

Supporting Information for

“Significance of V_P/V_S ratio in locating earthquakes of a long-duration swarm in the western coast of India”

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1. Figure S1 to S4

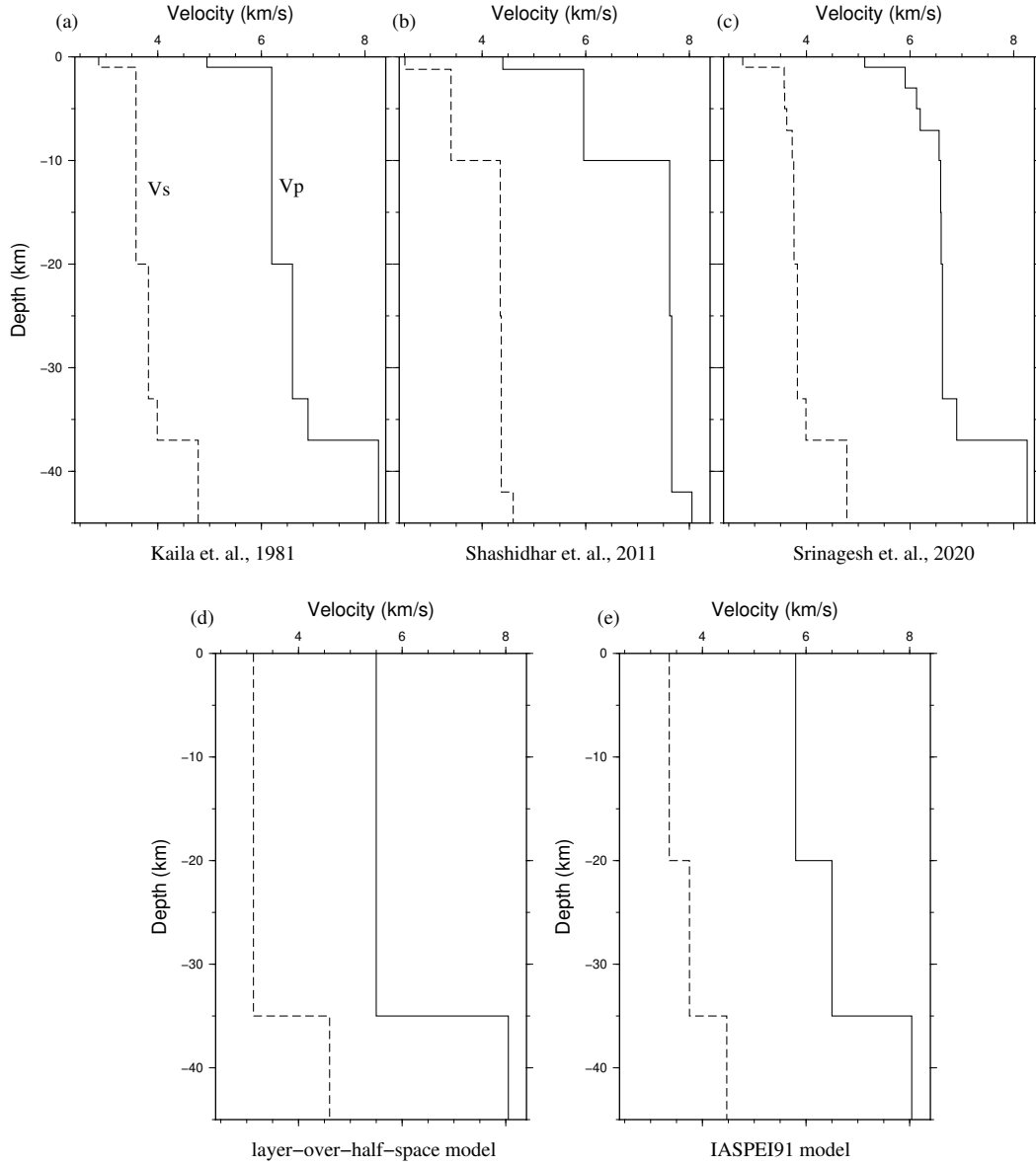


Figure S1. (a)-(c) Plot of the 1D velocity models obtained from previous studies. (d) Hypothetical 1D velocity model of a layer over mantle half-space. (e) Plot of the IASPEI91 velocity model. The solid line represents the P-wave velocity and the dashed line represents the S-wave velocity structure.

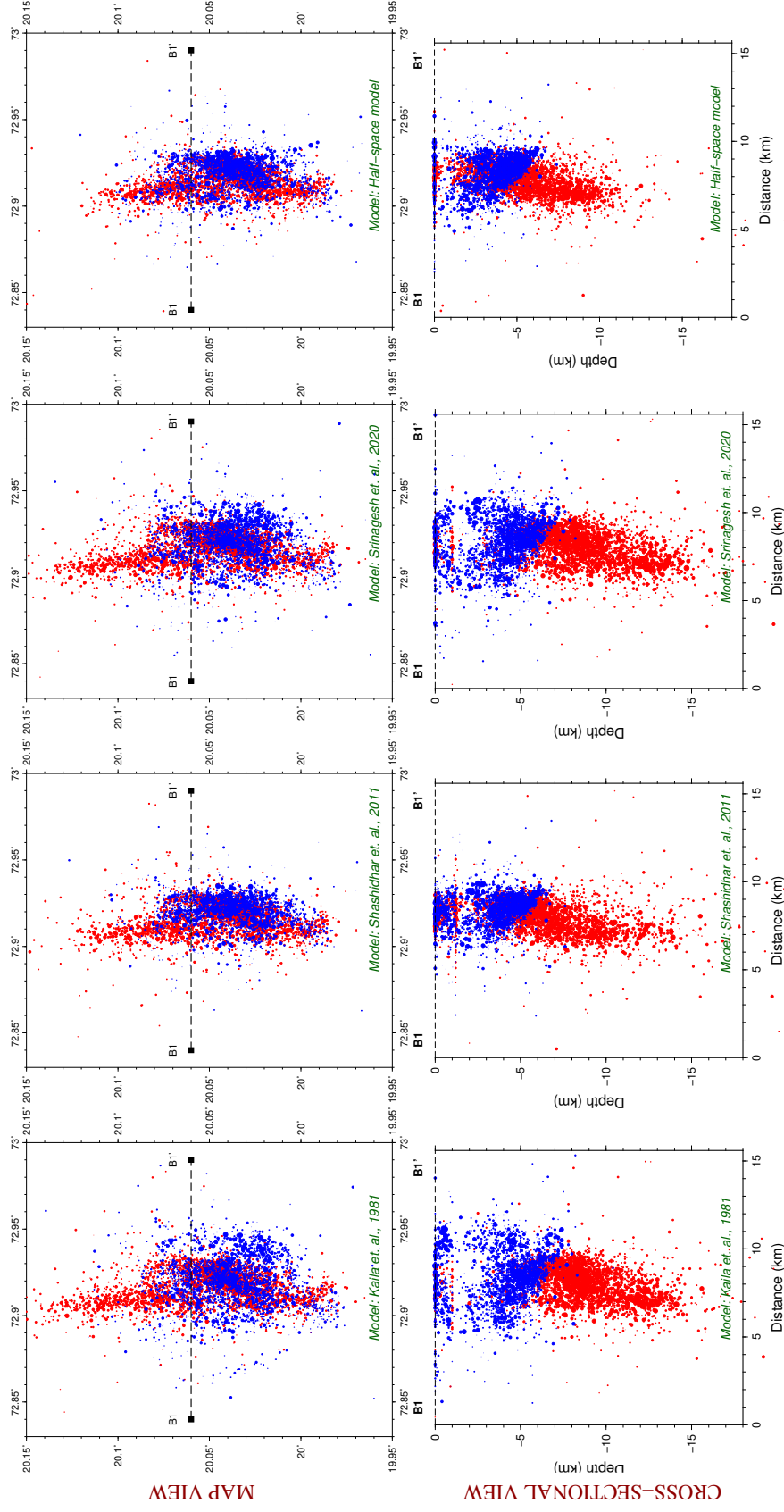


Figure S2. Distribution of all events recorded between February and May 2019 in CSIR-NGRI (red circles) and NCS networks (blue circles), relocated using different velocity models. The seismicity in the map view is shown on the top panels whereas seismicity projected in cross-sections along the profile B1-B1' are shown in the bottom panels.

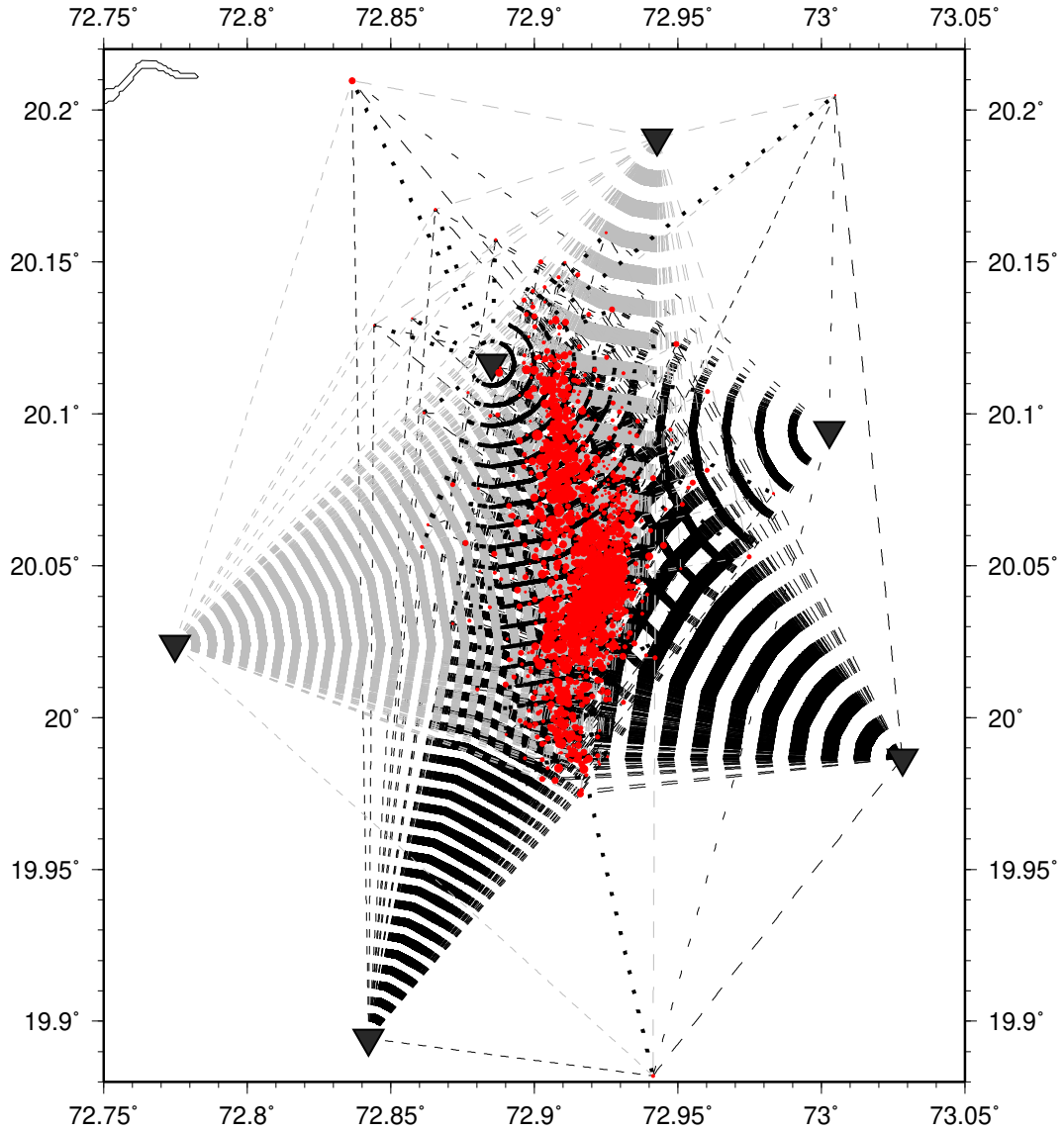


Figure S3. Raypaths from the earthquakes in the western cluster to different stations are plotted using dashed lines. The rays from different stations are distinguished by the gaping between dashes and colour (black or grey). The stations are indicated by inverted black triangles and seismicity is shown as red circles. It can be seen that the overlap of rays from all stations is confined to a small area close to the epicenters.

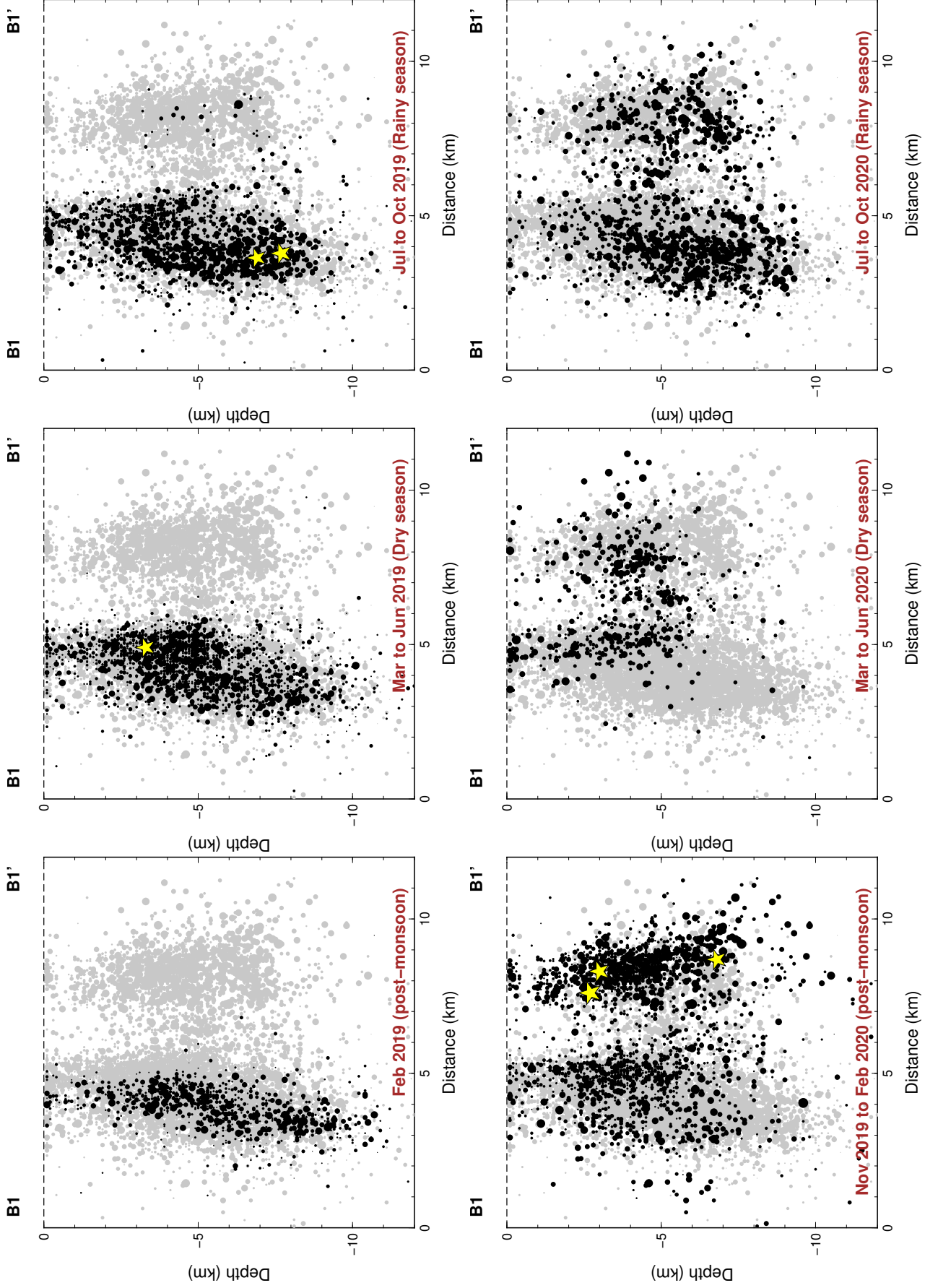


Figure S4. The plot of the best located seismicity ($\Delta x \leq 1.5$ km and $\Delta z \leq 1.5$ km) segregated by seasons – rainy season (July to October), post-monsoon (November to February) and dry season (March to June) in a cross-section along the profile B1-B1'. The seismicity at each season is shown by black dots, whereas gray dots represent the complete seismicity in the entire 2-year duration. The largest earthquakes ($M_L \geq 4.0$) are shown as yellow stars.