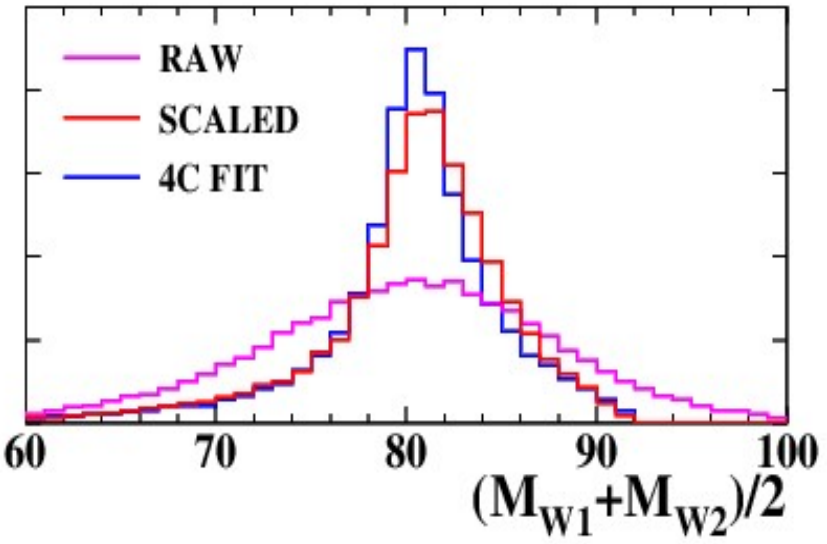
Impact of constrained fits?

- At LEP : improvement factors of 2-3 are quoted for the $m_{jet\text{-}jet}$ resolution.
  - Mostly valid for qqqq events where kinematic information is maximal, allowing 4C (E,p conservation) or 5C (E,p cons. + m_1=m_2)
  - Smaller improvement for lνqq, but no explicit number found
  - The effect is also experiment dependent, as better experimental resolution will leave less margin for improvement.



Impact of constrained fits?

- Can we get a quick estimate for the CEPC detector?
  - Initial resolution better than at LEP
  - Simplest : “rescaling”: $E_i \rightarrow \alpha_i E_i$, such that $(E_{tot}, p) = (\sqrt{s}, 0)$
  - More involved (but standard): kinematic fit