Suppose E, F, and G are events in a sample space S. If $E-F$ and $G-F$ both occur, but $(E \cup F \cup G)^c$ does not occur, then which of the following events also must occur?

(a) $E(F \cup G)$

(b) EFG

(c) FG

(d) FG^c

(e) $F - E$

(f) $E^c FG$

(g) $E^c F^c G$

(h) $E^c G$

(i) $E^c \cup G^c$

(j) S^c

(k) None of these