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Postseismic stress diffusion associated to Sumatra earthquake

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The giant megathrust occurred on 26th December 2004 off the west coast of northern Sumatra perturbated the stress field configuration over a wide area surrounding the event source. By means of a viscoelastic spherical model of global postseismic deformation and a new computational finite elements package (FEMSA) we perform an analysis of the stress diffusion following the earthquake near and far from the Sunda trench. We evaluated the stress changes due to the Sumatra earthquake by projecting the Coulomb stress over the sequence of aftershocks taken from various catalogues in a time window spanning about two years and then we considered the possibility that the Sumatra event could have affected subsequent events very far from the source.