An explanation of size and position of Mt. Fuji

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On Mt. Fuji, there are three unsolved features. First, the volume is so large (1400km^3) as typical volume of Japanese volcano is less than 100km^3 . Second, There is a big gap(200km) between the Nasu volcanic zone and Fuji volcanic zone on which the Mt. Fuji exists at northern end. Third, the Mt. Fuji is on 150km isodepth position of the Pacific Plate surface, whereas the average depth of the Nasu volcanic front is 100km. On the other hand, we created a VRML file for 3D plate boundaries, 3D volcano position with conduits, and positions of hypocenters around Japan, and we noted that there is a convex shape of the Philippine sea plate below the Mt. Fuji position. We performed a simple 3D simulation for magma conduits originated from 100km isodepth of the Pacific plate surface. Those conduits are blocked by the Philippine sea plate and deflected to the position of Mt. Fuji. Thus, we conclude that the shape of the Philippine sea plate well explains the size, position and depth of Mt. Fuji magma.

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