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## 3D tomography of the crustal structure of the central part of Madagascar

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Madagascar has never had a big earthquake until now. The biggest earthquake had a magnitude of 7 Richter, and not on land but in the ocean. The highest magnitude on land was below 6 Richter. The central part of the big island is the most active seismically. It can be clustered into three zones. Two of them are a Cenozoic volcanic area, which are Itasy and Ankaratra, from the north-west and the south respectively. The last seismically active zone is Alaotra, at the north-east part, and at the Alaotra-Ankay rift composed by normal faults. Many scientific articles say the volcanoes in the central part are already extinct and some say there have been recent eruptions, which means they are dormant volcanoes. The seismic map reveals that the epicenters tend to line up from the volcanic area of Ankaratra to Itasy and expand till Bongolava. A 3D tomography of this zone was done, with the permanent stations including the CTBTO station, to determine and study the structure of the crust which is thinner than the coastal areas.

### Promotional text

As the CTBTO promotes the third party countries scientists, I would like and very motivated to present our work from Madagascar. No 3D study of the crustal structure of the big island has done yet, attending the SnT21 would be an opportunity to share and get experiences.

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