

# Crustal Structure of the Intra-cratonic Chhattisgarh Basin and the adjacent Eastern Ghats Mobile Belt, East-Central India

Maitreyi<sup>1</sup>, Arun Singh<sup>1</sup> and Chandrani Singh<sup>1</sup>

<sup>1</sup>Department of Geology and Geophysics, Indian Institute of Technology Kharagpur, West Bengal, India

## Supplementary Material:

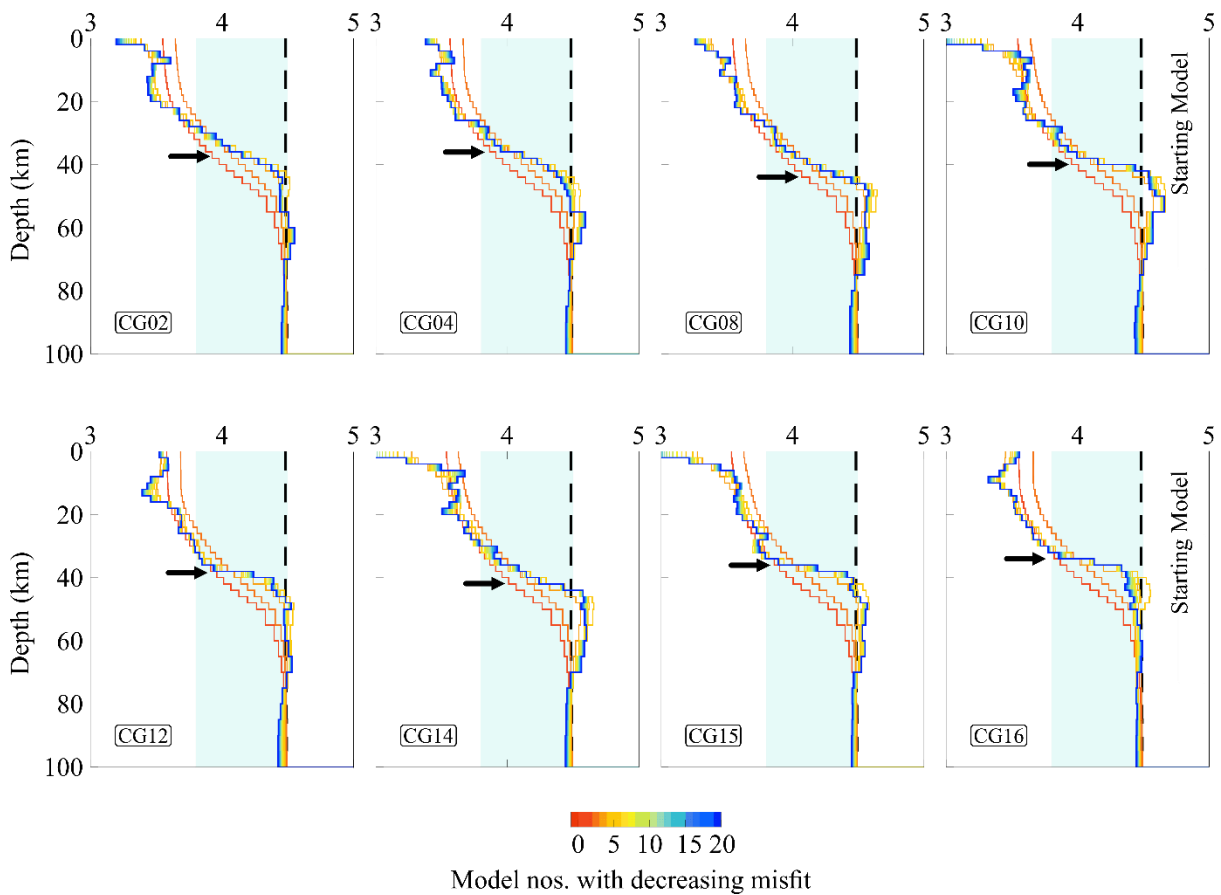


Fig: 1-D shear-wave velocity models derived from the joint inversion of receiver functions (RFs) and surface wave dispersion data. Horizontal black arrows indicate the average Moho depth at each station. Black dashed lines denote the initial starting models, while blue solid lines represent the final inverted models. The colour scale illustrates the iterative progression of the velocity model.

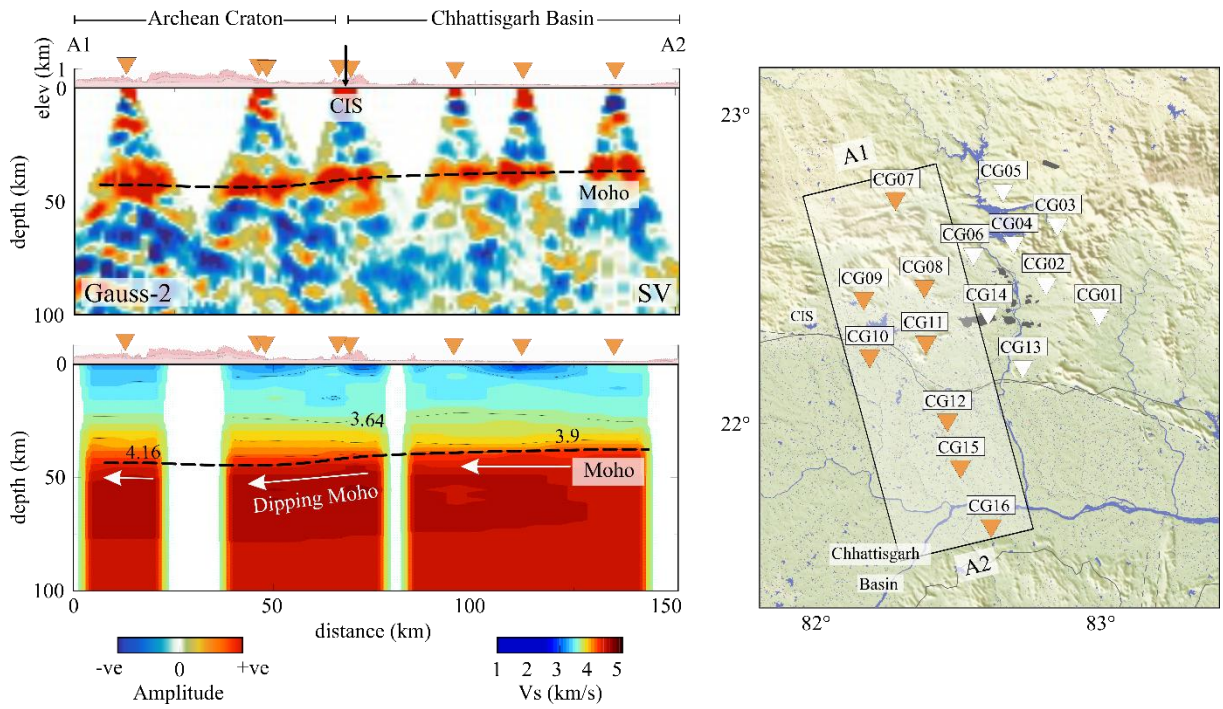
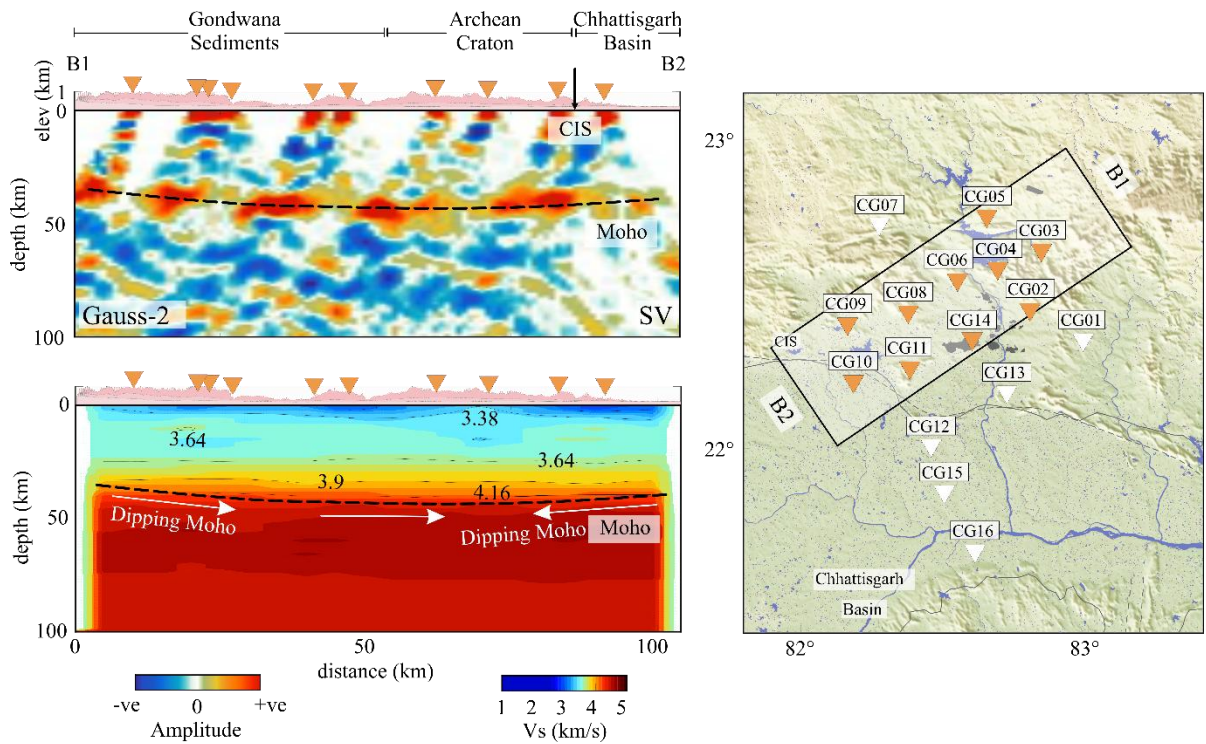


Fig: Common Conversion Point (CCP) stacks of SV receiver functions (RFs) for Gauss-2 (top), along the A1–A2 profile oriented NW–SE across the Chhattisgarh seismic network. Positive and negative phase conversions are shown in red and blue, respectively. The orange inverted triangles (right) denote stations included in the CCP analysis, while white inverted triangles represent excluded stations. The lower panel (bottom) shows the velocity model derived from the joint inversion of RFs and surface wave dispersion data. Consistent positive amplitudes at greater depths, along with the black dashed lines, delineate lateral variations in Moho geometry. The inverted black arrow marks the position of the Central Indian Shear (CIS).



*Fig: Common Conversion Point (CCP) stacks of SV receiver functions (RFs) for Gauss-2 (top), along the B1–B2 profile oriented NE–SW across the Chhattisgarh seismic network. Positive and negative phase conversions are shown in red and blue, respectively. The orange inverted triangles (right) mark the stations included in the CCP analysis, while white inverted triangles denote excluded stations. The velocity model (bottom) is obtained through joint inversion of RFs and surface wave dispersion measurements. Consistent positive amplitudes at greater depths, together with the black dashed lines, depict lateral variations in Moho geometry. The inverted black arrow marks the position of the Central Indian Shear (CIS).*