

GEORGE C. MARSHALL SPACE FLIGHT CENTER  
HUNTSVILLE, ALABAMA

*Memorandum*

R-ASTR-NG-21-65  
DCook/lw/876-7418

TO Mr. Jack Bridges, R-ASTR-NF

DATE March 24, 1965

FROM Chief, Guidance and Control Systems Analysis Branch, R-ASTR-NG

SUBJECT Saturn IB and Saturn V S-IVB Auxiliary Propulsion System (APS)  
Attitude Control Engine Minimum On-time

REFERENCE Memo, R-ASTR-NG-66, "Pseudo-Rate Modulator Design Parameters for  
the S-IVB/V and S-IVB/IB Stage Attitude Control Systems," 2 June 64

1. This memorandum reflects attitude control engine test results that were submitted by Thompson Ramo Wooldridge, Incorporated (TRW), Structures Division. The Attitude Control Engine Program Review was held 28 January 1965 at MSFC. From test firing several engines, it was found that a minimum pulse width of 0.065 seconds yielded an average  $7.5 \pm 0.5$  pound-second impulse (note Figure 1).

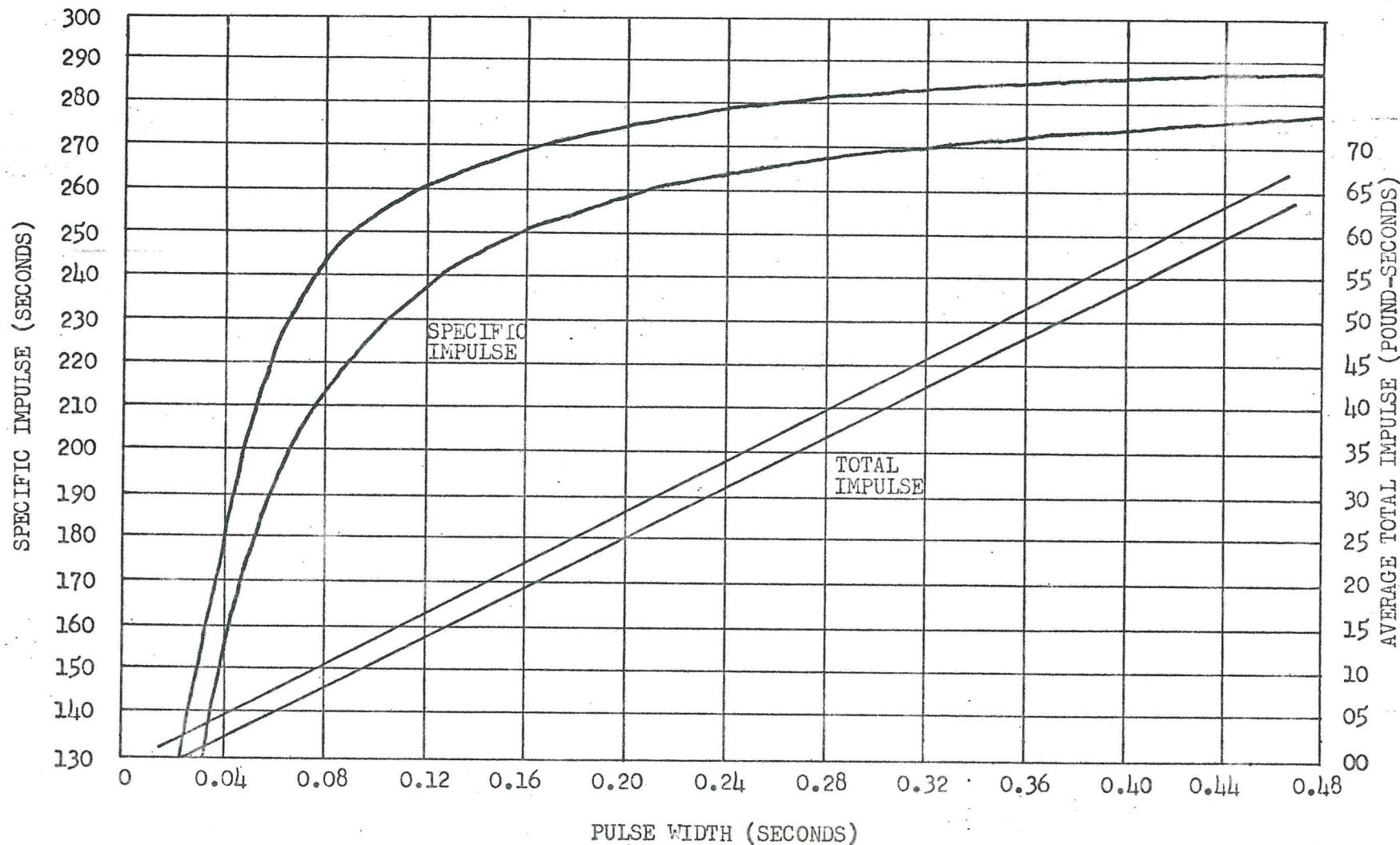
2. It is recommended presently that a minimum pulse width of 0.065 seconds should be considered a nominal value. Any changes in this value, if or when they occur, will be published when received from TRW.

*J L Mack*  
J. L. Mack

1 Enc:  
Figure 1

FIGURE 1  
SINGLE PULSE PERFORMANCE

AVERAGE TOTAL IMPULSE, SPECIFIC IMPULSE VS PULSE WIDTH



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