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P1.079 Radioactivity evaluation and control for the JUNO detector components and materials

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The Jiangmen Underground Neutrino Observatory (JUNO) is a multiple-purpose neutrino experiment with a 20 kilo ton liquid scintillator detector. Low background is essentially important for the low energy physics, such as reactor antineutrinos and solar neutrinos. Therefore, it is crucial to control the radioactivity of all materials used in the detector. The physics sensitivity requires less than 10 Hz single event rate in the fiducial volume ($R < 17.2$ m) with the visible energy greater than 0.7 MeV. This poster will present the radioactive background budget based on current investigation of the detector components and the detector simulation. The low background techniques will be shown as well.