After fifteen years of research funded by NASA, the RTDFS (Residence Time Driven Flame Spread) project culminated in a series of tests conducted from October 2024 through March 2025 in the Combustion Integrated Rig at the International Space Station. PMMA (poly methyl methacrylate) samples of six different thicknesses were ignited from one or both ends to observe the resulting flame spread. Besides fuel thickness, oxygen level, pressure, and flow velocity were some of the parameters that were varied. The goal of the experiments was to test the hypothesis that in the absence of any flow field, a flame which can propagate vigorously in normal gravity, can be self-extinguishing even in a high oxygen environment due to radiative losses enhanced by the large residence time. The current grant is to facilitate the analysis of the huge volume of acquired data to characterize flame spread in a microgravity environment and establish conditions under which steady flame spread cannot occur.