

$$\begin{array}{ccc}
 h_1^n(X^{(n)} / X^{(n-1)}) & \xrightarrow[\cong]{f_n^*} & h_1^n(\bigvee_{i \in I_n} S^n) \\
 \downarrow T_{X,n} & & \downarrow \cong T_{\bigvee_{i \in I_n} S^n} \\
 h_2^n(X^{(n)} / X^{(n-1)}) & \xrightarrow[\cong]{f_n^*} & h_2^n(\bigvee_{i \in I_n} S^n)
 \end{array}$$