

EG free action

$$BG = EG/G$$

$$H_G^*(M) = H^*(EG \times_G M)$$

free action

$$H_G^*(M) = H^*(M/G)$$

$$H^*(EG/G) = H_G^*(EG)$$

integration

$$H_G^*(M) \xrightarrow{\mathfrak{p}_*} H_G^*(M/M) = H_G^*(G/G) = H_G^*(EG) = H^*(BG) = S(\mathfrak{g}^\#)^G = \mathcal{P}(\mathfrak{g})^G = \mathcal{P}(\mathfrak{t})^W$$

$$EC^U = \mathbb{S}^\infty$$

$$BC^U = \mathbb{P}^\infty$$

$$EG \times_G G/T = ET/T = BT$$

$$H_G^*(G/T) = H_T^*(G/G)$$

$$H_G^*(G \times_H M) = H_H^*(M)$$