Concerns about heart dysrhythmia have been present since the earliest days of the US manned space program. While information about an astronaut’s health is generally kept private, one of the original seven American astronaut’s health status was played out in a very public forum. Donald “Deke” Slayton was removed from the second manned space flight when it was discovered he had idiopathic atrial fibrillation. Referencing the original medical documents, details of how this was discovered and managed from the medical perspective will be reviewed. This is NASA’s first heart dysrhythmia case in an astronaut and it proves quite interesting when placed in historic perspective.