longer e.c. half life due to the necessity for decay to a high-spin state in the ^{256}Fm daughter, such as the known 6+ level at 332 keV or the 8+ level at 563 keV which are populated[6] by the decay of the 7.6-h high-spin isomer of ^{256}Es. It might also decay by alpha emission to ^{252}Es. A concerted search for this and other isomers of the even-mass Md isotopes should be made.

The production of 43-m ^{258}Md allowed studies[5] of the SF properties of its 0.380 ms ^{258}Fm daughter to be performed which showed that SF of ^{258}Fm resulted in a narrowly symmetric fragment mass distribution with unusually high total kinetic energy. (See Figs. 1 and 2.) The only other spontaneously fissioning isotope known to exhibit similar properties is 1.5-s ^{259}Fm. (See Figs. 3 and 4.) So far, SF decay of mendelevium has only been observed[1] for 95-m ^{259}Md. Its SF properties have turned out to be quite unusual in that although its fragment mass distribution is highly symmetric, its total kinetic energy of 189 MeV is not anomalously high (see Fig. 4) as is the case for ^{258}Fm and ^{259}Fm. The full width at half maximum of the total kinetic energy distribution of 104 MeV is unusually large compared to those for other spontaneously fissioning nuclides as shown in the summary given in Table 2. Hulet et al.[9] have suggested that this relatively low total kinetic energy may be due to the emission of a Z = 1 particle which then allows the remaining mass to divide into two Z = 50, closed-proton shell fragments. If confirmed, this would be another dramatic demonstration of the strong effect exerted on low-energy fission by the fragment shells. Further examination of the fission properties of still heavier Md isotopes would be of particular interest.