

عنوان مقاله:

The time delay between signals of tokamak magnetic coils and its effect on the measurement of plasma displacement

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خلاصه مقاله:

The time delay between magnetic coil signals in a tokamak is believed to lead to inaccuracy in the measurement of the plasma physical parameters in the tokamak. In this research, we calculated the time delay between the signals of magnetic coils used in IR-T₁ tokamak and investigated its effect on the measurement of the plasma horizontal displacement. The time delay between the signals of the magnetic coils was calculated utilizing time series analysis, and the horizontal displacement of the plasma was measured using the multipole moments method. The experimental results showed that by eliminating the time delay from the coil signals, the measurement of plasma horizontal displacement in IR-T₁ tokamak was optimized.

کلمات کلیدی:

Time Series, Time delay, Phase shift, Plasma, Tokamak

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