The ATLAS collaboration presents a study of the diphoton mass spectrum at the CERN Large Hadron Collider (LHC) with a center-of-mass energy of $\sqrt{s} = 13$ TeV, using an integrated luminosity of 36.1 fb$^{-1}$. The plot shows the distribution of diphoton masses ($m_{\tau\tau}^{\text{MMC}}$) in GeV, comparing data with predictions and various background contributions.

- **Data**: Represented by black circles.
- **$Z \rightarrow \tau\tau$**: Shaded blue area, indicating the expected yield for the decay of a $Z$ boson into two tau leptons.
- **Misidentified $\tau$**: Yellow shaded area, accounting for misidentified tau leptons.
- **$t\bar{t}/Wt$**: Orange shaded area, representing top quark pair and wide boson contributions.
- **Other bkg**: Purple shaded area, encompassing other backgrounds.

The bottom panel of the graph displays the ratio of data to prediction, with error bars indicating the uncertainties in each bin. The uncertainties are represented by the shaded region in the lower part of the plot.