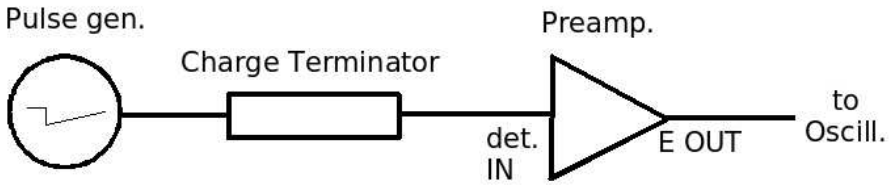
Preamplifiers for "old" (cylinder) MUSICs and Twin-MUSIC

1. CSTA-1 "C_f = 0.5 pF". High gain. Four available. Used in S364, June 2011: gave good resolution for Z ~ 50 fragments.
2. CSTA-1 "C_f = 14.6 pf". Low gain. Three working, fourth is noisy (labelled "NO OUTPUT"). Labelled "Modified for MUSIC at 1.5 bar C_3F_8". Used in S323 test run, August 2011: only moderate resolution for Z ~ 50 fragments.
3. CSTA-1 "C_f = 1 pF". Not tested. Two or three of these.
4. CSTA-2 "Gain 4", with short E, T and test cables. These are the Twin MUSIC preamps. Medium gain. Many available. Tested briefly during S323 Bi beam, August 2011: only moderate resolution.
5. CSTA-2 "Gain 1.25" with long E, T and test cables. Low gain. Many available. Used for S272 SHT expt., Oct. 2010, and S323 test, August 2011: only moderate resolution.
6. CSTA-2 " C_f = 0.68 pF, g = 10, K. Sü.". High gain. Four available.

Relative gain test

A pulse generator was used in conjunction with a charge terminator from an Ortec 419 to send equal negative charge signals to the detector input of various types of preamplifier. See sketch below.



The resulting energy output signals are given in the following table:

Preamp type	Output
CSTA-1, C_f 0.5pF	-2 V
CSTA-1, C_f 14.6pF	-10 mV
CSTA-2, "Gain 4"	-50 mV
CSTA-2, "g = 10, K.Sü."	-2 V