Seminario: Filtro Rápido de Coincidencias

“Fast Matched Filter”

Posibles aplicaciónes a microsismicidad

Hugo S.

Institut de Recherche pour le Développement IRD - ISTerre

Gracias a mis colegas:
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Seminario en el IGP, LabEx OSUG Project EFASAP

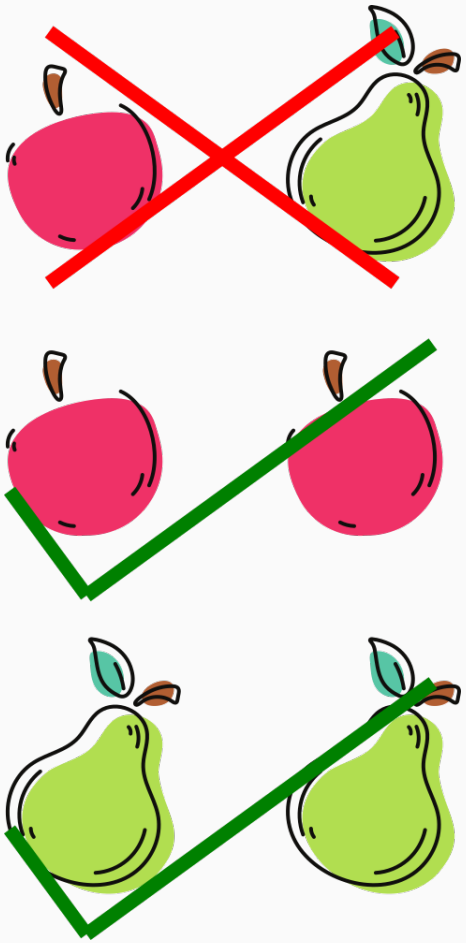
December 6, 2022

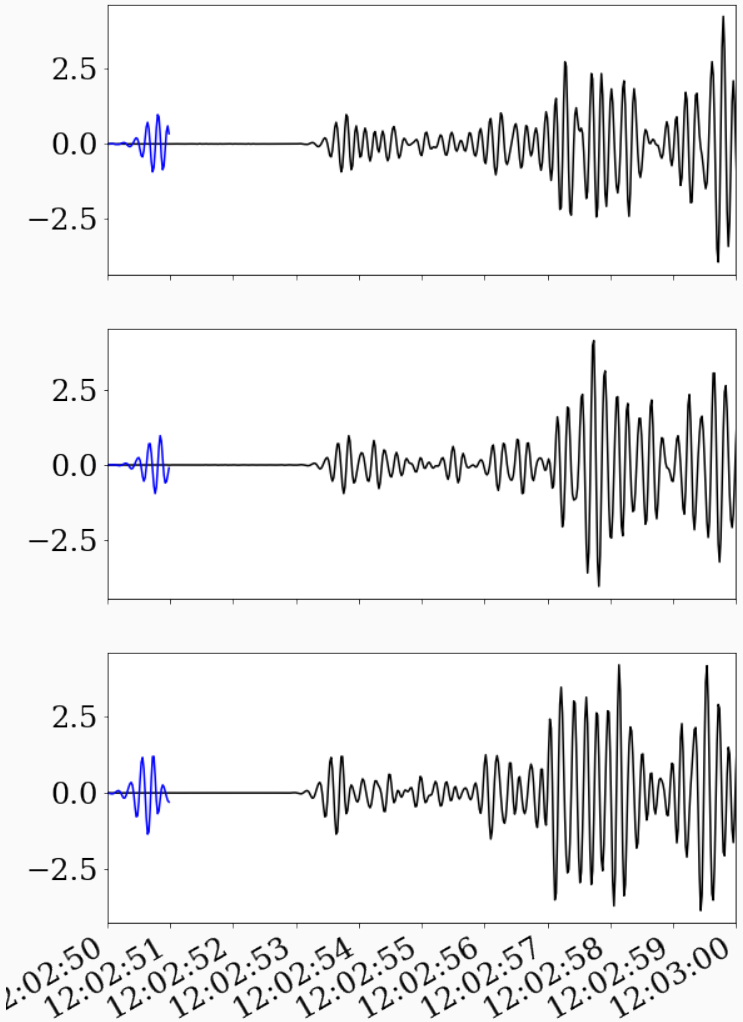
Introducción

Similitud, correlación

Manzanas con manzanas

y peras con peras





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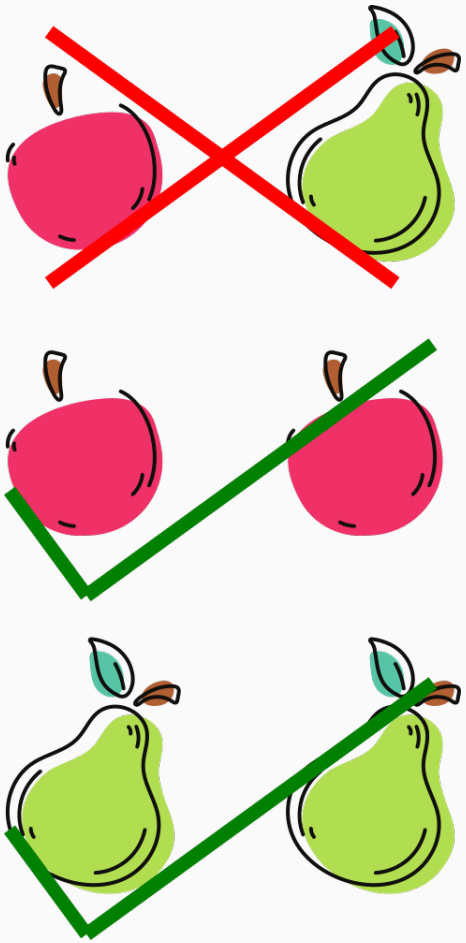

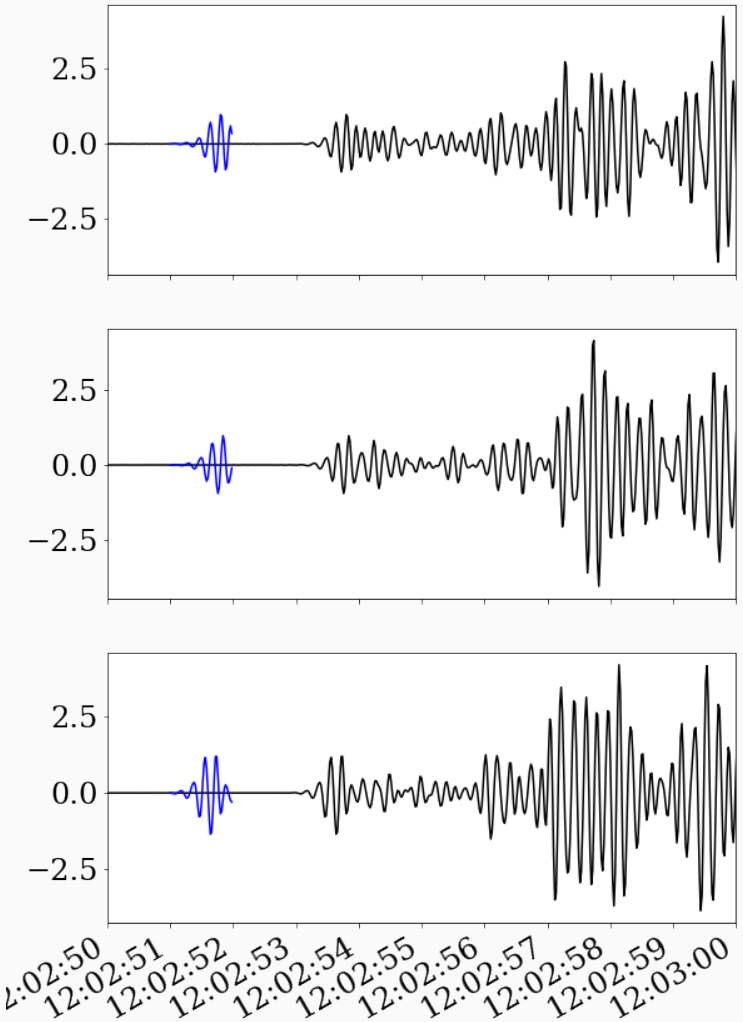

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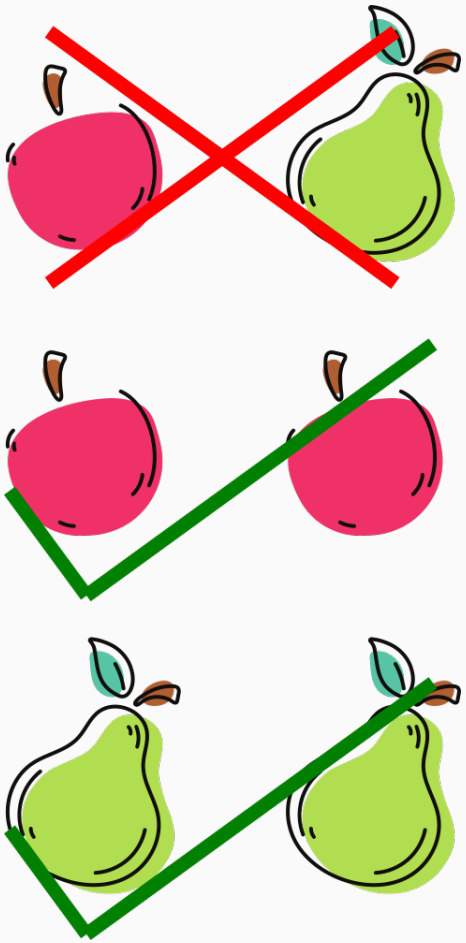

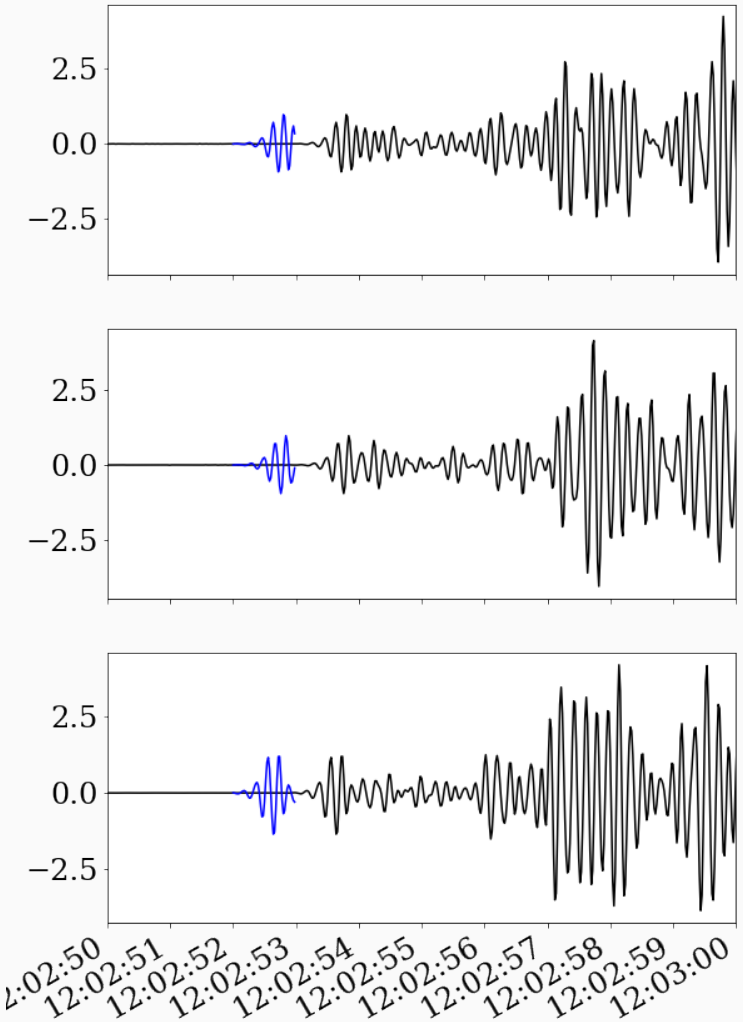

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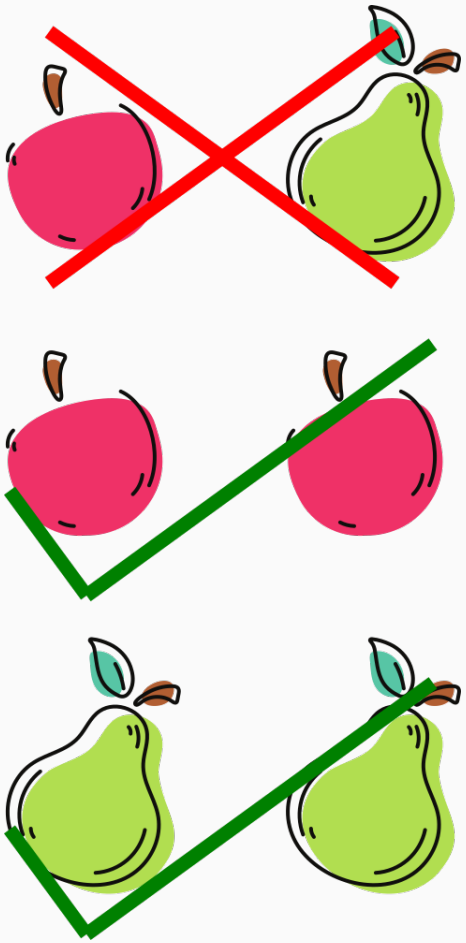

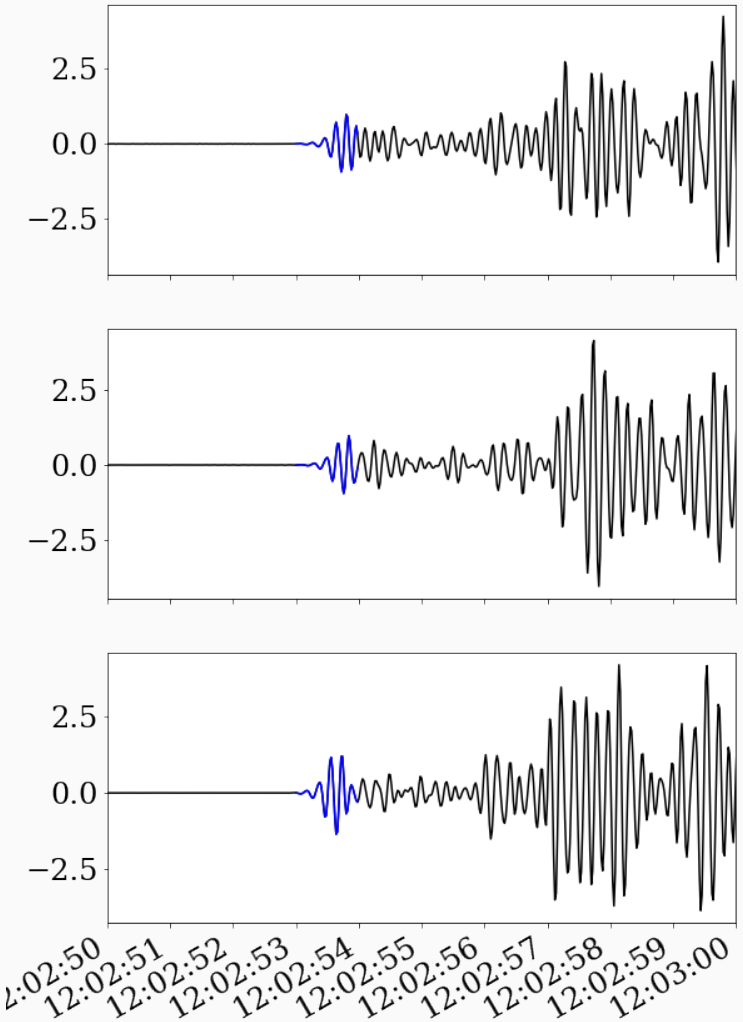

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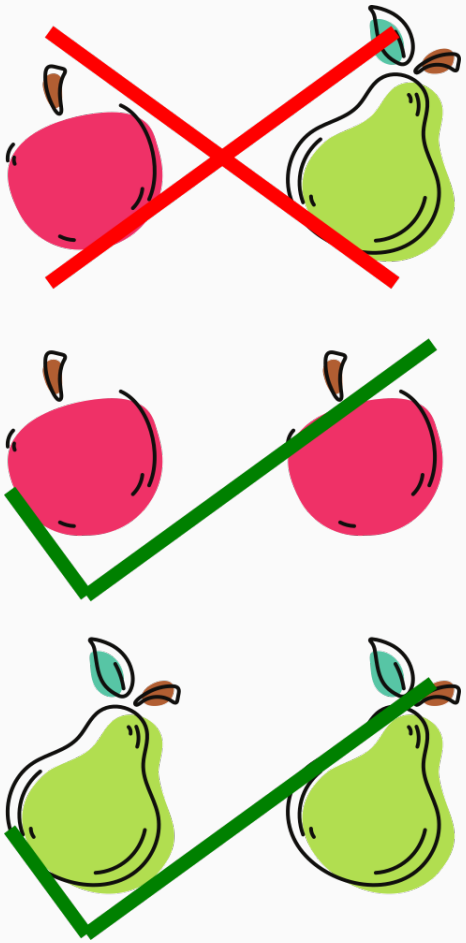

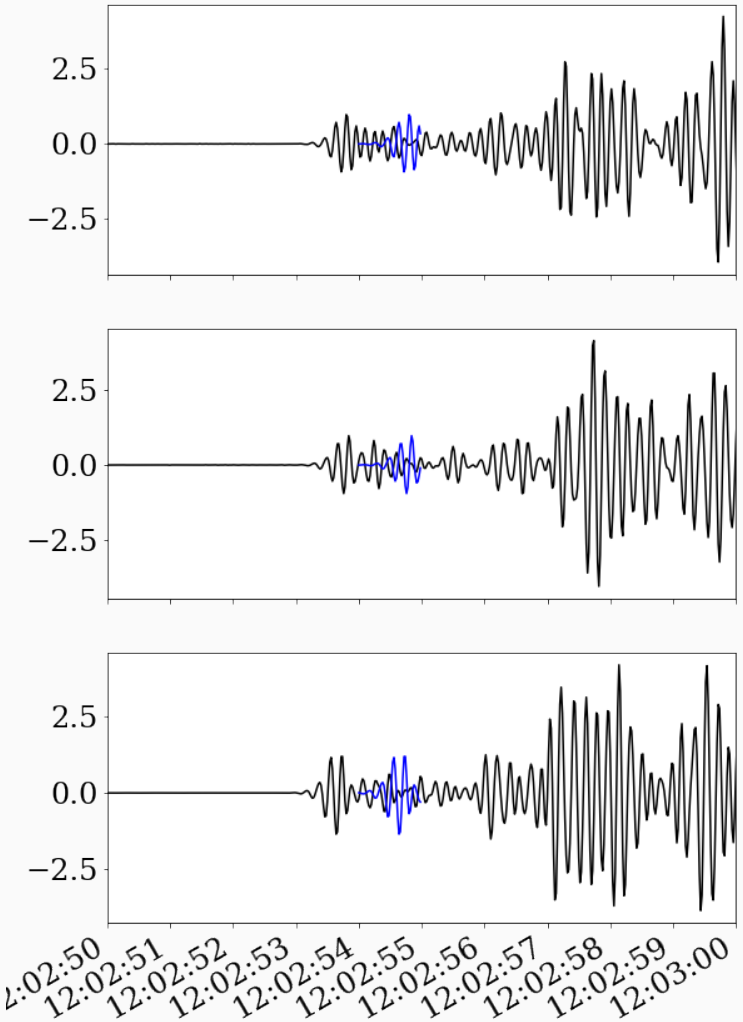

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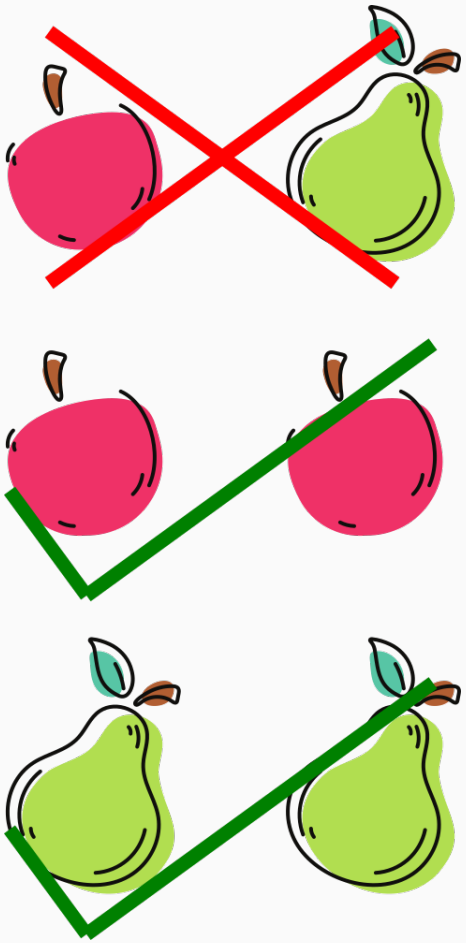

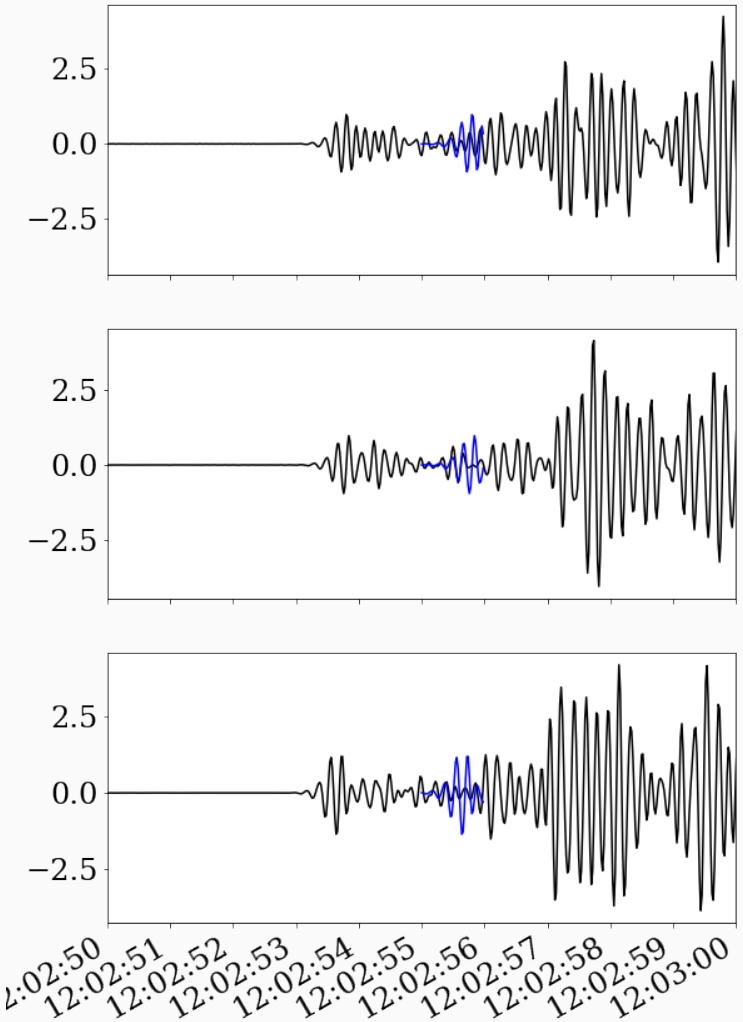

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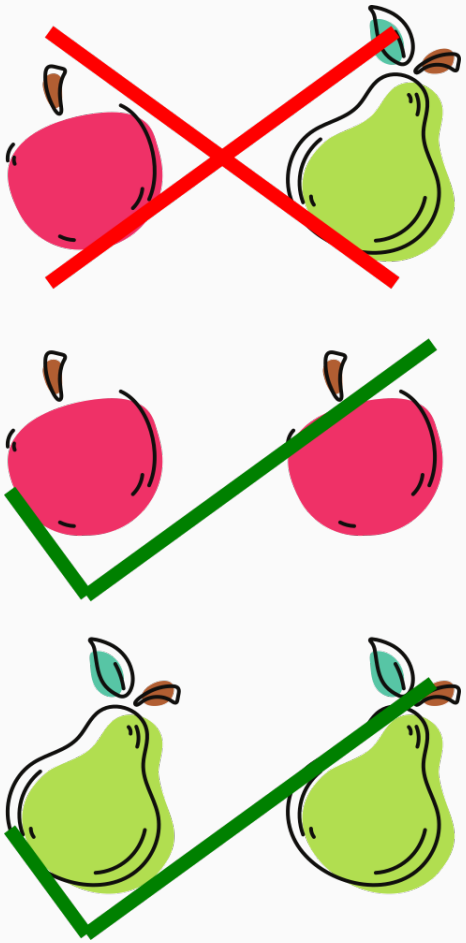

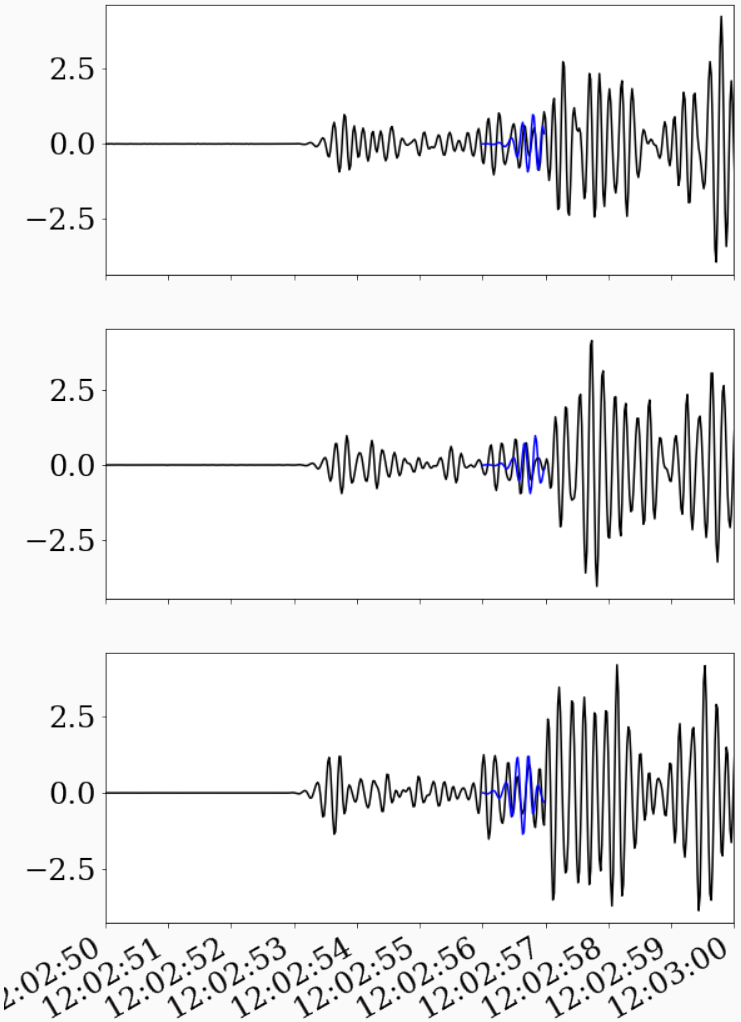

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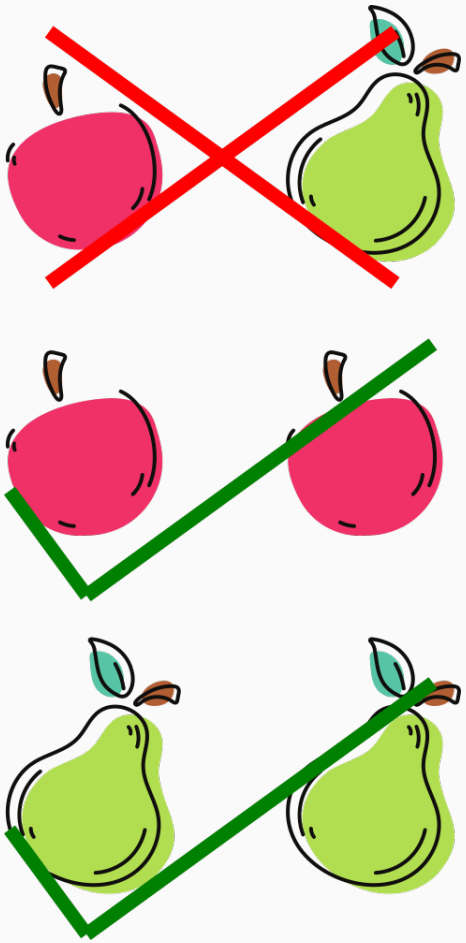

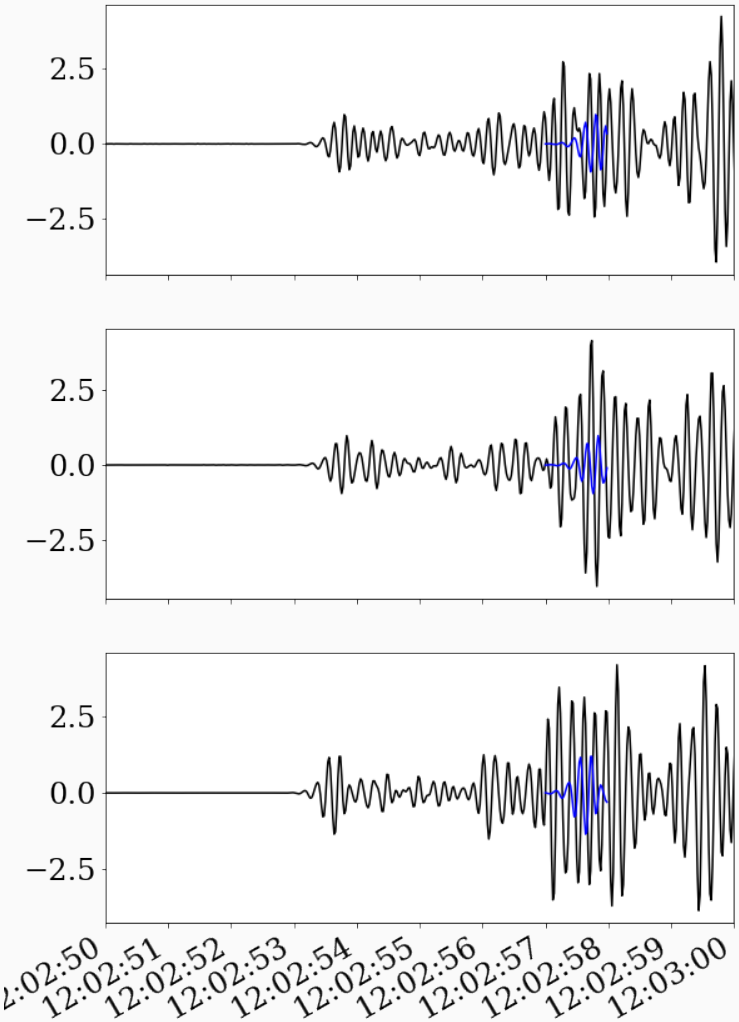

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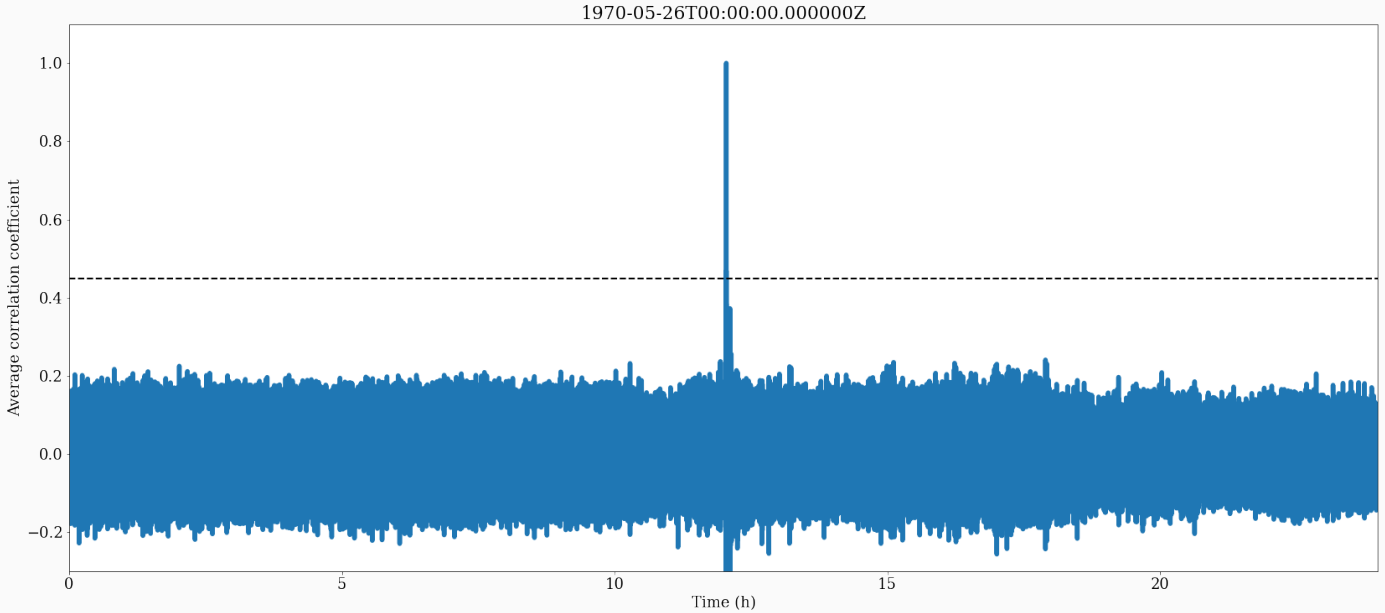
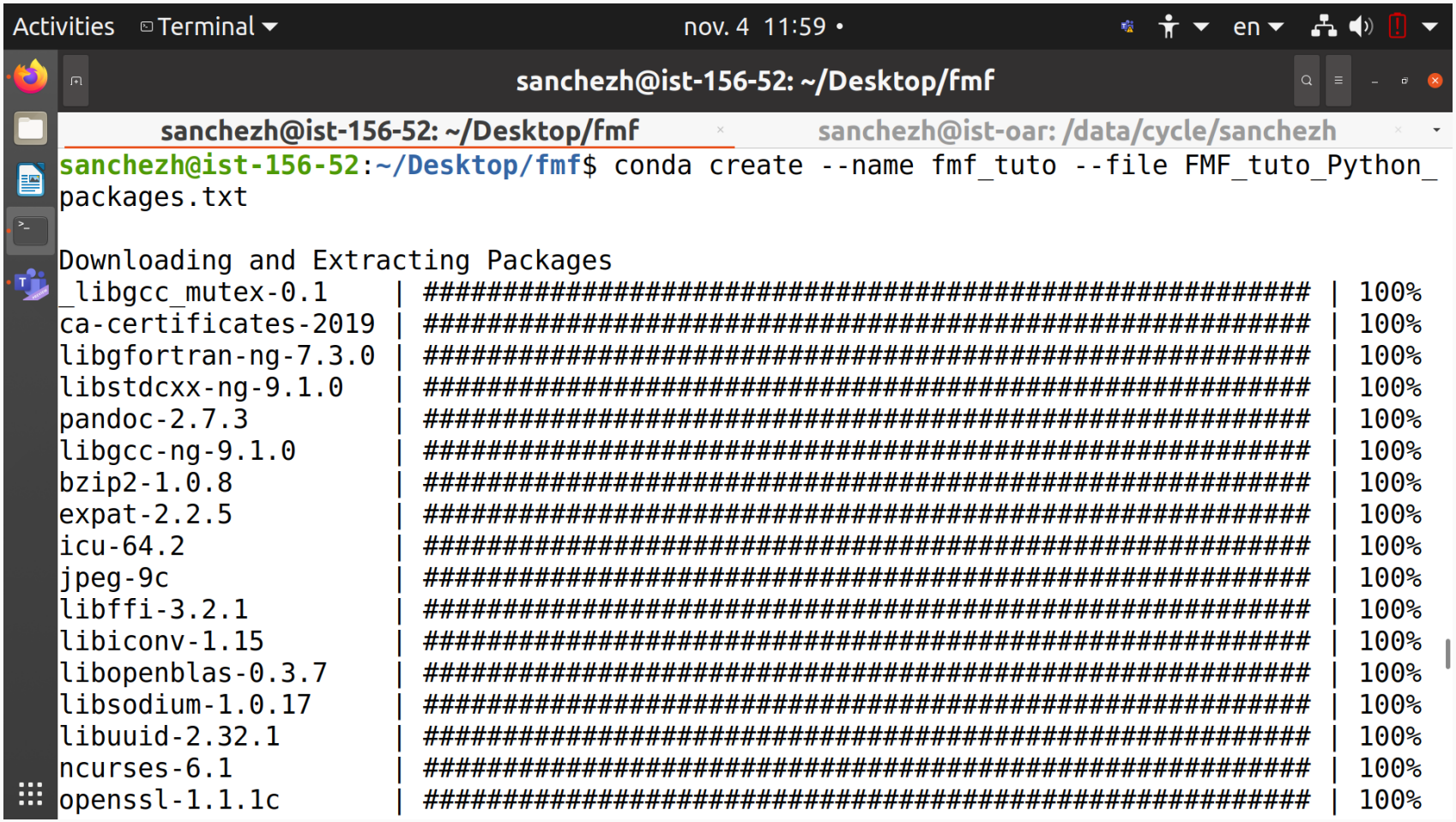
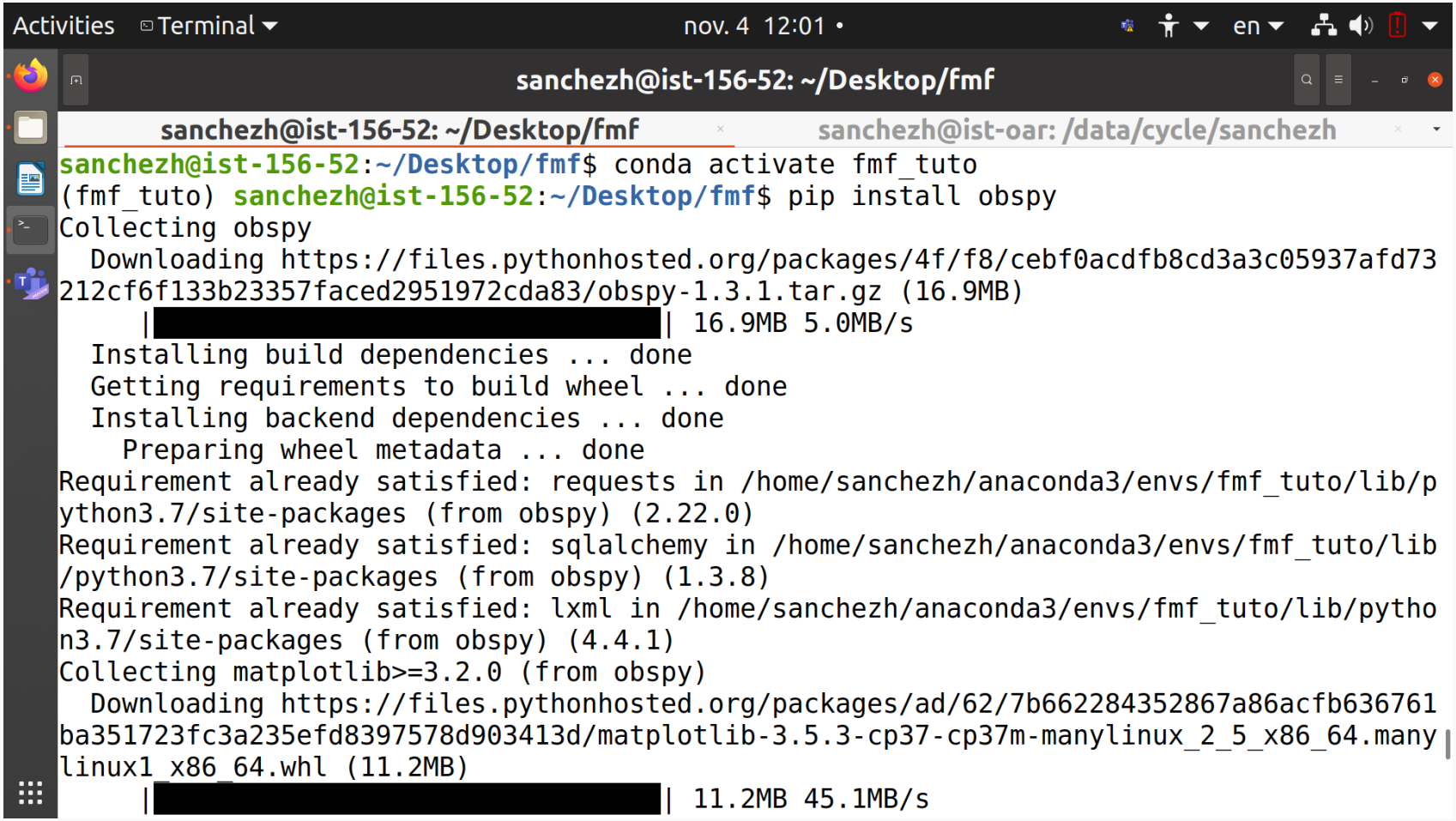


Instalación

Creación de ambiente de trabajo "fmf_tuto"



Instalación de “ObsPy”



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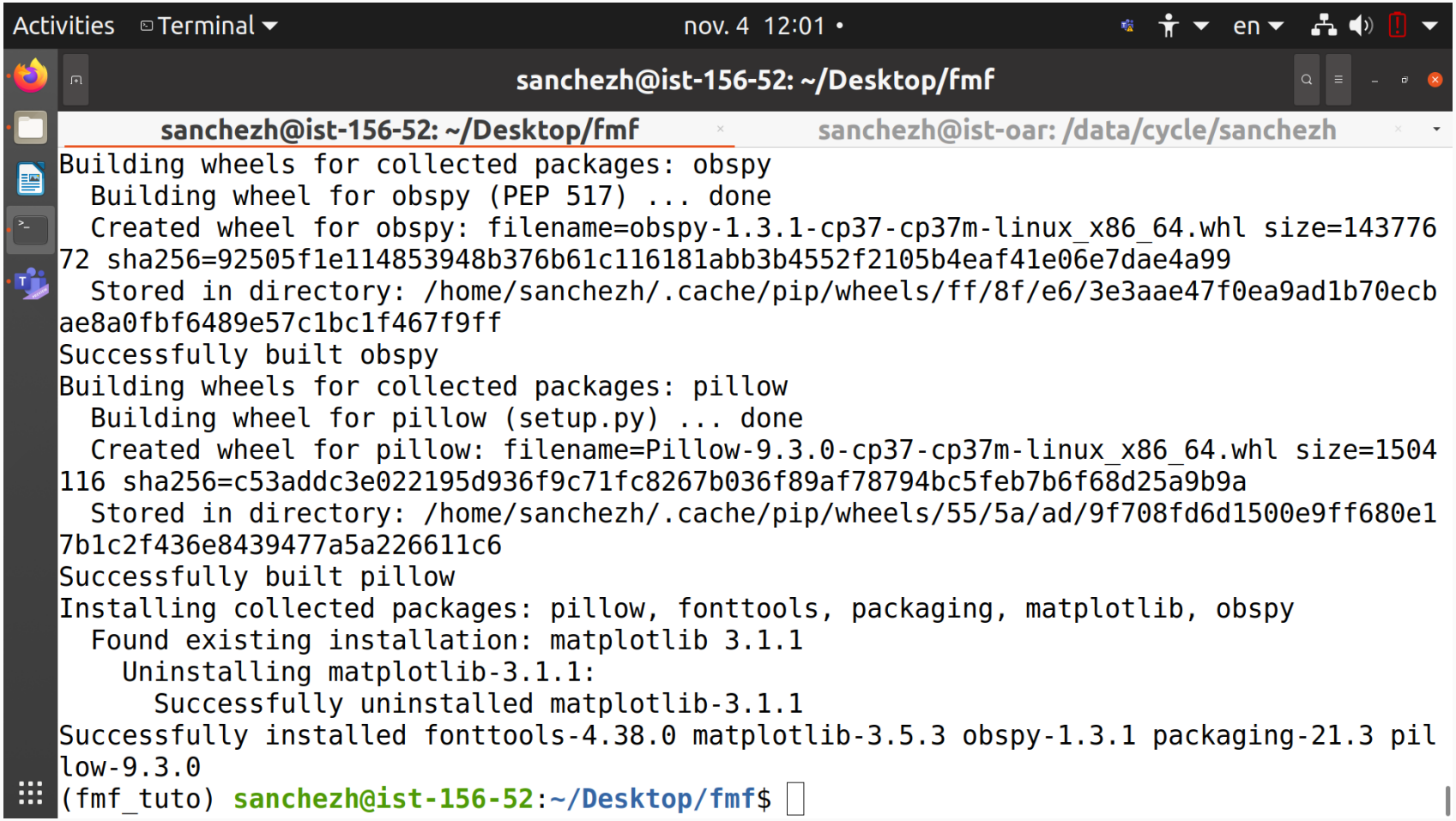
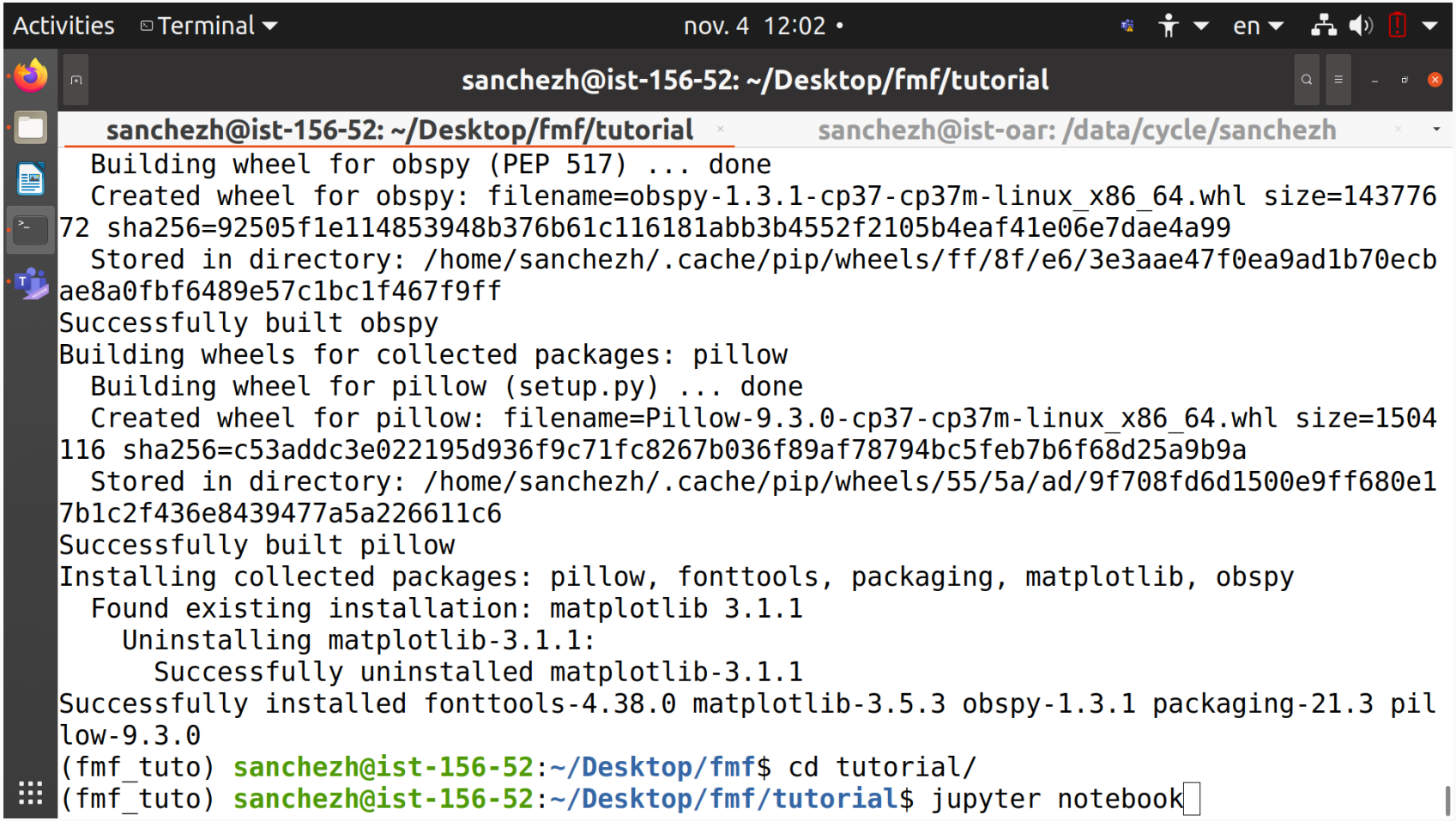


Abrir "jupyter notebook"



Ejemplo

Secuencia sísmica del sismo 2019 Mw4 Balsorano, Italia

ISTerre

The Imbricated Foreshock and Aftershock Activities of the Balsorano (Italy) M_w 4.4 Normal Fault Earthquake and Implications for Earthquake Initiation

Hugo Sánchez-Reyes*[1], David Essing[1], Eric Beaucé[2], and Piero Poli[1]

Abstract

Foreshocks in the form of microseismicity are among the most powerful tools to study the physical processes that occur before main earthquakes. However, their detection and precise characterization is still sparse, especially for small-to-moderate-size earthquakes (M_w<6). We present here a detailed foreshock analysis for the 7 November 2019, Balsorano, Italy, normal fault earthquake (M_w 4.4). To improve the detection of the microseismicity before and after the mainshock, we use six three-component broadband receivers at distances of less than 75 km from the targeted seismicity, through template matching. To improve the understanding of the physical mechanism(s) behind the earthquake initiation process, as well as other accompanying phenomena, we also detail the spatiotemporal evolution of the sequence associated with this medium-sized earthquake, using waveform clustering and hypocenter relocation. Clear differences between foreshocks and aftershocks are revealed by this analysis. Moreover, five

Cite this article as Sánche

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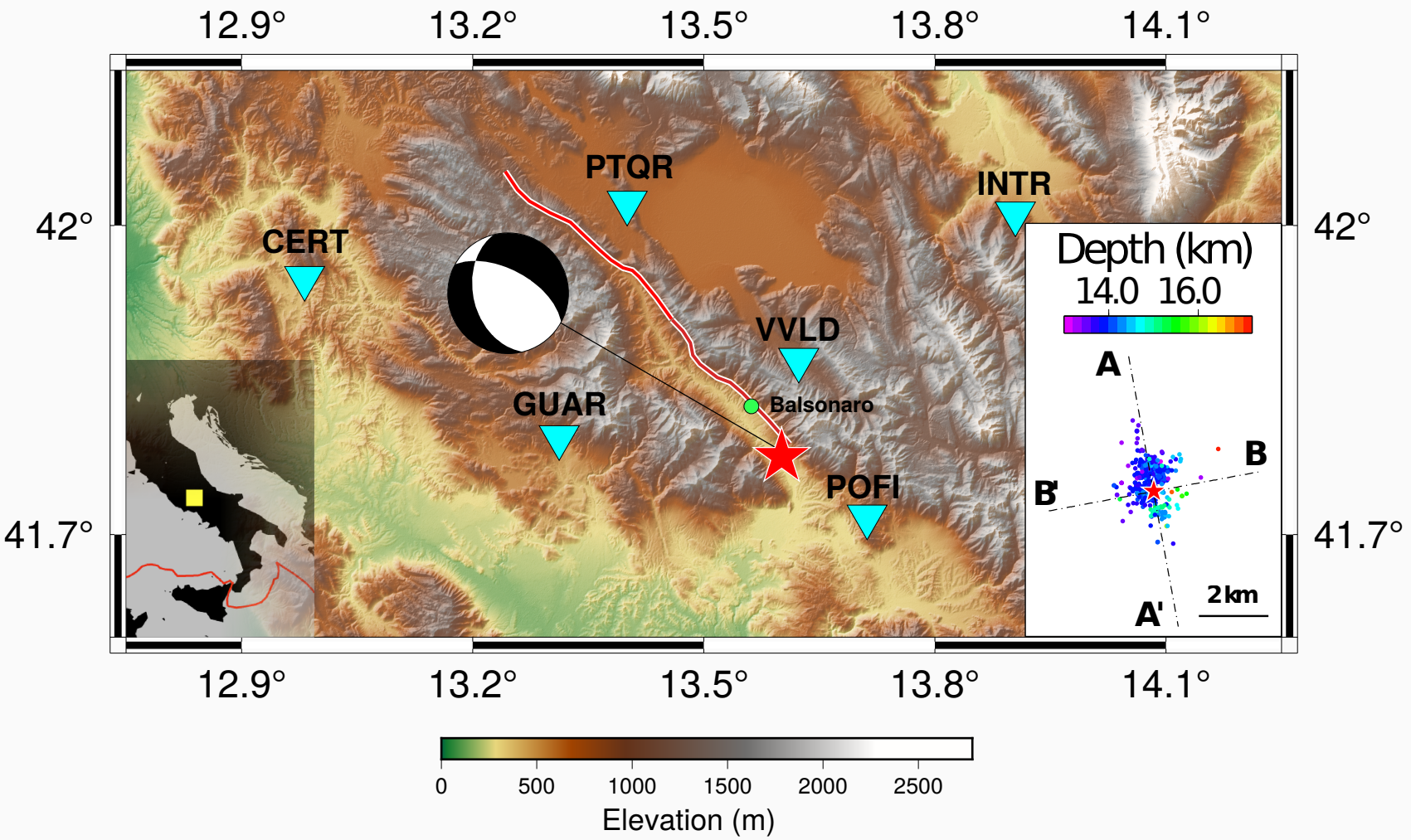

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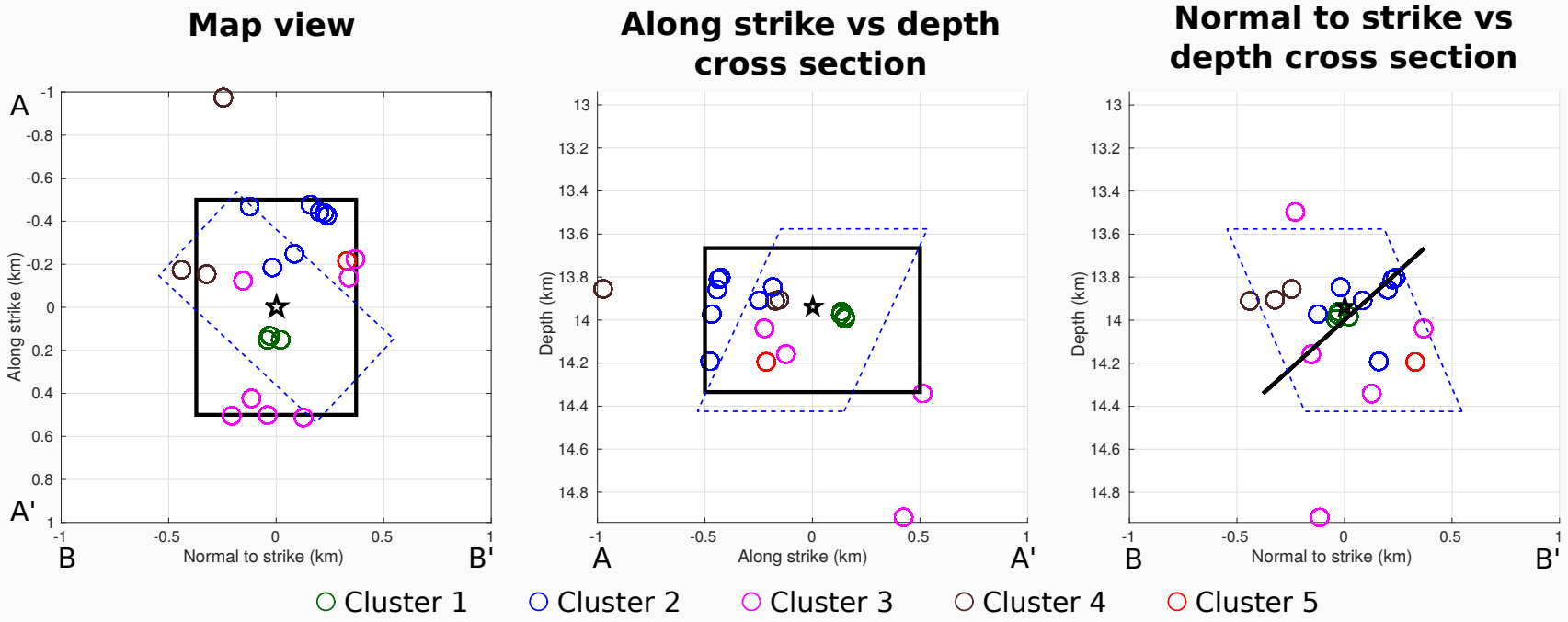

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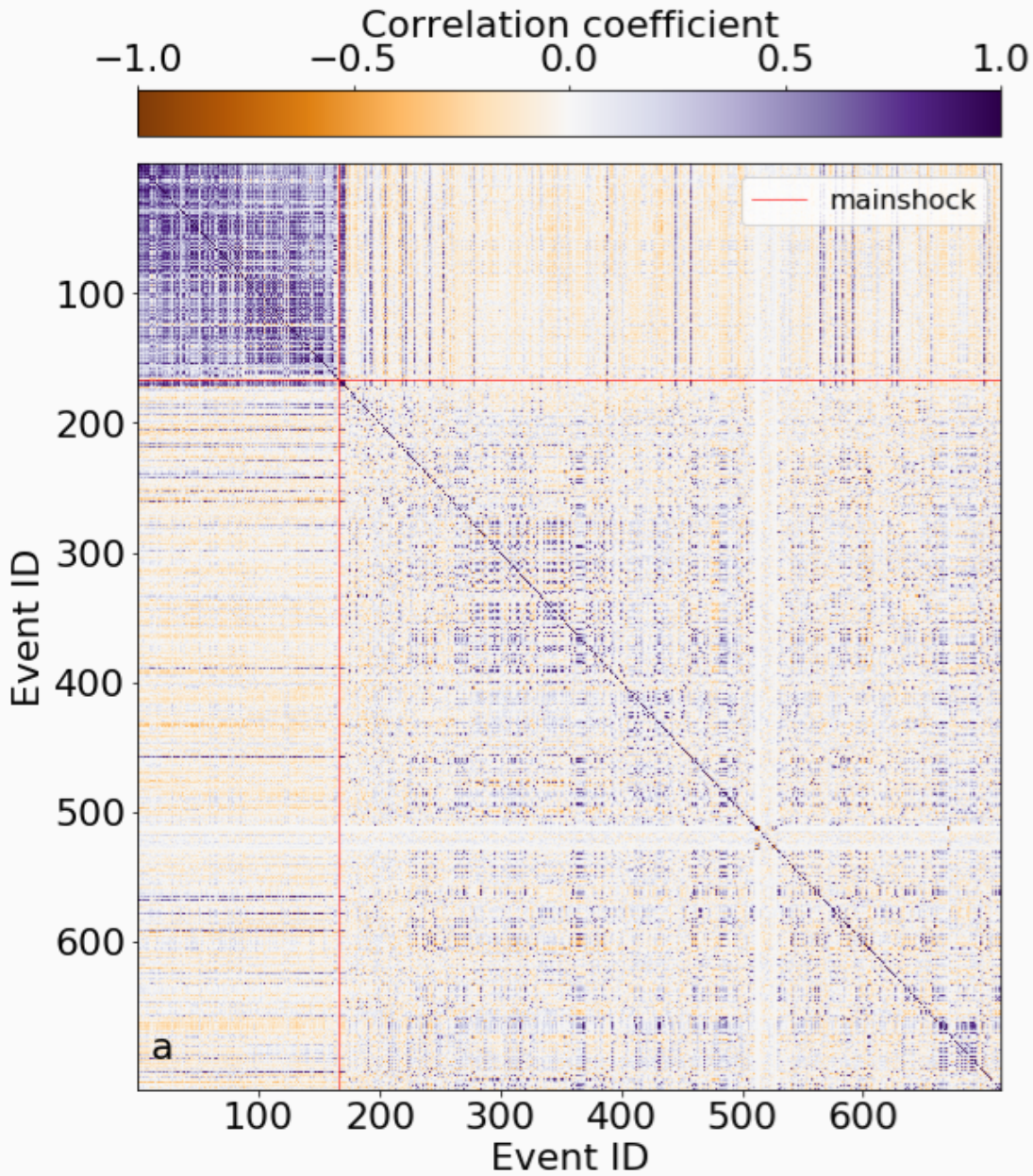

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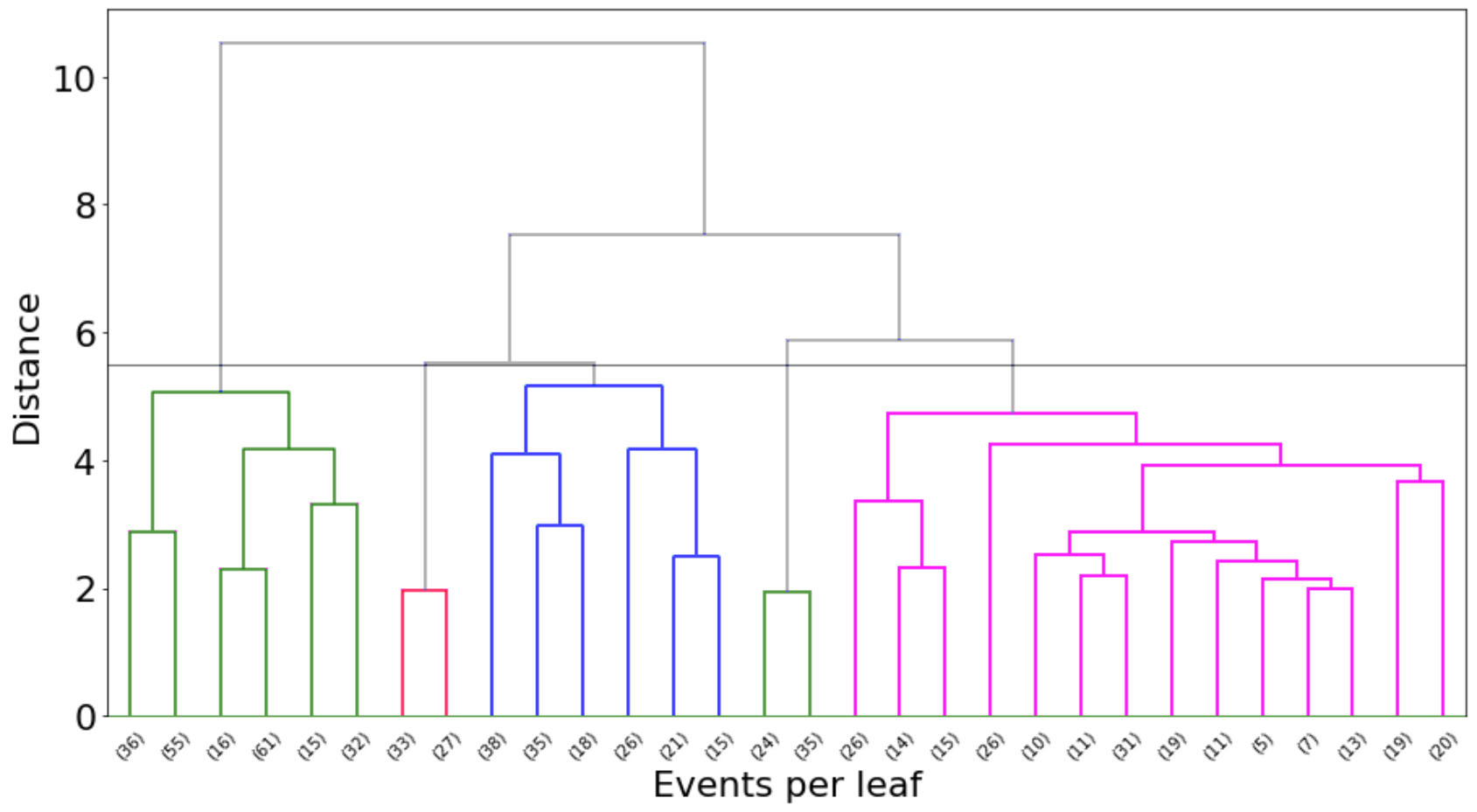

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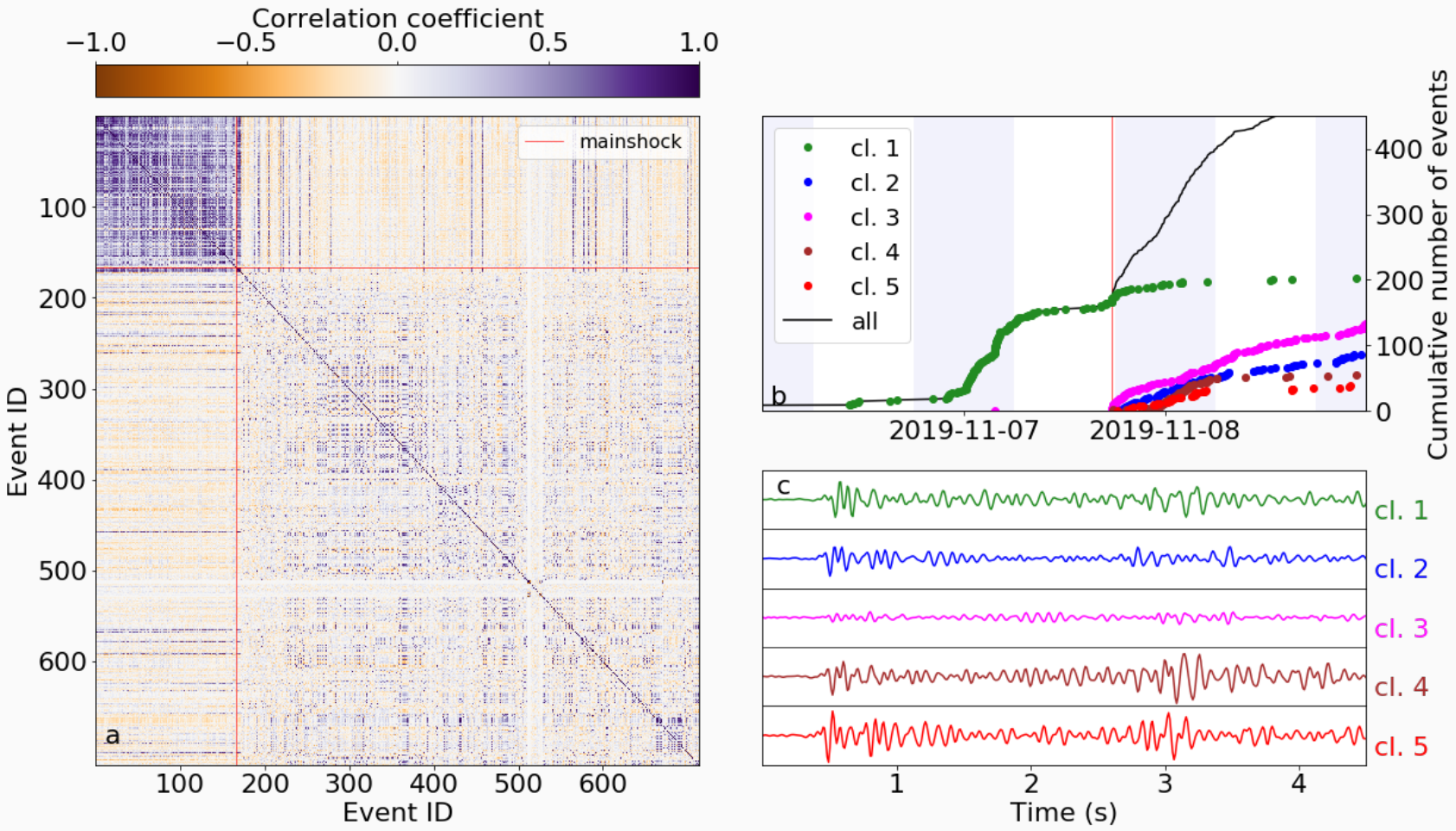

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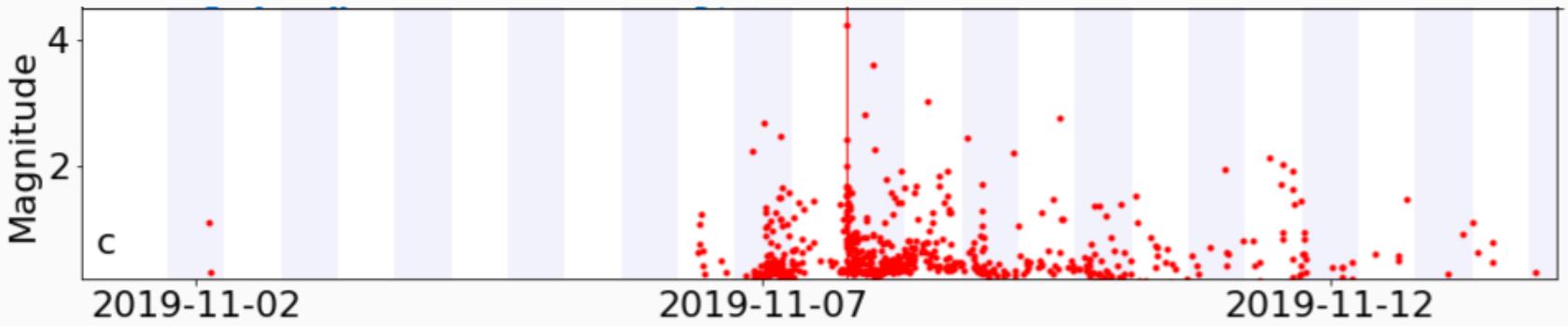

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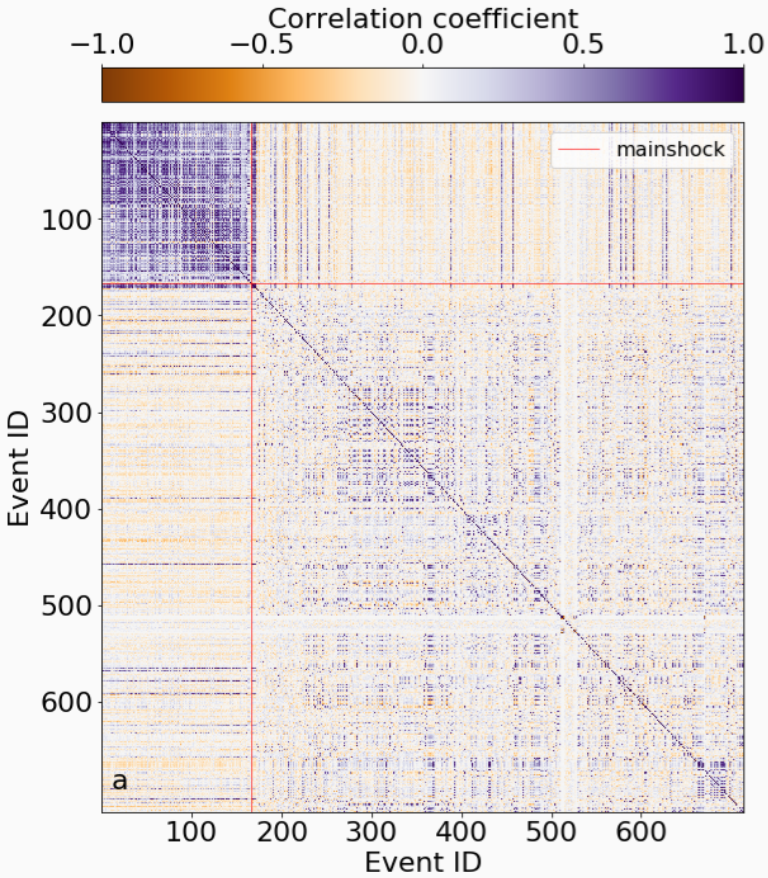
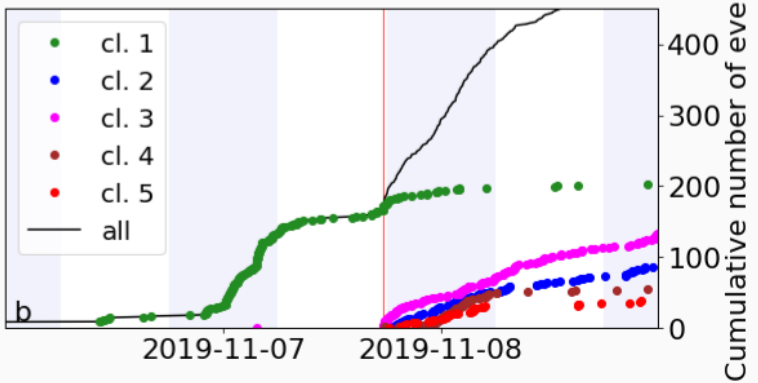
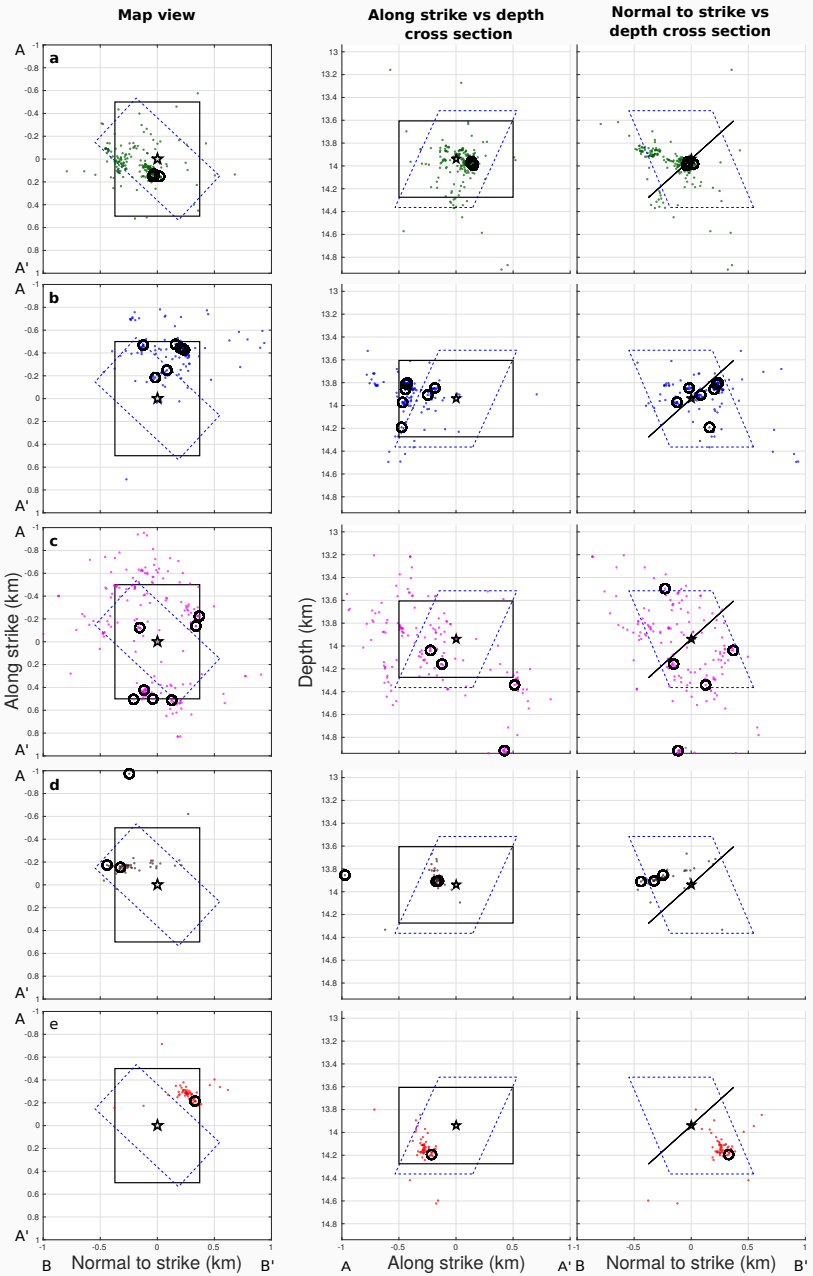
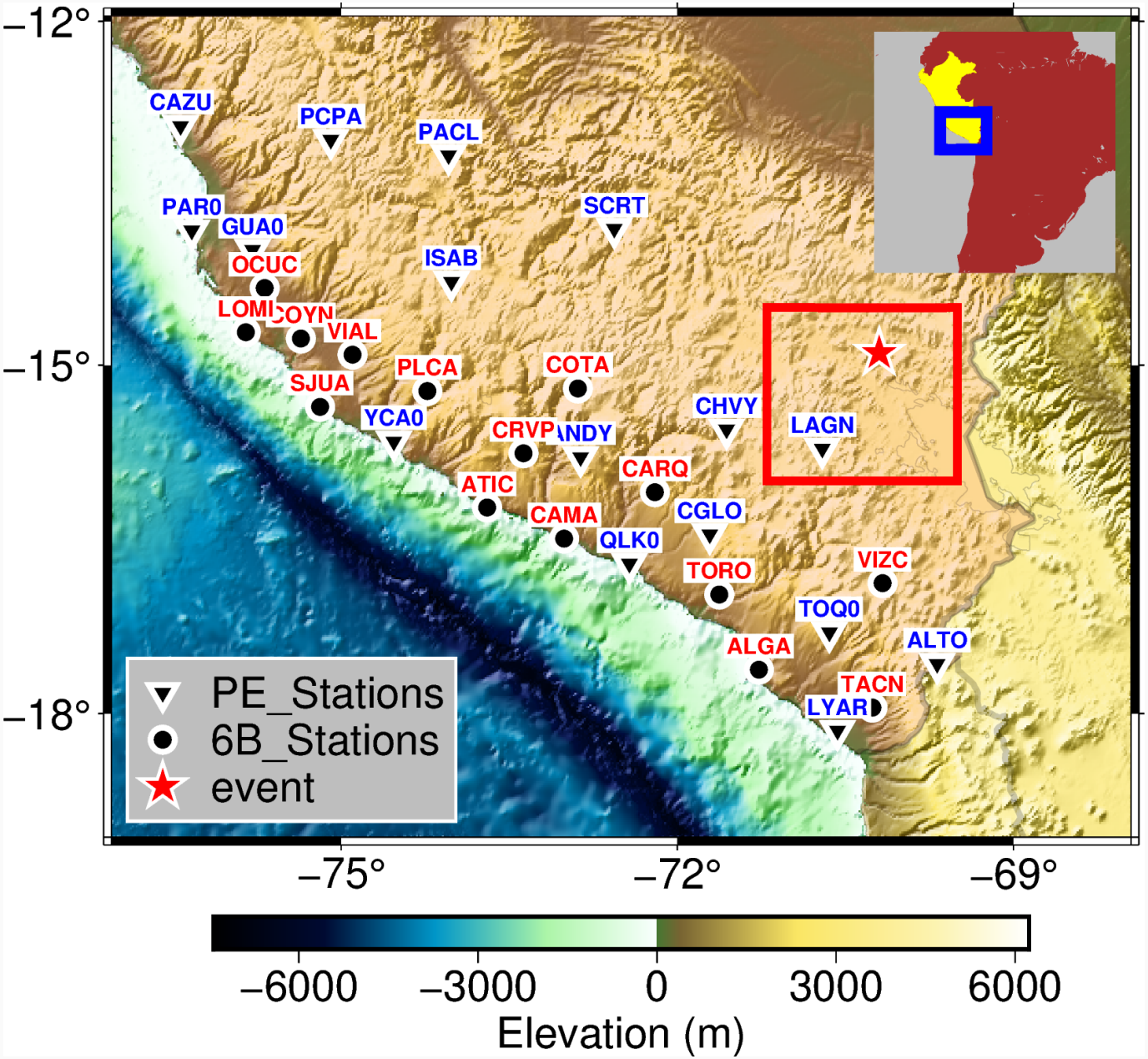






Ejercicio

Evento sísmico del 26 de Mayo del 2022, Mw7.2



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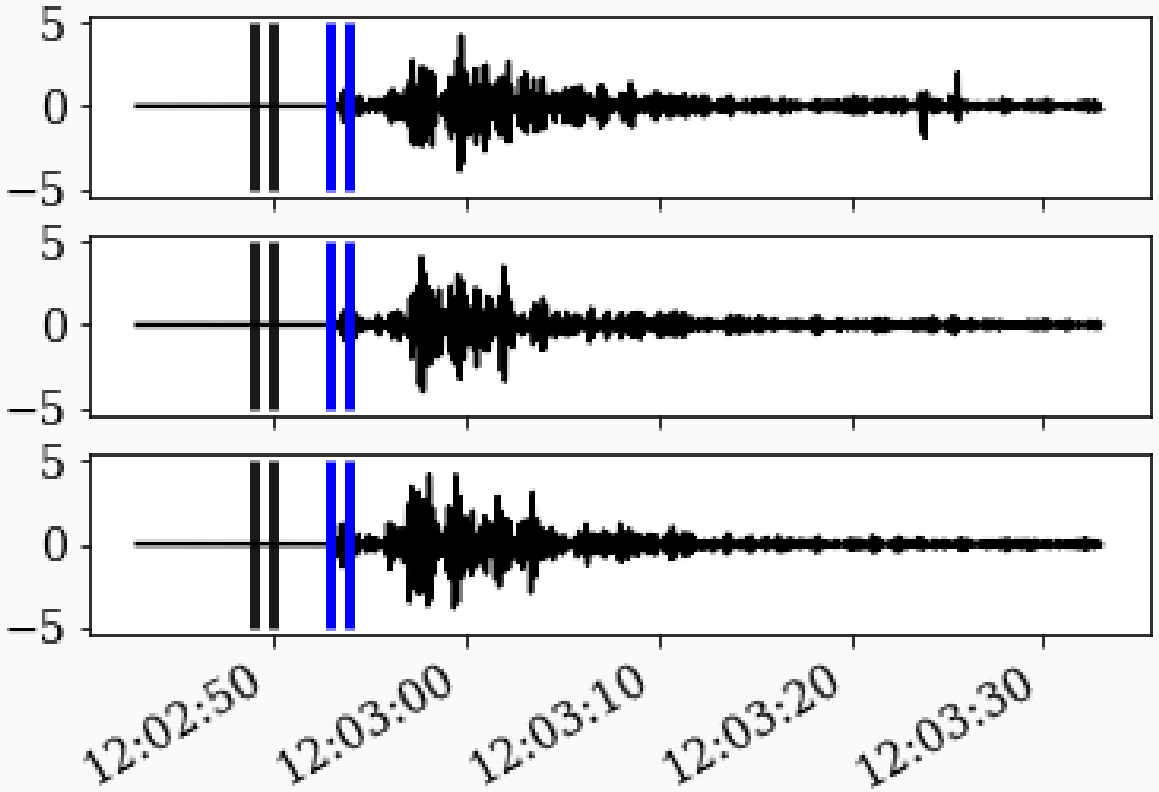

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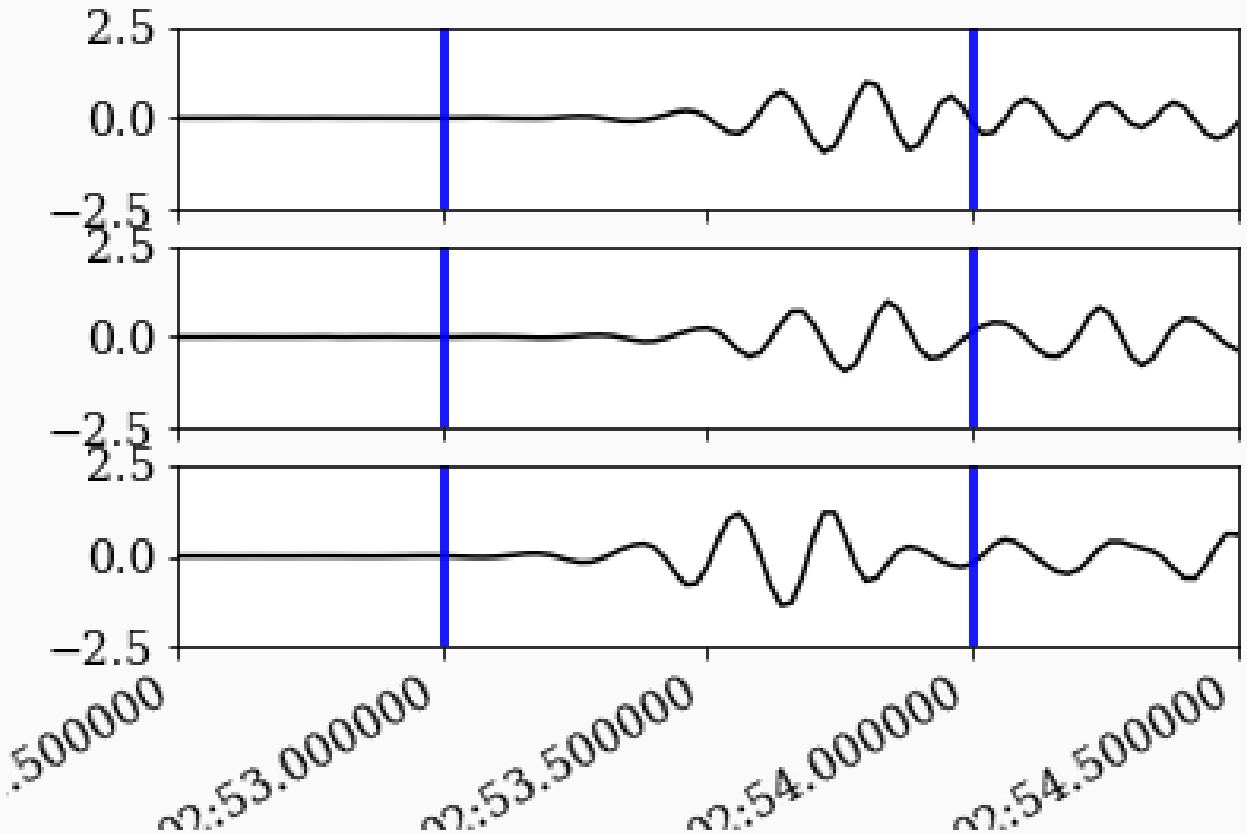

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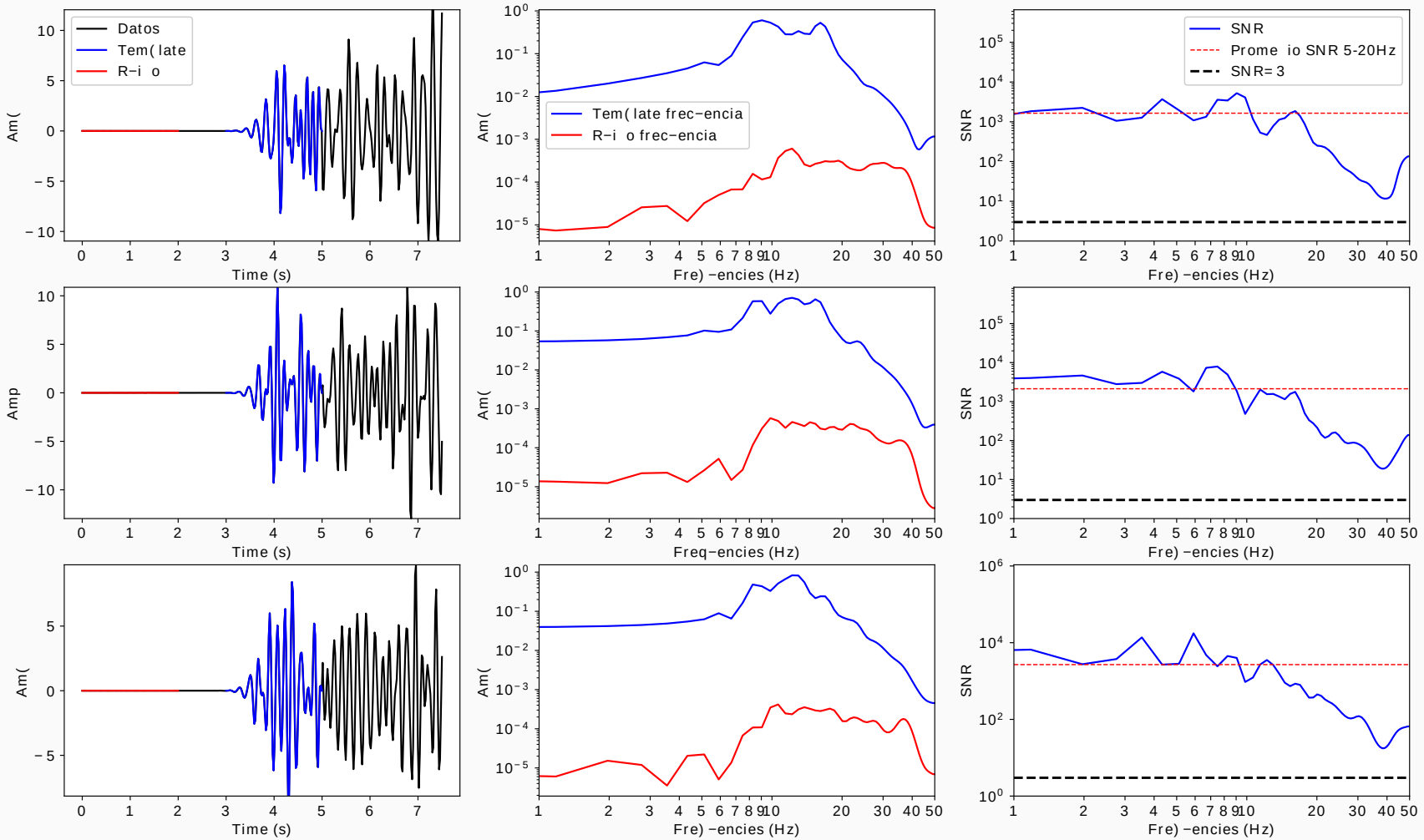

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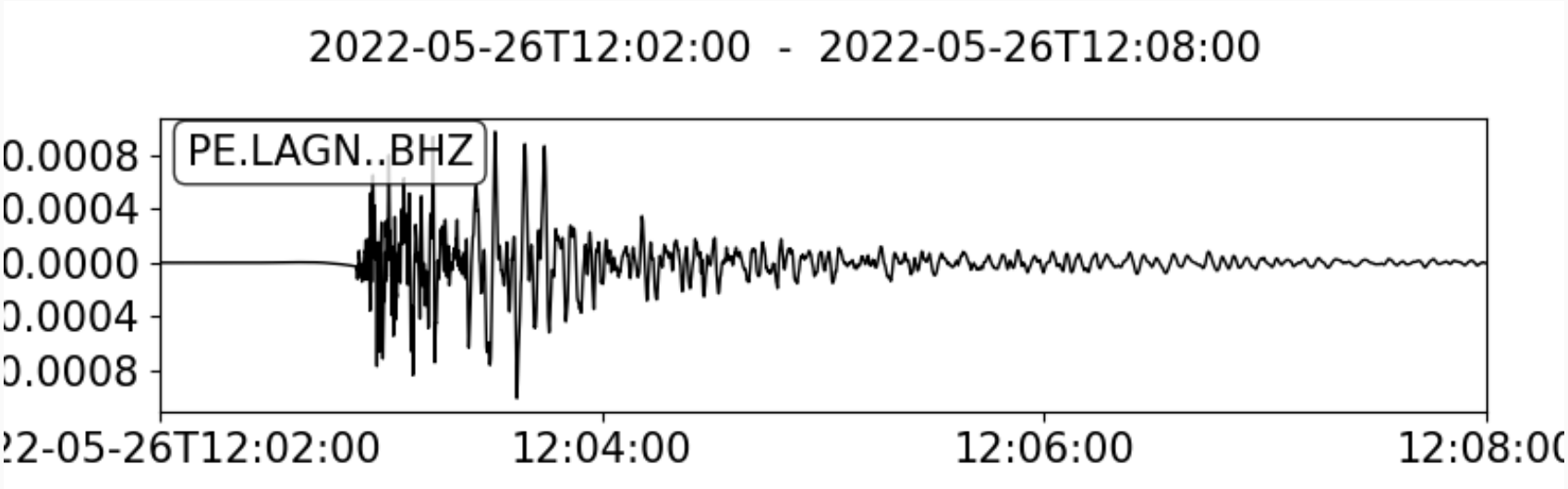

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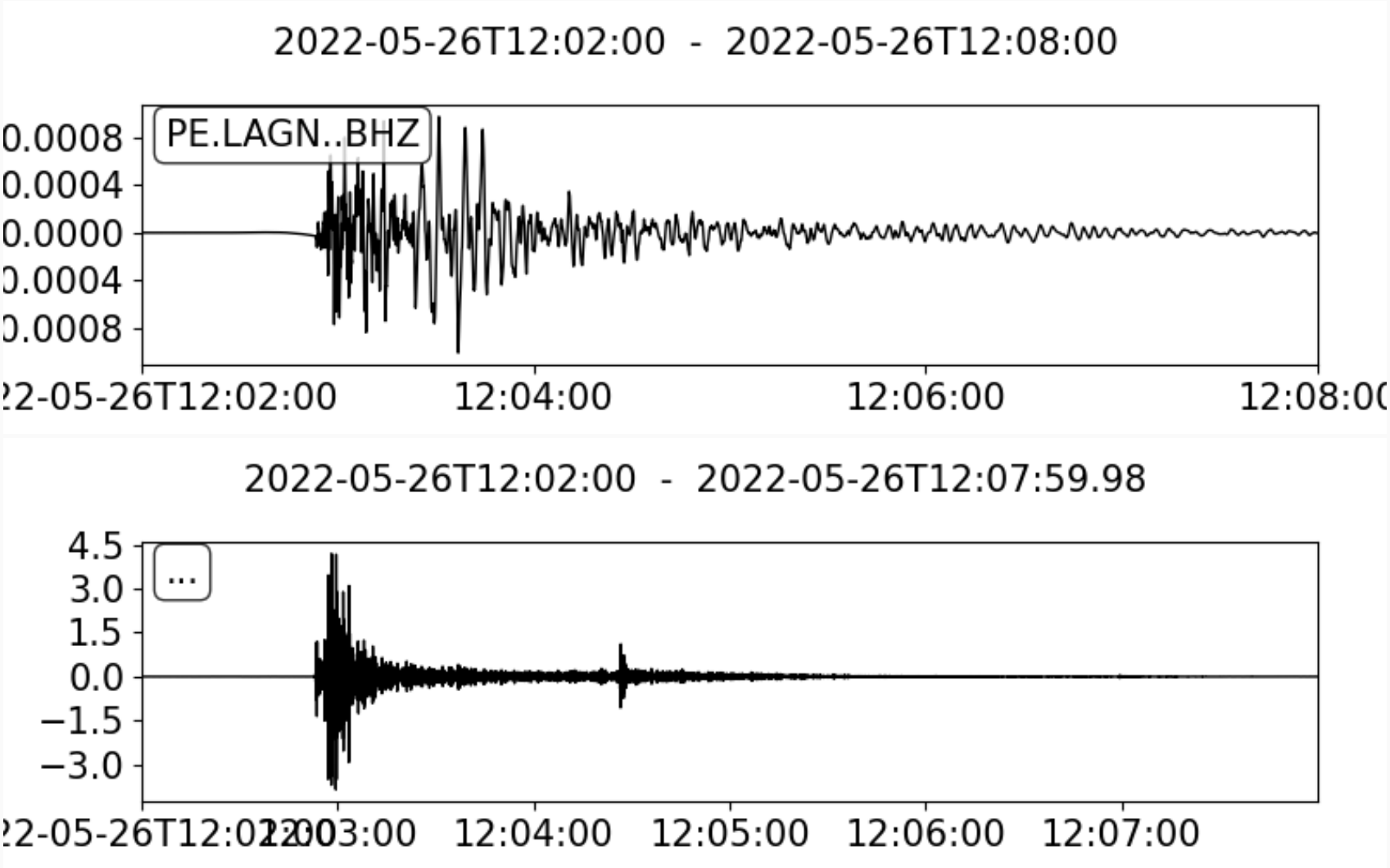

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