

$$\begin{array}{ccc}
& \xrightarrow{F} & \xrightarrow{F'} \\
\mathcal{B} & \begin{array}{c} \downarrow \eta \\ \downarrow \sigma \end{array} & \mathcal{C} \begin{array}{c} \downarrow \eta' \\ \downarrow \sigma' \end{array} \mathcal{D} \\
& \xrightarrow{H} & \xrightarrow{H'}
\end{array}$$