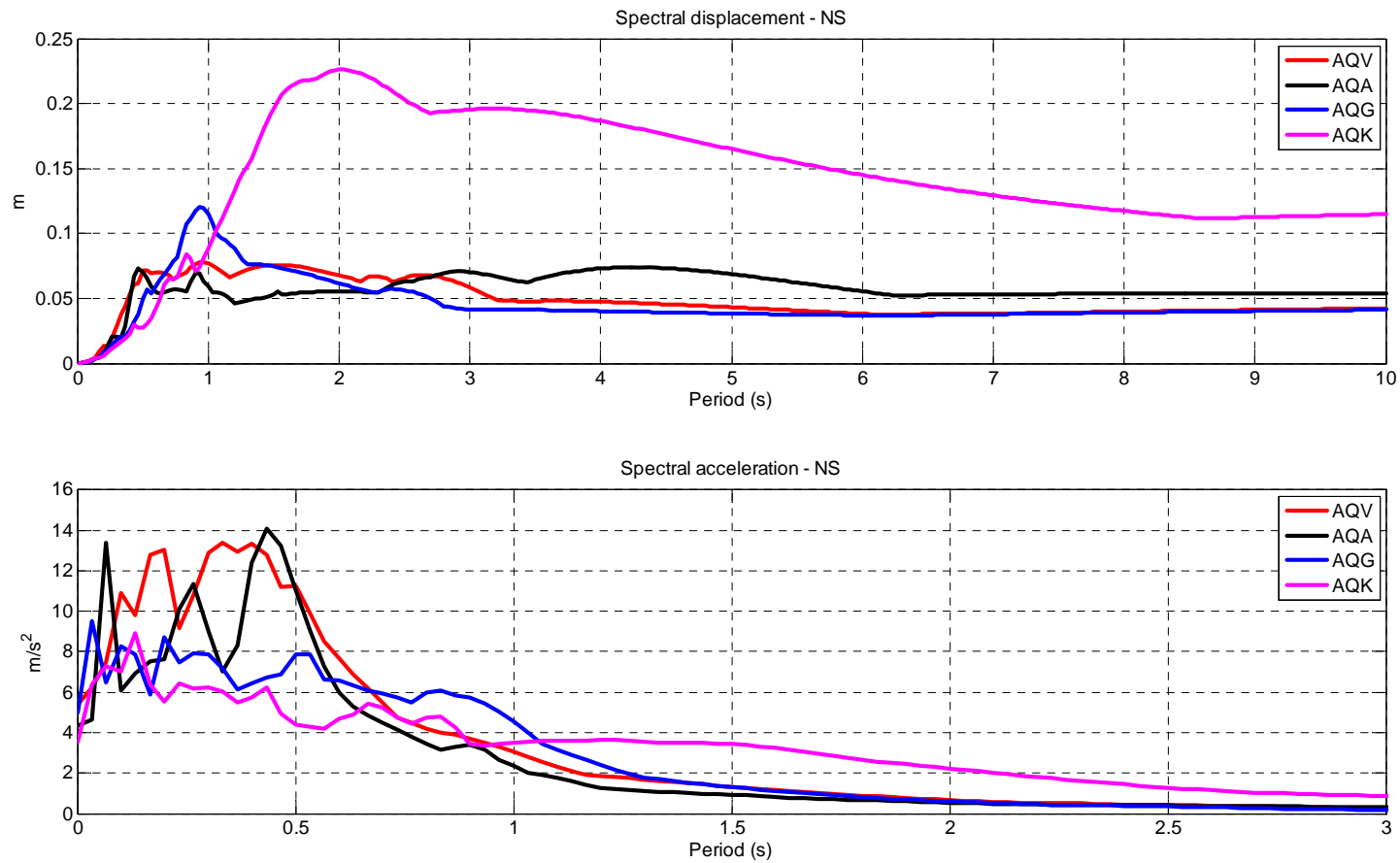
- ✓ The computed displacements suggest a permanent movement directed SE and downwards, in agreement with preliminary results from GPS



da: <http://portale.ingv.it/primo-piano/archivio-primo-piano/notizie-2009/terremoto-6-aprile/dati-gps>

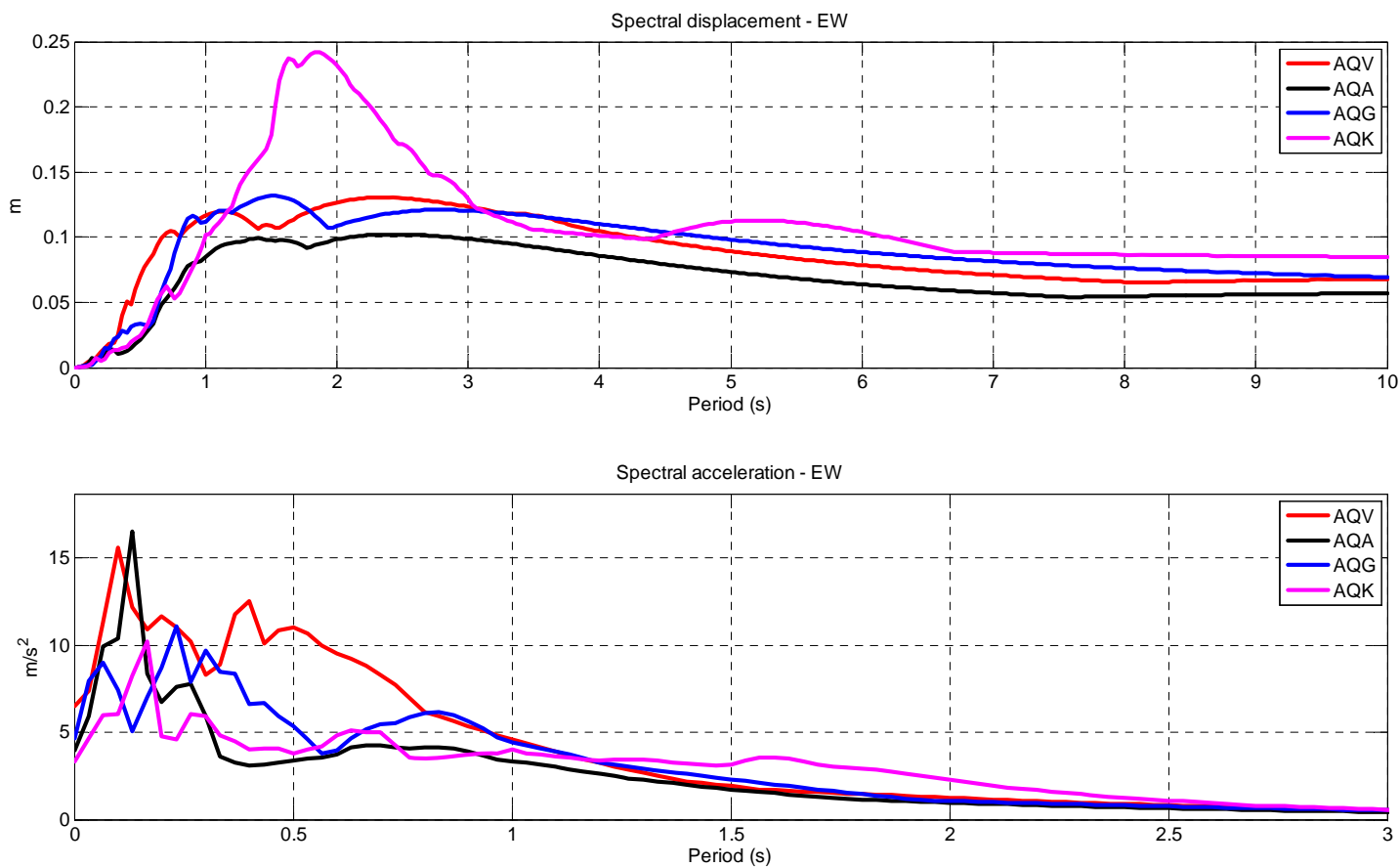


NS – Response spectra





EW – Response spectra





UP – Response spectra

