

**Estimation of Radiation Dose of Epoxy Resin by IR Spectrometry,** K. ENDO, Y. OHSAWA, KEK; T. MICHIKAWA, JREC - To estimate the radiation dose to the epoxy resin used for an insulation of the magnet coil, an IR (infrared) absorbance can be an effective method. Carbonyl radicals generated in the epoxy resin reveal an IR absorbance signal in the range of  $1705 - 1720 \text{ cm}^{-1}$  of which magnitude is proportional to the radiation dose. Irradiated samples of the epoxy resin were taken from the TRISTAN-MR magnets and their IR absorbances was compared with the calibrated data obtained from those of samples with controlled irradiation in order to estimate the dose. This method can be applied to the insulated material irradiated more than  $10^4$  Gy and only small amount of resin shaved from the surface of the insulation is enough for the measurement.