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A study over indirect solid earth tide effect on the GRACE observables

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In this contribution, the indirect solid earth tide effect on the GRACE observables, namely, (i) kinetic energy at the position of GRACE-1 and GRACE-2 satellites, i.e., summation of the gravitational potential and the unknown energy constant, (ii) gravitational acceleration at the position of the satellites, (iii) kinetic energy difference between the satellites, i.e., summation of the gravitational potential difference and energy constant difference, (iv) Line Of Sight (LOS) gravitational difference, and (v) gradiometry observations, is studied based on the global estimates of the Love numbers. The derived results are presented in terms of the maps of the aforementioned effect on GRACE observables.