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Title: Toward "Team Flow" Real-time Monitoring and Modulation System

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Abstract: Working in a space environment with an extended duration of extreme conditions can lead to an inferior team's cognitive functions. NASA's Human Research Program (HRP) identified this risk, short-titled "Team," which has high likelihood and consequences on both operations and health in the long-term. "Team flow" occurs when a team falls into the flow state or getting into the zone, as in sports teams, music ensembles, dance squads, or teams in video gameplay. The flow state is a psychological phenomenon known to have a positive effect on several life experiences. Team flow showed enhanced positive effects, including enhanced creativity, productivity, and emotions. We recently identified several neural correlates for team flow using electroencephalograms (EEG). We utilized these data to develop an objective monitoring and modulation system to enhance team performance while keeping high motivation and engagement.