$$E_Y = \frac{m_Y c^2}{\sqrt{1 - v^2/c^2}}$$

$$= \frac{938\,\text{MeV}}{\sqrt{1 - (0.19859)^2/c^2}} = 957\,\text{MeV}.$$

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v) X is at rest in inertial frame of X, so from Conservation of energy

$$m_X c^2 = E_Y + E_Z$$

$$= (957 + 232.59)\,\text{MeV}$$

$$= 1189.6\,\text{MeV}$$

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