

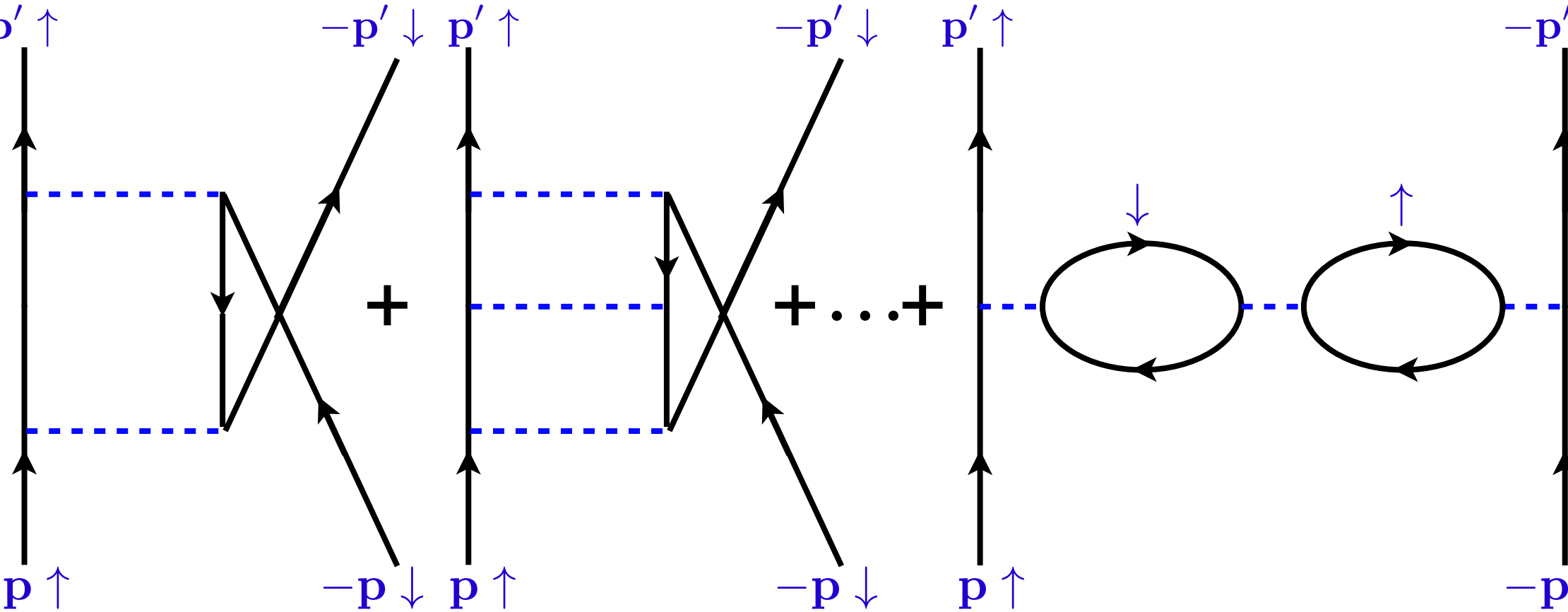
$$V_s =$$


Diagram illustrating the series expansion of V_s . The expansion consists of four terms separated by plus signs and ellipses. Each term features two vertical solid black lines with arrows pointing upwards. The left line is labeled $\mathbf{p} \uparrow$ at the bottom and $\mathbf{p}' \uparrow$ at the top. The right line is labeled $-\mathbf{p} \downarrow$ at the bottom and $-\mathbf{p}' \downarrow$ at the top. The first and third terms include a dashed blue line connecting the two vertical lines, which then splits into two lines that cross each other before rejoining. The second and fourth terms include a dashed blue line connecting the two vertical lines, which then splits into two lines that cross each other before rejoining. The third and fourth terms also include a loop structure (two circles connected by a dashed blue line) between the two vertical lines. The expansion ends with an ellipsis.

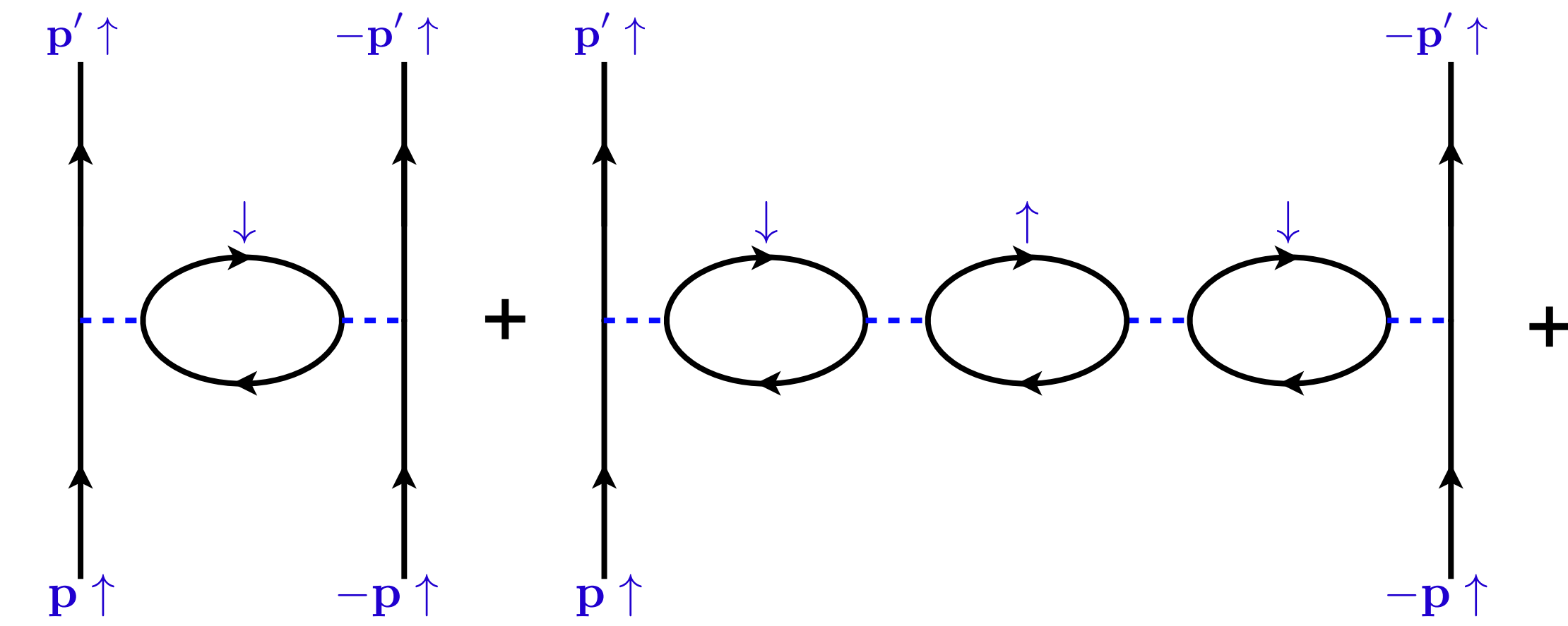
$$V_t =$$


Diagram illustrating the series expansion of V_t . The expansion consists of four terms separated by plus signs and ellipses. Each term features two vertical solid black lines with arrows pointing upwards. The left line is labeled $\mathbf{p} \uparrow$ at the bottom and $\mathbf{p}' \uparrow$ at the top. The right line is labeled $-\mathbf{p} \uparrow$ at the bottom and $-\mathbf{p}' \uparrow$ at the top. The first and third terms include a dashed blue line connecting the two vertical lines, which then splits into two lines that cross each other before rejoining. The second and fourth terms include a dashed blue line connecting the two vertical lines, which then splits into two lines that cross each other before rejoining. The third and fourth terms also include a loop structure (two circles connected by a dashed blue line) between the two vertical lines. The expansion ends with an ellipsis.