

$$I_4^{\{D=4-2\epsilon\}}(0, m_1^2, 0, m_2^2; t, u; 0, 0, m_1^2, m_2^2)$$

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$$I_4^{\{D=4-2\epsilon\}}(0, m_1^2, 0, m_2^2; t, u; 0, 0, m_1^2, m_2^2) = \frac{1}{(t - m_1^2)(u - m_2^2)} \left[\frac{1}{\epsilon^2} - \frac{1}{\epsilon} \left[\ln \left(\frac{m_2^2 - u}{m_2 \mu} \right) + \ln \left(\frac{m_1^2 - t}{m_1 \mu} \right) \right] \right. \\ \left. - \frac{\pi^2}{2} - \ln^2 \left(\frac{m_1}{m_2} \right) + 2 \ln \left(\frac{m_2^2 - u}{m_2 \mu} \right) \ln \left(\frac{m_1^2 - t}{m_1 \mu} \right) \right]$$

For Li_2 etc, see the file on [notation](#).

This integral has been given in Eq. (6.77) of ref [1].

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References

- [1] R. Höpker, Hadroproduction and decay of squarks and gluinos, (in german), DESY Internal report DESY-T-96-02, ([Relevant excerpt](#))