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COUNTERMEASURE CONSIDERATION OF WEIGHTLESSNESS PHYSIOLOGICAL EFFECTS IN OUR LONG-TERM SPACE FLIGHT

Abstract

To overview the development of weightlessness physiological effects protection system, the countermeasure methods and protection effects evaluation in last fifty years of manned space programs. To summarize the development of our current status in the establishment of weightlessness physiological effects protection system, and put forward the directions and main points in the development of countermeasures of long-term manned space flight. The summary were given from five aspects. First is about the technical and physiological effects challenge in the long-term spaceflight. Second is about the current technical reviews of countermeasures in the international space station (ISS). Third is about the challenge in the development of our own countermeasure systems. Fourth is the current status of our engineering and basic exploration in the development of physiological protection system. And the last is about the establishment of evaluation system and new countermeasures. In 2020 China will step into space station ear. And space station as a national space laboratory, it will offer unique opportunities to weightlessness physiological effects and the efficacy of countermeasures studies. This summary reported explicitly some considerations and thoughts about Chinese countermeasure system development.