

SPACE SYSTEMS SYMPOSIUM (D1)
Training, Achievements, and Lessons Learned in Space Systems (5)

Author: Mr. li xiaoke

Beijing Institute of Space Mechanics and Electricity, China, lixiaokecn@126.com

Mr. He Shaodong

Beijing Institute of Space Mechanics&Electricity, China, shaodong.he@163.com

Mr. Zheng Xinglin

Beijing Institute of Space Mechanics&Electricity, China, wy50806@sina.com

Dr. Xun LIU

Beijing Institute of Space Mechanics & Electricity, China Academy of Space Technology (CAST), China,
liuxun_laby@163.com

STUDY ON OPTICAL REMOTE SENSOR OF HIGH PRECISION TEMPERATURE TECHNOLOGY
OF ENVIRONMENT SIMULATION TEST

Abstract

The imaging quality of the optical remote sensor is one of the performance indicators, the imaging quality demanding on the environment temperature, in order to accurately model the imaging in the vacuum thermal environment optical remote sensor, the need to measure experiment temperature, and then the accurate control of the temperature. This paper mainly discusses the optical remote sensor for environmental simulation test, the platinum resistance as temperature sensor, in precise calibration on its temperature coefficient, high precision conversion, amplification of the signal collected by measuring bridge and the instrumentation amplifier, numerical fitting function of D digital signal and the corresponding temperature of T, reduce the introduction the middle link error of ε , to achieve the goal of high precision temperature measurement.