I found the “Scientific Significance”, “Scientific Quality” and “Presentation Quality”; Good.

The paper addresses relevant scientific and/or technical questions within the scope of NHESS, including new data and results which are presented in international standards.

The scientific methods and assumptions are valid and outlined clearly. The results are sufficient to support the interpretations and the conclusions. The title of the manuscript clearly and unambiguously reflect the paper’s contents. The abstract provides a concise, complete and unambiguous summary of the work done and the results obtained. The title and the abstract are pertinent and easy to understand for a wide and diversified audience. The size, quality and readability of the figures are adequate for the type and quantity of data presented. Authors give proper credit to previous related work, and they indicate their contribution, clearly. The overall presentation is well structured, clear and easy to understand by a wide and general audience. The length of the paper is quite adequate; not too long, not too short.

The fluency of the paper is good, in general. I noticed some ambiguity in some of the statements which can be edited quickly and easily. You can kindly find my comments/corrections/suggestions which will improve and strengthen the submitted paper, I believe. I congratulate the writers and wish them success in their future work. Last but not least understanding the background noise levels and seismic network standards is very important for studies in earthquake locations and early warning systems. I also want to thank the journal editor for evaluating this submission which will be quite beneficial and enlightening for the data users of this seismic network.

Seismic data quality affects the earthquake monitoring capabilities of a seismic network significantly. More than that near-source strong motion records have great advantages for real-time estimation of earthquake magnitude by providing unsaturated recordings of moderate to large earthquakes to get fast and robust earthquake location and magnitude estimates. So, the quality of data from individual stations has to be estimated, evaluated and investigated constantly and regularly. In this framework, I found the submitted work of Fornasari et al. very valuable and precious. The results of the paper will be quite beneficial for the researchers who will use the data of the Italian Strong Motion Network. It is a necessity for each network to have similar studies investigating noise levels. So, I appreciate and encourage the submitted work and effort. I found this study, to have such an effort for Italian strong motion data, quite valuable. I would be in favour of the publication of this paper.

1. Line 1: “. . . with more than 700 stations.” ITACA (*https* : *//itaca.mi.ingv.it/ItacaNet*$_3$2*//station/search*) refers to 836 stations for Italian Strong Motion Network, FDSN presents (https://www.fdsn.org/networks/detail/I 523 stations. May you please provide a specific number, with a source?
   We update the information related with the stations so that it is easier to understand the information related with stations. The RAN consists of more than 700 stations of which 532 provided continuous data in the time range that we are interested in. Relatively to the number of stations reported by ITACA, it also considers temporary networks and uninstalled stations. We have the exact current number of installed stations as we perform real-time monitoring using their data but since this number changes constantly due to the addition and removal of stations we prefer not to provide a specific number.

2. Line 9: “. . . we focused on relatively short periods (5 s), interested by in anthropic noises.” Line 9: You refer **“anthropic”** noise/activities/sources in Line 9, Line 24, Line 98, Line 119, Line 186, Figure 11 caption.
   You refer **“anthropogenic”** noises/sources in Line 5, Line 42, Line 75, Line 107, Line 165, Line 223
   You refer **“cultural”** noise in Line 15, Line 140, Line 159.
   If you are using these terms in the same meaning, please be more consistent in the usage. If you are referring to different meanings, please describe this.
   We decided to use the term "anthropogenic" to identify human-related noise, except in several occasions we decided to use "human" instead of "antropic".

3. Line 12: “. . . stations are located in densely populated areas such as the center of Naples, . . . ”. ✓

4. Line 14: “noise levels dropped to 6.5 decibels in the daytime and 12.5 decibels on weekdays. ✓

5. Line 20: “On the other hand, noise can be used for the characterization of layers of the earth (Shapiro et al., 2005), moon (Larose et al., 2005) or Mars (Schimmel at al., 2021). ”
   Please refer also to those additional sources:
   https://agupubs.onlinelibrary.wiley.com/doi/10.1029/2005GL023518 ✓
   https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1029/2021EA001755 ✓

6. Line 21-26: Please cite also (Stutzmann et al., 2000).
   (https://pubs.geoscienceworld.org/ssa/bssa/article/90/3/690/102808/GEOSCOPE-Station-NoiseLevels) ✓

7. Line 48: “ that ~~has~~ have been carried out for more than 25 years.”
   We rephrased the sentence.

8. Line 64-Line67: Please cite DOI’s, for these networks properly:
   Italian Strong Motion Network - 10.7914/SN/IT - ✓
   Friuli Venezia Giulia Accelerometric Network - 10.7914/SN/RF ✓

Irpinia Seismic Network - ?
We cited the paper dedicated to ISNet (https://doi.org/10.1785/gssrl.78.6.622) as ISNET do not have any registered DOI.

9. Line 75: Regarding your commentabout the change of the stations on Line 51-Line52; I may suggest you to perform 2022-year noise as a whole, in order to present a full understanding of the background noise for the mentioned networks. Then, to compare the results with the Covid-19 lockdown period provide more meaningful and stable results.
Currently, we perform our real-time monitoring only by using the servers at the department of civil protection without holding the seismic waveforms in our servers in Trieste due to a problem in our hard drives. Because of that, we are not able to do further analysis with the data later than April 2022. If we solve the space problem in our servers, we will add the rest of the 2022, if not, unfortunately, we cannot do it.

10. Line 112: "Numerous stations exceed the levels defined by Cauzzi and Clinton (2013)." May you please comment/discuss on the possible reasons of this situation.
In Table S1, number of stations that exceed the AHNM are provided. In periods between 0.04 second to 2 second there are numerous stations exceeds the AHNM. In Figure 1, we provided the noise sources and between 0.04 to 2 seconds culture noises are dominant in the seismic traces. Since the idea behind the integrated RAN network is to monitor the ground motions during an earthquake in the urban areas, many of our stations are positioned in the settlements. This may amplify the cultural noises and considerable number of stations exceed the upper noise limits.

11. Line 126: Diurnal and seasonal variations of seismic noise is well documented many years before 2021. You should also check (Stutzmann et al., 2000; McNamara and Buland, 2004), and please cite (Stutzmann et al., 2000), accordingly.
(https://pubs.geoscienceworld.org/ssa/bssa/article/90/3/690/102808/GEOSCOPE-Station-NoiseLevels) ✓

12. Figure 1: Please mention what is "EM noise" and insert Cauzzi et al. (2014) to the References.
We change the caption to explicitly address the electromagnetic (previously EM) noise and also fixed the typo in Cauzzi and Clinton (2013).

13. Figure 4: Does this caption refers to Supplement S1 or Table 4? Please, edit given period band in the caption accordingly. " Median vertical component noise maps in one-third octave bands around a-g) 0.1 s, 0.25 s, 0.5 s, 1 s, 2 s, 5 s, 16 s, 32 s, and 80.6 s."
In Figure 4, the wrong figure was presented by mistake. We changed the figure and it can be seen in the updated version of the paper. We also put the same figure below

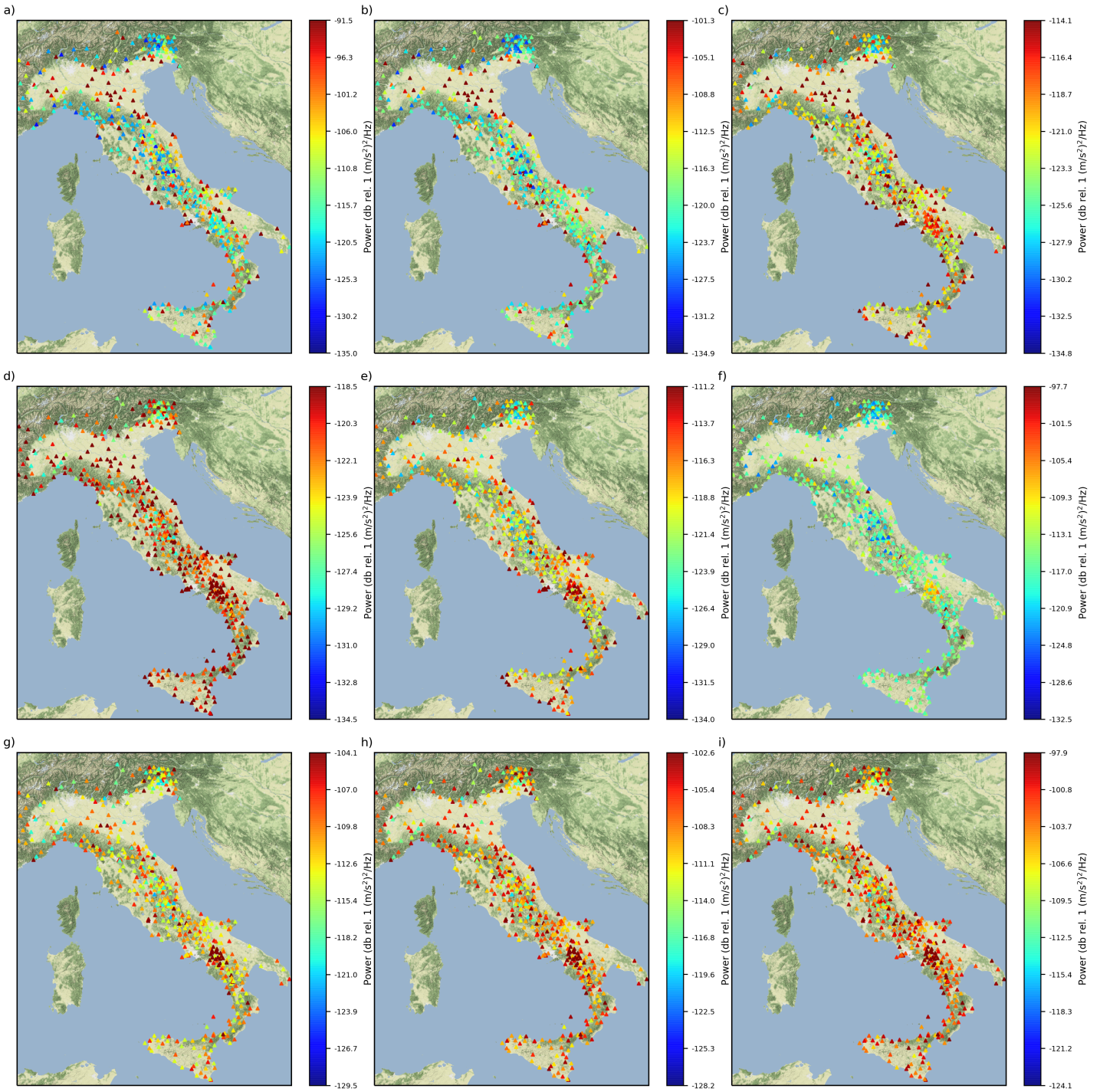

Figure 1: Median vertical component noise maps in one-third octave bands around a-g) 0.1 s, 0.25 s, 0.5 s, 1 s, 2 s, 5 s, 16 s, 32 s, and 80.6 s. Upper and lower limits of the color bar are defined by the model developed by Cauzzi and Clinton (2013). Vertical components are presented in the following figures and Electronic Supplement. Background noise levels of all calculated periods can be found in Figure S1.