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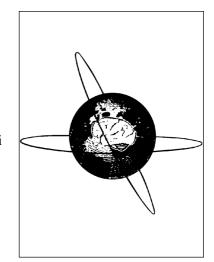
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## **ACCEPTED MANUSCRIPT**

# Closed-loop adaptation of neurofeedback based on mental effort facilitates reinforcement learning of brain self-regulation

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#### **Highlights**

Mental effort is correlated to the difficulty level of neurofeedback during brain selfregulation.

The difficulty threshold that balances mental effort is higher than maximum classification accuracy.

Threshold adaptation based on mental effort allows progressively increasing the difficulty level.

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