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$e^+e^- \rightarrow \gamma X(3872)$ cross section measurement

We study the process of $e^+e^- \rightarrow \gamma \omega J/\psi$ with 11.6 fb^{-1} e^+e^- annihilation data taken at center-of-mass energies from 4.008 GeV to 4.600 GeV with the BESIII detector at the BEPCII storage ring. $X(3872) \rightarrow \omega J/\psi$ is observed with more than 5 sigma significance for the first time. The $X(3872)$ mass is measured to be $3873.3 \pm 1.1 \pm 1.0 \text{ MeV}$. The ratio of the decay rate of $X(3872) \rightarrow \omega J/\psi$ to $X(3872) \rightarrow \pi\pi J/\psi$ is measured to be $1.6 \pm 0.4 \pm 0.2$, which indicates a large iso-spin violation effect. The \sqrt{s} dependent cross section of is also investigated.

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