$N = 8$ $q-$polynomials for admissible partitions with $c_\lambda(1) = 0$

There are eight admissible partitions for $N = 8$ whose $S-$functions occur in expansion of the square of the Vandermonde with zero coefficient. They occur as pairs of partitions related by Dunne's reversal symmetry as

$$\{13\ 11985^241\}, \quad \{13\ 10\ 9^26531\} \tag{Q1}$$
$$\{13\ 11\ 9854^22\}, \quad \{13\ 10\ 987531\} \tag{Q2}$$
$$\{13\ 11\ 976541\}, \quad \{12\ 10^2\ 96531\} \tag{Q3}$$
$$\{12\ 11\ 97^24^22\}, \quad \{12\ 10^2\ 7^2532\} \tag{Q4}$$

There corresponding $q-$polynomials are

$(Q1)$ $-q^{17}(q^2-q+1)^2(q^2+1)^2(q-1)^4(q^2+q+1)^5$
$(Q2)$ $q^{16}(q^2+1)(q^2-q+1)^3(q-1)^4(q^2+q+1)^6$
$(Q3)$ $q^{16}(q^2-q+1)^2(q^2+1)^3(q-1)^4(q^2+q+1)^5$
$(Q4)$ $q^{14}(q^{10}+q^9+3q^8+4q^6+q^5+4q^4+3q^2+q+1)(q^2-q+1)^2(q-1)^4(q^2+q+1)^5$