

Abstract: Different effects between the dipole peak at 85 degrees C for Mylar PETP and the real charge peak at lower temperature for the nonpolarity fluoropolymer on charge stability are discussed. The transport rule of detrapping real charge in the bulk of the sample and the main factor leading to the compensation of detrapping charge in the bulk during TSD (thermally stimulated discharge) are studied by means of the heat pulse technique and measurement of steady-state conduction current, and the bulk conductivity glow curve. It is shown that dipole charge is formed in Mylar PETP only when the charging temperature or temperature during TSD after corona charging at room temperature is close to or higher than the glass-transition temperature  $T$ . The disorder of the dipole charge for the Mylar electret occurs only when the detrapping of the real charge due to the external excitation causes the real charge field not to have enough capability to resist the external excitation to the dipole charge. This confirms that the dipole charge appears and vanishes with the existence and weakness of the field of the real charge at suitable temperature ( $>T$ ).