

$$\begin{array}{ccccc}
 \Omega(A) & \hookrightarrow & P & \twoheadrightarrow & A \\
 \text{Id}_{\Omega(B)} \circ \Omega(f) - \Omega(f) \circ \text{Id}_{\Omega(A)} = 0 \downarrow & & \downarrow i_{\phi_1^B} \circ p_f - i_{\Omega(f)} \circ p_{\phi_1^A} & & \downarrow \phi_1^B \circ f - \Sigma \Omega(f) \circ \phi_1^A \\
 \Omega(B) & \hookrightarrow & I & \twoheadrightarrow & \Sigma \circ \Omega(B)
 \end{array}$$