

$$\begin{array}{ccccccc}
 A & \xrightarrow{f} & B & \xrightarrow{g} & C & \xrightarrow{\delta} & \\
 \alpha_c \downarrow & & \downarrow & & \parallel & & \\
 A'' & \longrightarrow & E' & \longrightarrow & C & \xrightarrow{(\alpha_c)_* \delta} & \\
 \alpha_f \downarrow & & \downarrow & & \parallel & & \\
 A' & \longrightarrow & E & \longrightarrow & C & \xrightarrow{\alpha_* \delta} & \\
 \parallel & & \downarrow \varphi & & & & \\
 A' & \xrightarrow{f'} & B' & \xrightarrow{g'} & C' & &
 \end{array}$$

Commutative diagram illustrating a sequence of maps and transformations between objects $A, B, C, A'', E', E, A', B', C'$.

The diagram shows the following maps and relationships:

- Horizontal maps: $A \xrightarrow{f} B \xrightarrow{g} C \xrightarrow{\delta}$, $A'' \longrightarrow E' \longrightarrow C \xrightarrow{(\alpha_c)_* \delta}$, $A' \longrightarrow E \longrightarrow C \xrightarrow{\alpha_* \delta}$, and $A' \xrightarrow{f'} B' \xrightarrow{g'} C'$.
- Vertical maps: $\alpha_c: A \rightarrow A''$, $\alpha_f: A'' \rightarrow A'$, and a map from E' to E .
- Identities: $A' \cong A''$ (indicated by \parallel), $C \cong C$ (indicated by \parallel), and $E \cong E'$ (indicated by \parallel).
- Curved arrow: $\beta: B \rightarrow E'$.
- Dashed arrow: $\varphi: E \rightarrow B'$.
- Commutativity symbols: \square (between $A \rightarrow B$ and $A'' \rightarrow E'$) and \triangle (between $A'' \rightarrow E'$ and $A' \rightarrow E$).