The earthquake's intensity at J-PARC was measured a “6-lower”, which equates to the third highest intensity on the ten-ranked Japanese seismic scale. The earthquake's magnitude was 9.0 struck north-eastern Japan on March 11, 2011 (HVTR05 in Jun. 2014 (36,000h). HVTR02 in Dec. 2013 (30,200h), HVTR01 in Mar. 2012 (the total operating hours was 28,400h (hours)). The earthquake's intensity at J-PARC ranked Japanese seismic scale. It will be replaced with repaired HVTR02.

Concerning the components of the 324-MHz RF source, the most significant damage was the subsequent decrease in the external resistance of the ignitrons. Ignitrons (National Electronics, NL7703EHVNP) are used as crowbar switches, and comprise 29 components of the 6 HVDCs (HVDC1-6). The external resistances between the ignitrons and the cathodes, which are infinite at normal level, decreased by under 10 Ω in 24 components (82.8% overall).

The cause of this decrease was taken to be the shifting sustained at the resonators during the earthquake, which resulted in the malposition of the mercury in the ignitrons onto the ignitors. To repair the 24 faulty ignitrons, the method of impressing DC voltages (2 – 10 V) between the ignitors (-) and the cathodes (+) was used. As a result of this treatment, 20 pieces were recovered (a recovery rate of 83.3%). The 4 remaining faulty ignitrons were replaced.

Since 2006, the majority of the 324-MHz RF source components have total operating times of over 35,000 hours. The problems of klystrons themselves (breakdown, discharge, etc.) are (i), (iv), (v), (vi) The other reasons (HVTR exchange, cathode-voltage-changing)