

$$\mathbb{K}^n \underset{\text{off}}{\supset} U_\alpha \xrightarrow[\text{homeo}]{\phi_\alpha} V_\alpha \underset{\text{off}}{\subseteq} M$$

$$\begin{array}{ccc}
\phi_\alpha^{-1} (V_\alpha \cap V_\beta) & & \\
\downarrow & \searrow \phi_\alpha & \\
\phi_\alpha^\beta & & V_\alpha \cap V_\beta \\
\downarrow & \nearrow \phi_\beta & \\
\phi_\beta^{-1} (V_\alpha \cap V_\beta) & &
\end{array}$$