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Control of plasma vertical displacement based on neural network

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For elongation plasma, the vertical displacement control is essential for the stable operation of tokamak devices. In this paper, a neural network model is used to rapidly detect vertical displacement recognition, and a new vertical displacement control algorithm is built by combining the method of neural network. To reduce latency and provide sufficient computing resources for the neural network, a high-speed acquisition and fast control system is designed. The new control system is confirmed in EAST experiments. The results show that in EAST different plasma discharge configurations, the vertical displacement can be accurately calculated and be controlled in effectively and quickly.

Minioral

Yes

IEEE Member

No

Are you a student?

No

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