

**ANSYS Class3 Error Report****ERROR NO:**

2012-01

**Keywords:**

SINGLE POINT RESPONSE SPECTRUM      MISSING MASS      SPECTRUM  
ACCELERATION      REACTION FORCES

**Description of Error:**

In Single Point Response Spectrum analysis (Sptype=SPRS on the SPOPT command) and Multiple Points Response Spectrum analysis (Sptype=MPRS), when the missing mass is included (MMASS command), applied accelerations (SVTYP, FREQ, and SV for SPRS; SPUNIT, SPFREQ, and SPVAL for MPRS) are not included in the element nodal force calculation, resulting in erroneous reaction forces.

**Typical GUI Path(s):**

Main Menu>Preprocessor>Loads>Analysis Type>Analysis Options

Main Menu>Solution>Analysis Type>Analysis Options

Main Menu>Preprocessor>Loads>Load Step  
Opts>Spectrum>SinglePt>Settings

Main Menu>Solution>Load Step  
Opts>Spectrum>SinglePt>Settings

Main Menu>Preprocessor>Loads>Load Step  
Opts>Spectrum>MultiPt>Settings

Main Menu>Solution>Load Step  
Opts>Spectrum>MultiPt>Settings

**Other Comments:**

For cases where the structure is supported by springs with a large stiffness, the impact of this error on the reaction forces is generally inconsequential. Examples: BM3 piping system (NUREG/CR-6645) in the Technology Demonstration Guide and all NRC Piping Benchmarks in the Verification Manual.

**First Incorrect Version:**

Release 12.0

**Corrected In:**

Release 14.0

**Suggested User Action For Running on Uncorrected Version:**

Use large springs at the support(s) where reactions are desired.

**Author Signature:**

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**Approval:**

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