

$$\mathfrak{p} \xrightarrow[\text{G inv}]{\Phi} \mathfrak{g}^+$$

$$\mathfrak{K}\gamma = \underline{\Phi^+ \gamma}$$

$$\rho^m \mathfrak{m} \mathfrak{J} \overline{\mathfrak{K}\gamma}^m = \rho^m \underline{\mathfrak{m} \Phi \gamma} = \rho^m \underline{\mathfrak{m} \Phi} \gamma$$

$$\gamma \in \mathfrak{g}$$

$$m \in \mathfrak{p} \xrightarrow{\Phi \gamma} \mathbb{R} \ni \mathfrak{m} \Phi \gamma$$

$$\mathfrak{p}^m \xrightarrow[\mathfrak{m} \omega]{\mathfrak{m} \Phi} \mathfrak{g}^+$$

$$\overline{\mathfrak{K}\gamma}^m \mathfrak{m} \mathfrak{J} \overline{\mathfrak{K}\gamma}^m = \mathfrak{m} \Phi \underline{\gamma \mathfrak{K} \gamma}$$

$$m \mathfrak{K} \Phi = \mathfrak{m} \Phi \mathfrak{K} g \Rightarrow \overline{\mathfrak{K}\gamma}^m \mathfrak{m} \Phi = \mathfrak{m} \Phi \mathfrak{K} \gamma$$

$$\rho^m = \overline{\mathfrak{K}\gamma}^m \Rightarrow \text{LHS} = \overline{\mathfrak{K}\gamma}^m \mathfrak{m} \Phi \gamma = \underline{\mathfrak{m} \Phi \mathfrak{K} \gamma} \gamma = \text{RHS}$$

$$\begin{array}{ccc} M & \xrightarrow{\Phi} & \mathfrak{g}^+ & \xrightarrow{\mathfrak{J}} & \mathbb{R} \\ & & & & \uparrow \\ & & & & \mathfrak{m} \Phi \mathfrak{J} \in \mathfrak{g} \end{array}$$

$\Phi \mathfrak{K} \mathfrak{J}$

$$\mathfrak{m} \Phi \mathfrak{J} \in \mathfrak{g}$$

$$\underline{\Phi \mathfrak{K} \mathfrak{J}}^+ = \overline{\mathfrak{K} \mathfrak{m} \Phi \mathfrak{J}}^m$$

$$\rho^m \mathfrak{m} \mathfrak{J} \underline{\Phi \mathfrak{K} \mathfrak{J}}^+ = \rho^m \mathfrak{m} \Phi \mathfrak{K} \mathfrak{J} = \rho^m \mathfrak{m} \Phi \mathfrak{m} \Phi \mathfrak{J} = \rho^m \mathfrak{m} \mathfrak{J} \overline{\mathfrak{K} \mathfrak{m} \Phi \mathfrak{J}}^m$$

$$M \xrightarrow[\text{Pois}]{\Phi} \mathfrak{g}^{\dagger}: \overline{\Phi \times \mathfrak{J}} \times \overline{\Phi \times \mathfrak{J}} = \Phi \times \overline{\mathfrak{J} \times \mathfrak{J}}$$

$${}_m \overline{\overline{\Phi \times \mathfrak{J}} \times \overline{\Phi \times \mathfrak{J}}} = \overline{\Phi \times \mathfrak{J}}^m \downarrow_m \overline{\Phi \times \mathfrak{J}}^m = \overline{\times}_{m\Phi^-} \mathfrak{J}^m \downarrow_m \overline{\times}_{m\Phi^-} \mathfrak{J}^m = {}_m \overline{\Phi}_{m\Phi^-} \overline{\mathfrak{J} \times \mathfrak{J}}_{m\Phi^-} = \overline{\mathfrak{J} \times \mathfrak{J}}_{m\Phi} = {}_m \overline{\Phi \times \overline{\mathfrak{J} \times \mathfrak{J}}}$$

$$\mathfrak{g}^{\dagger} \xrightarrow[G \text{ inv}]{\mathfrak{J}} \mathbb{R} \Rightarrow \overline{\Phi \times \mathfrak{J}} \times \overline{\Phi \times \nabla_{M^{\infty}} \mathfrak{g}^{\dagger}} = 0$$

$$\mathfrak{J} \times \mathfrak{J} = 0$$