

Electron density measurements of fusion plasma using an impulse

Tokihiko Tokuzawa[1]

[1] NIFS

For an electron density profile measurement in fusion plasma a microwave reflectometer is a suitable technique because a low power microwave does not affect the plasma and reflectometer has a good spatial resolution. However if we want to measure the whole range of the plasma radius, we need a very wide frequency range of microwave and it is not easy to get such a wide range microwave source. We utilize an impulse as a source of microwave. An impulse has wide frequency components in a Fourier-space. Now we use 23ps 3V impulse for measurement in Large Helical Device plasma in NIFS. At the conference we show the reflectometer technique and recent results of the plasma measurements.