

$$\partial_t \Gamma_k[\bar{g}, 0] = \frac{1}{2} \left(\text{Diagram 1} \right) - \left(\text{Diagram 2} \right) + \frac{1}{2} \left(\text{Diagram 3} \right) - \left(\text{Diagram 4} \right) + \frac{1}{2} \left(\text{Diagram 5} \right) - \left(\text{Diagram 6} \right)$$

The equation represents the time derivative of the effective action Γ_k at zero momentum, expressed as a sum of six Feynman diagrams. Each diagram features a vertex (a circle with an 'X') at the top, connected to the rest of the loop by two lines.

- Diagram 1:** A circle with a double-line boundary (two concentric solid lines).
- Diagram 2:** A circle with a dotted boundary and arrows pointing clockwise.
- Diagram 3:** A circle with a dashed boundary.
- Diagram 4:** A circle with a solid boundary and arrows pointing clockwise.
- Diagram 5:** A circle with a wavy (scalar) boundary.
- Diagram 6:** A circle with a dotted boundary and arrows pointing clockwise.