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If $\vec{P}$ is the 3-mom of one of the photons, its 4-mom must be $P^\mu = (|\vec{P}|, \vec{P})$ since $P^\mu P_\mu = 0$.

The other photon must have

$P'^\mu = (|\vec{P}|, -\vec{P})$ since the Higgs is at rest:

$$(m_{\text{Higgs}}, 0) = (|\vec{P}|, \vec{P}) + (|\vec{P}|, -\vec{P})$$

$$\Rightarrow m_{\text{Higgs}} = 2|\vec{P}| \simeq$$

$$2 \times \left(31.25^2 + 54.13^2 + 0^2 \right)^{\frac{1}{2}} \simeq 125 \text{ GeV.}$$