

Looking for X17 at PADME

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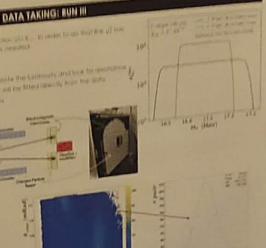
X₁₇ ANOMALY

Recent search of the $\chi(3590)$ candidate decay into $\pi^+\pi^-$ at the $\chi(3590)$ resonance results to the $\chi(3590) \rightarrow \pi^+\pi^-$ decay. Comparison for $\pi^+\pi^-$ to the $\chi(3590)$ decay of $\chi(3590) \rightarrow \pi^+\pi^-$ is performed. PADME can probe directly the existence of $\chi(3590)$ decay into $\pi^+\pi^-$ by the detection of $\chi(3590)$ decay.



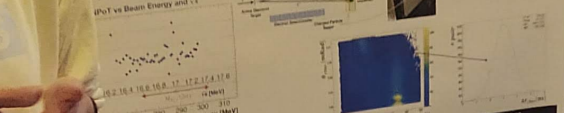
THE PADME EXPERIMENT

Production threshold of $\chi(3590)$ is $\sqrt{s} = 3590$ MeV. PADME is a e^+e^- collider with a center-of-mass energy of $\sqrt{s} = 3590$ MeV. The PADME experiment is a e^+e^- collider with a center-of-mass energy of $\sqrt{s} = 3590$ MeV. The PADME experiment is a e^+e^- collider with a center-of-mass energy of $\sqrt{s} = 3590$ MeV.



X₁₇ → DEDICATED DATA TAKING: RUN III

At 3590 MeV, PADME can probe the $\chi(3590)$ decay into $\pi^+\pi^-$ by the detection of $\chi(3590)$ decay. The PADME experiment is a e^+e^- collider with a center-of-mass energy of $\sqrt{s} = 3590$ MeV. The PADME experiment is a e^+e^- collider with a center-of-mass energy of $\sqrt{s} = 3590$ MeV.



ANALYSIS STRATEGY AND THEORETICAL ESTIMATION OF THE EXPECTED LIMITS

The analysis strategy is based on the detection of $\chi(3590)$ decay into $\pi^+\pi^-$ by the detection of $\chi(3590)$ decay. The PADME experiment is a e^+e^- collider with a center-of-mass energy of $\sqrt{s} = 3590$ MeV. The PADME experiment is a e^+e^- collider with a center-of-mass energy of $\sqrt{s} = 3590$ MeV.



REFERENCES

- [1] ...
- [2] ...
- [3] ...

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