

$$\begin{array}{ccccc}
H^{q-1}(G, A') & \xrightarrow{\text{cores}} & H^{q-1}(H, A') & \xrightarrow{\text{cores}} & H^{q-1}(G, A') \\
\downarrow \sim & & \downarrow \sim & & \downarrow \sim \\
H^q(G, A) & \xrightarrow{\text{res}} & H^q(H, A) & \xrightarrow{\text{res}} & H^q(G, A)
\end{array}$$