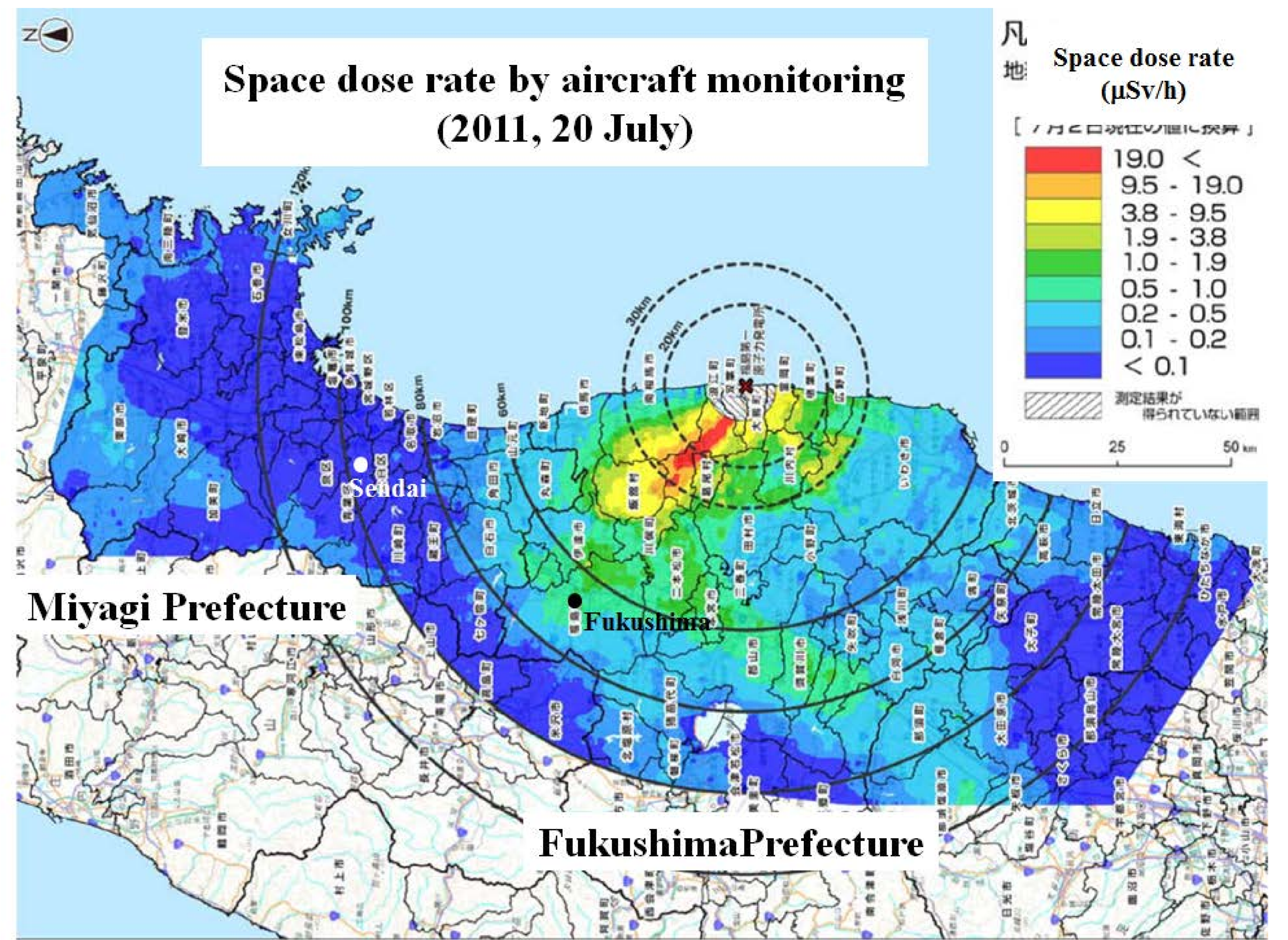
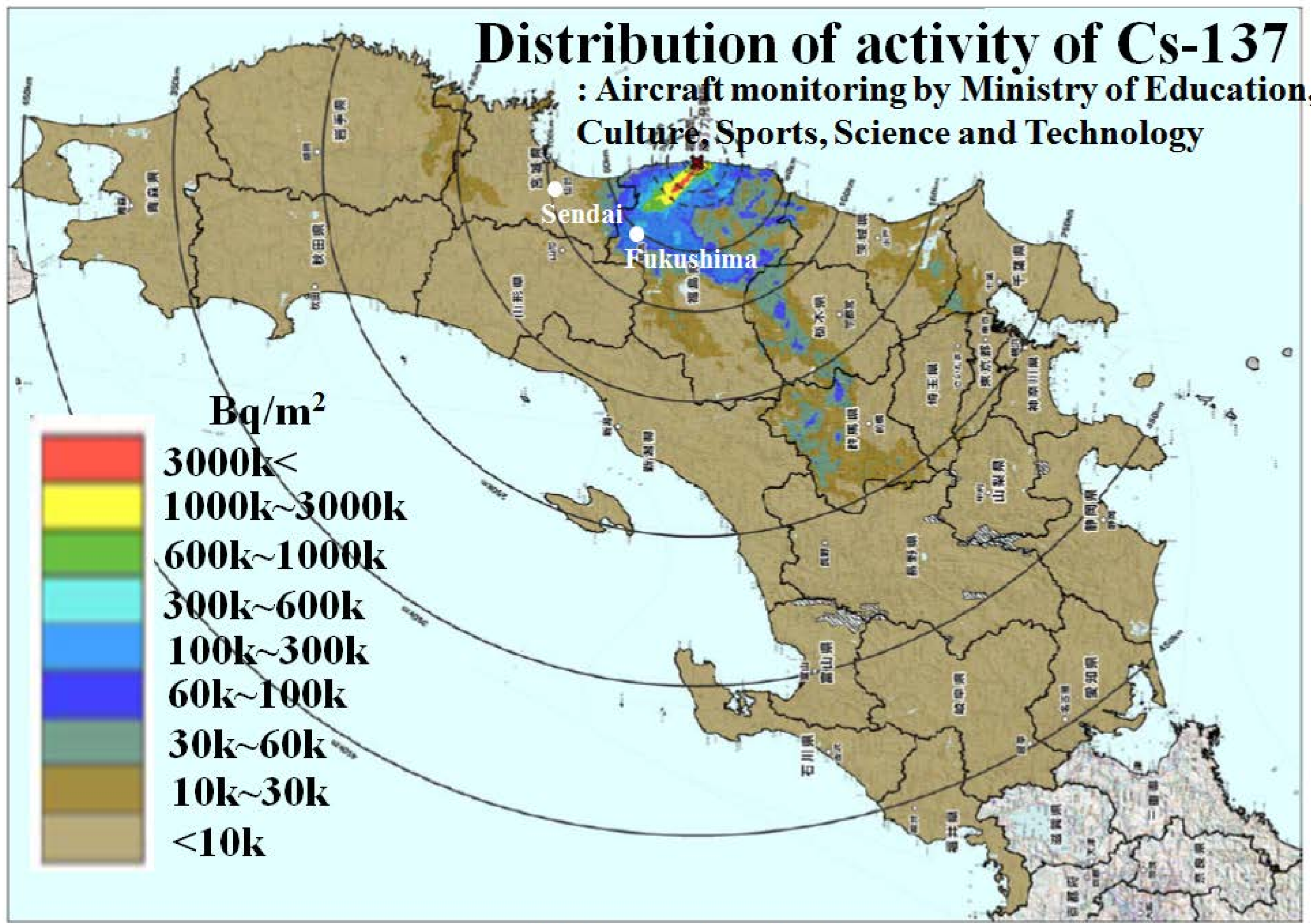
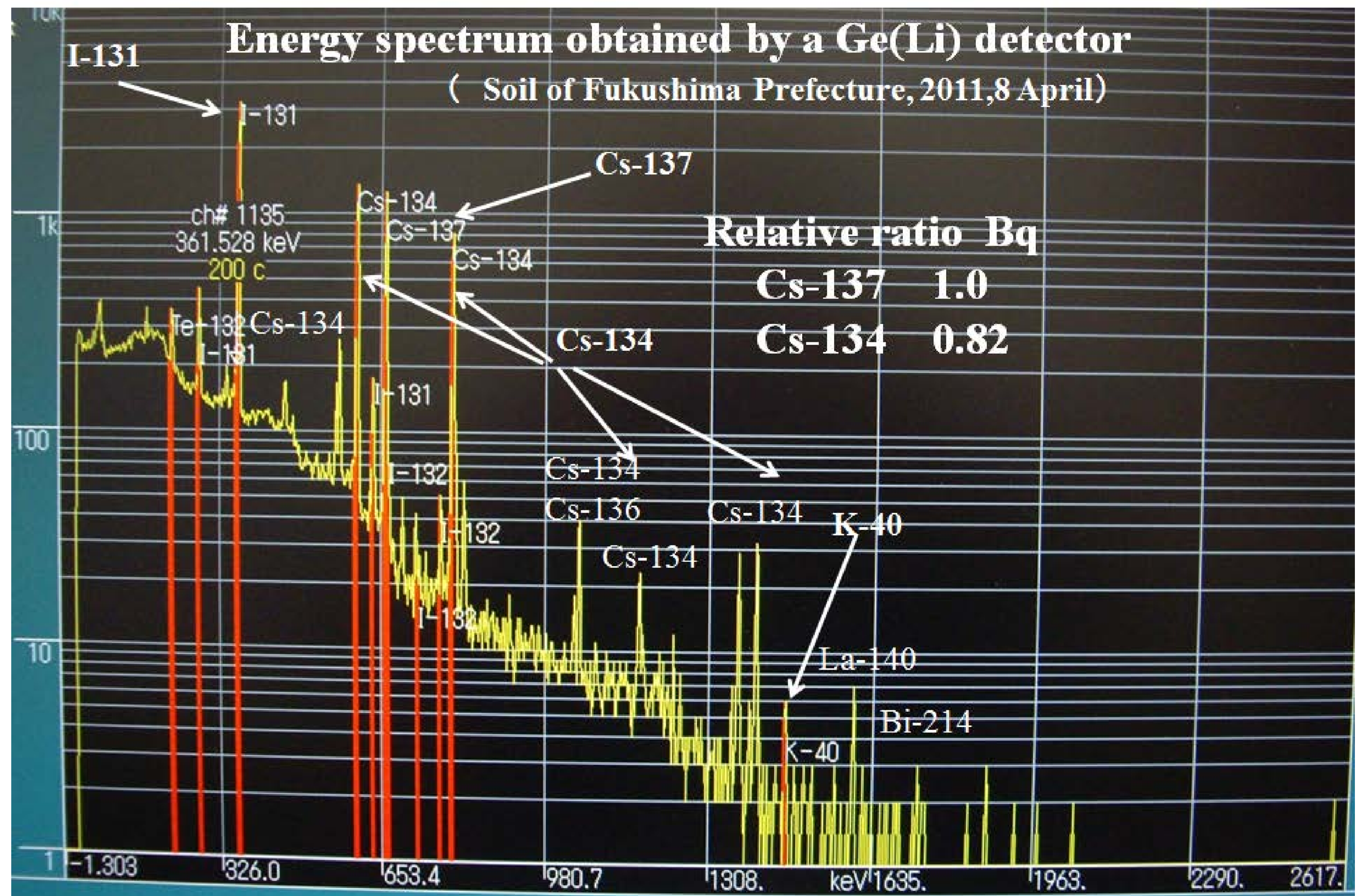
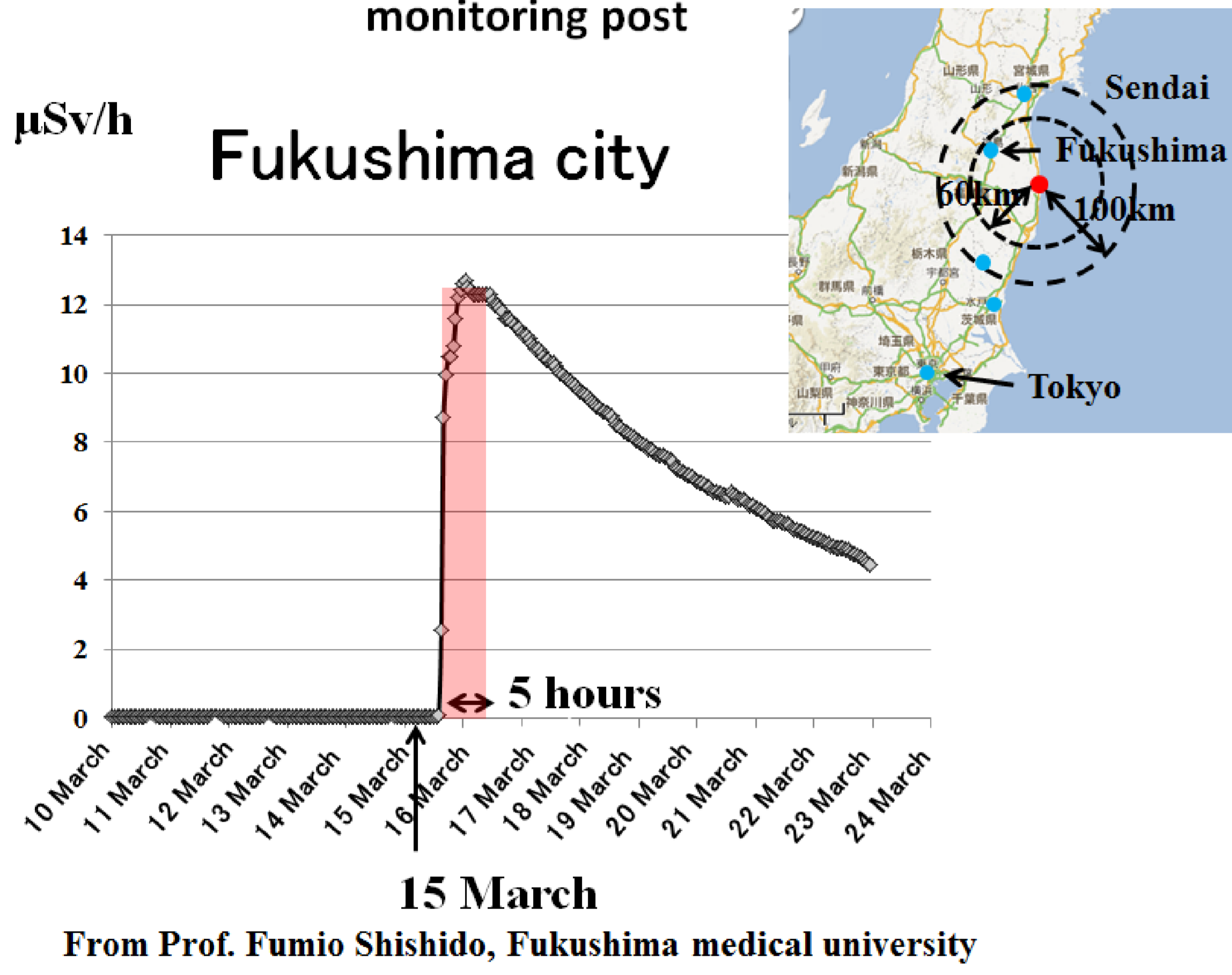


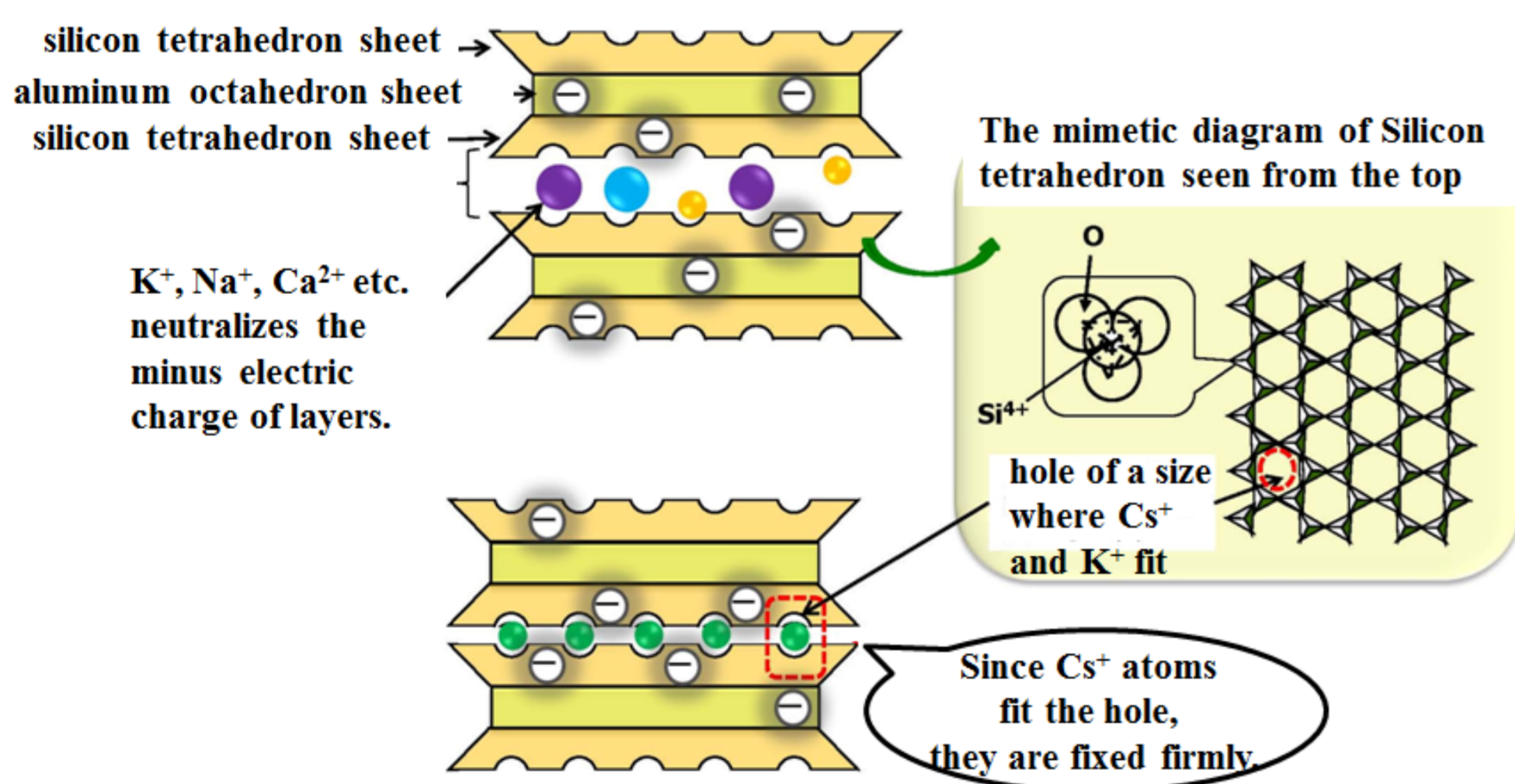
Outline of radioactive pollution due to Fukushima nuclear accident



Dose rate of radiation at Fukushima medical university hospital monitoring post



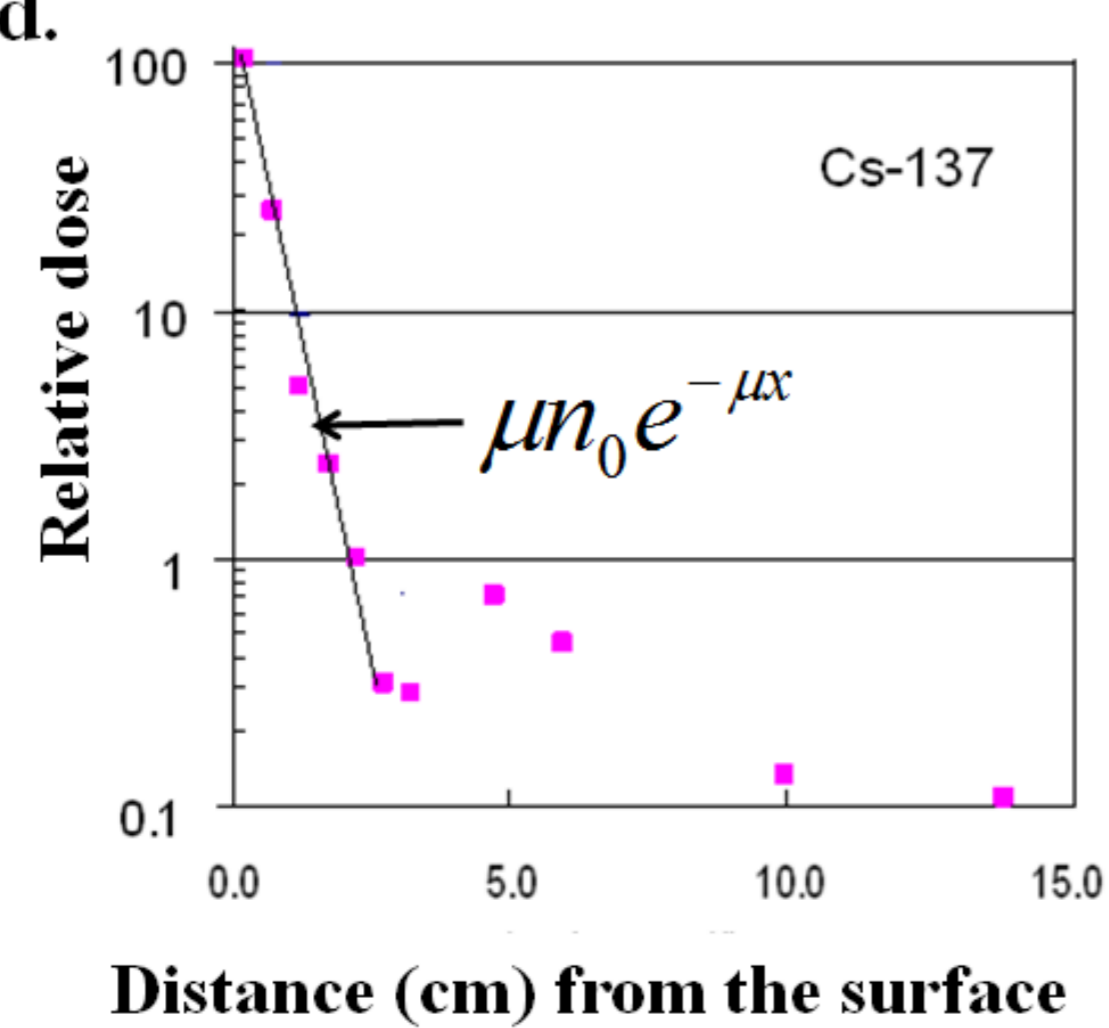
Cesium is firmly adsorbed by clay.
 When cesium fell on the ground, 70% of cesium stuck to clay, and 30% stuck to ionic exchangers and macromolecules.
 Clay consists of silicon tetrahedron sheets and aluminum octahedron sheets which overlap each other. Cs atoms replace K atoms in clay and are firmly fixed in the holes of tetrahedron sheets.



From Japanese Society of Soil Science and Plant Nutrition

Most radioactive cesium atoms are distributed on the surface of the ground.

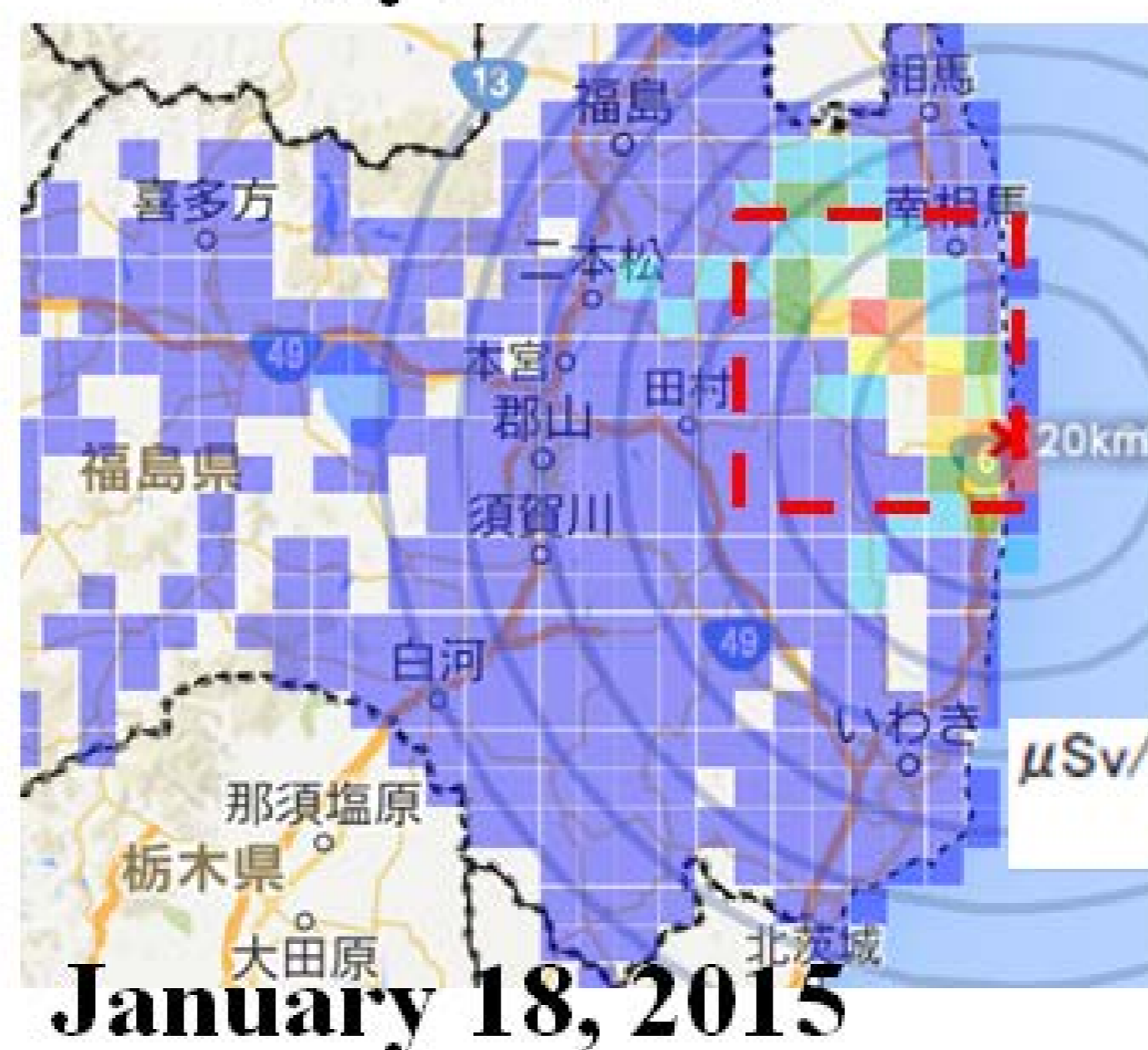
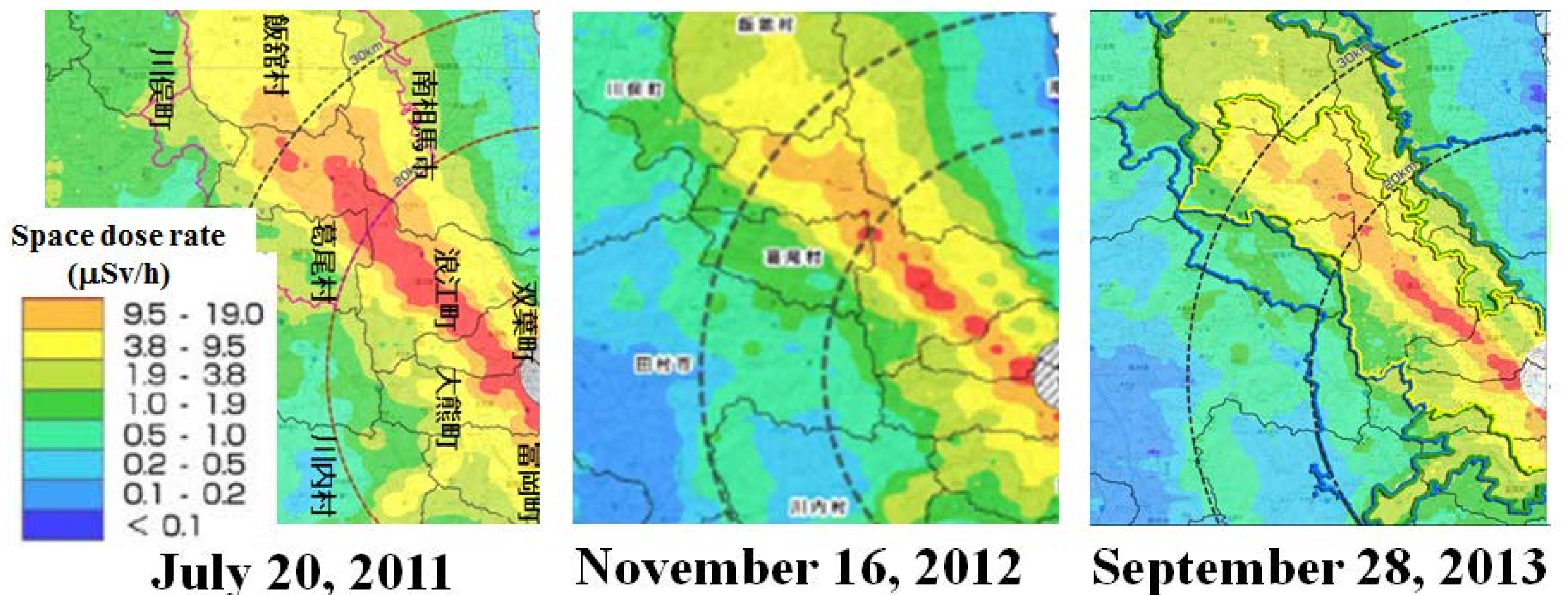
Radioactivity is almost distributed over a thickness of about 5mm from the surface. Distribution is decreasing by the exponential function of the distance from the surface (expected theoretically).



Therefore, most radioactive cesium atoms which fell on the ground, were adsorbed in clay.

→ Space dose will decrease if the soil on the surface of ground is removed.

Time dependence of space dose rate at Fukushima



According to the decay of ¹³⁴Cs (Half life: 2 years) and the weathering effect, the effort of decontamination, the space dose rate decreased very much.