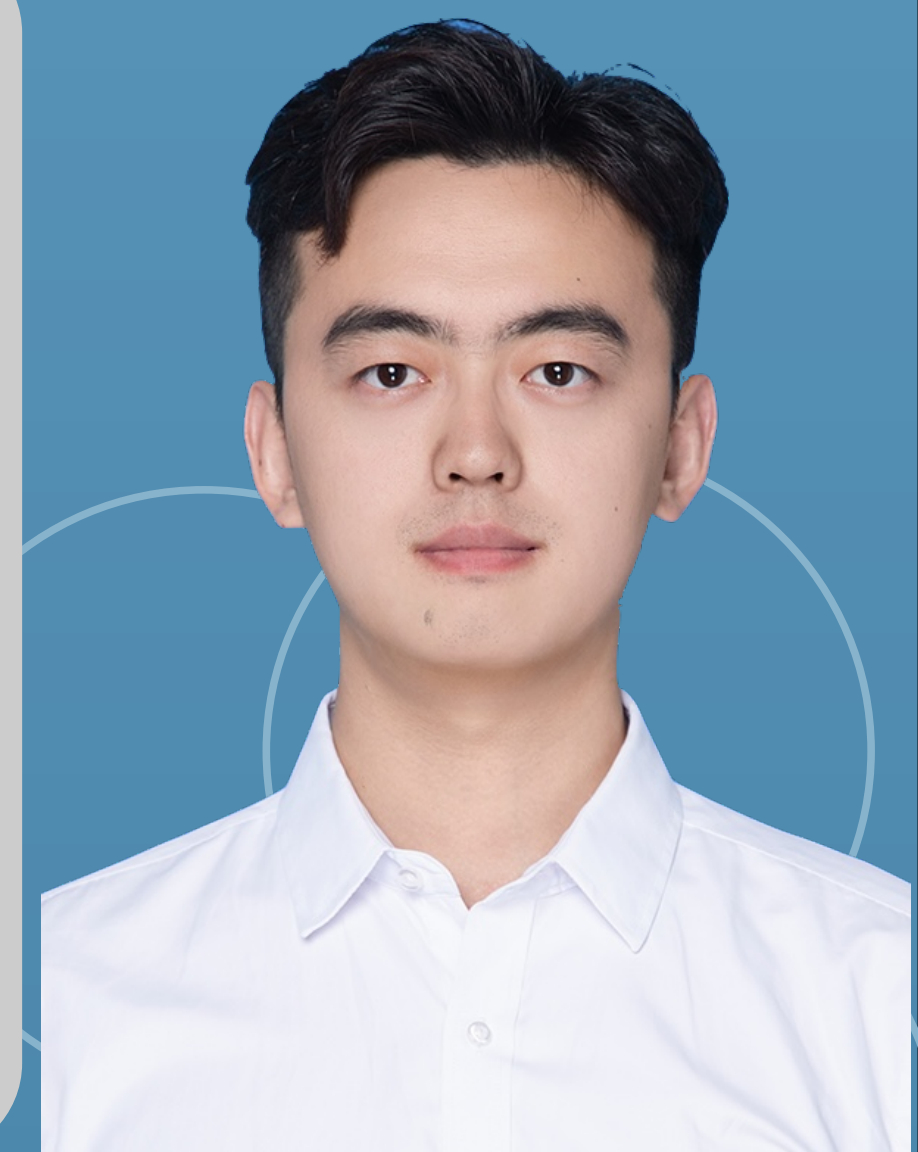


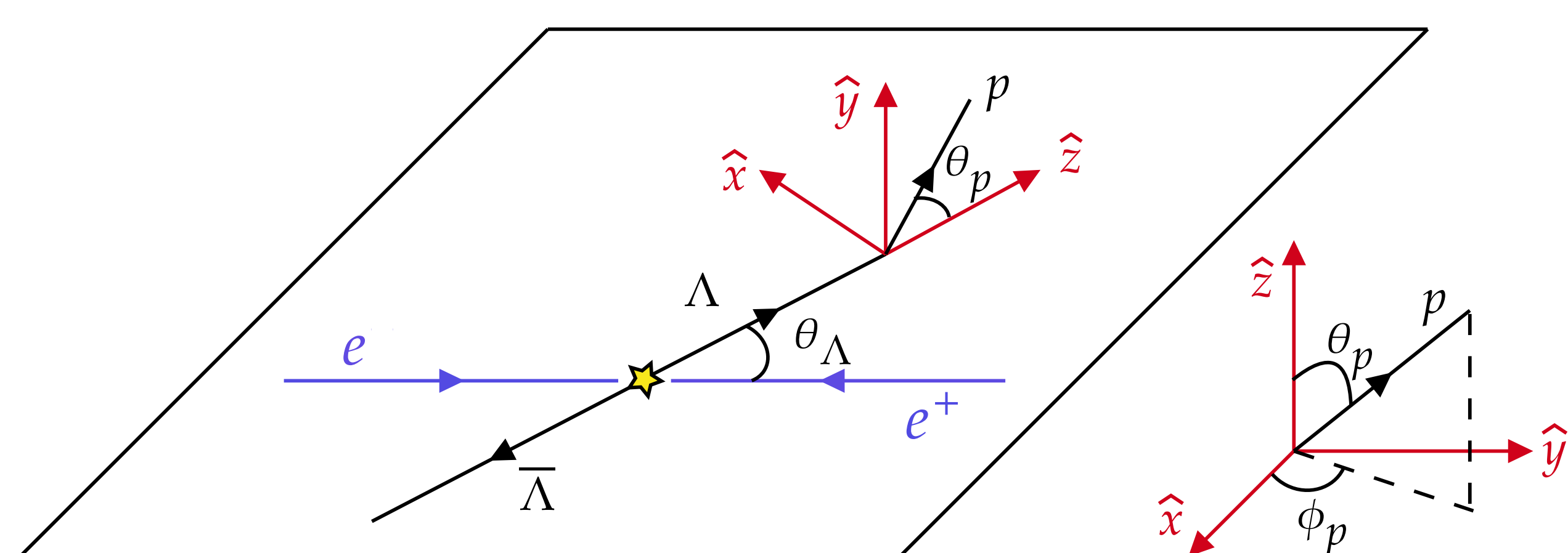
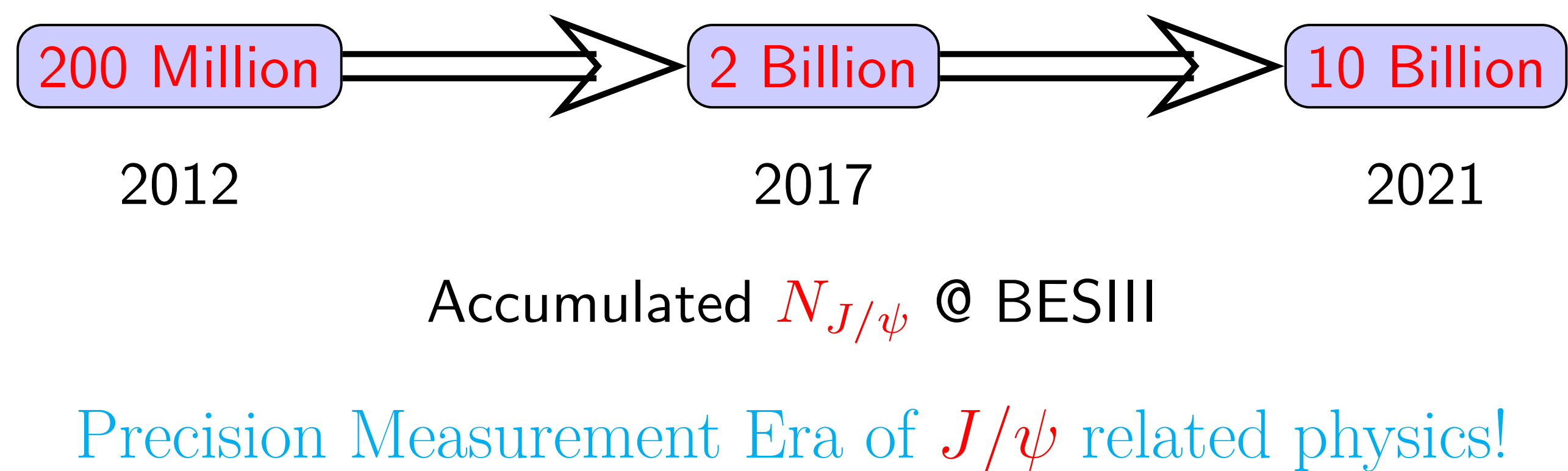


Low-mass Z' in isospin violating decays of J/ψ

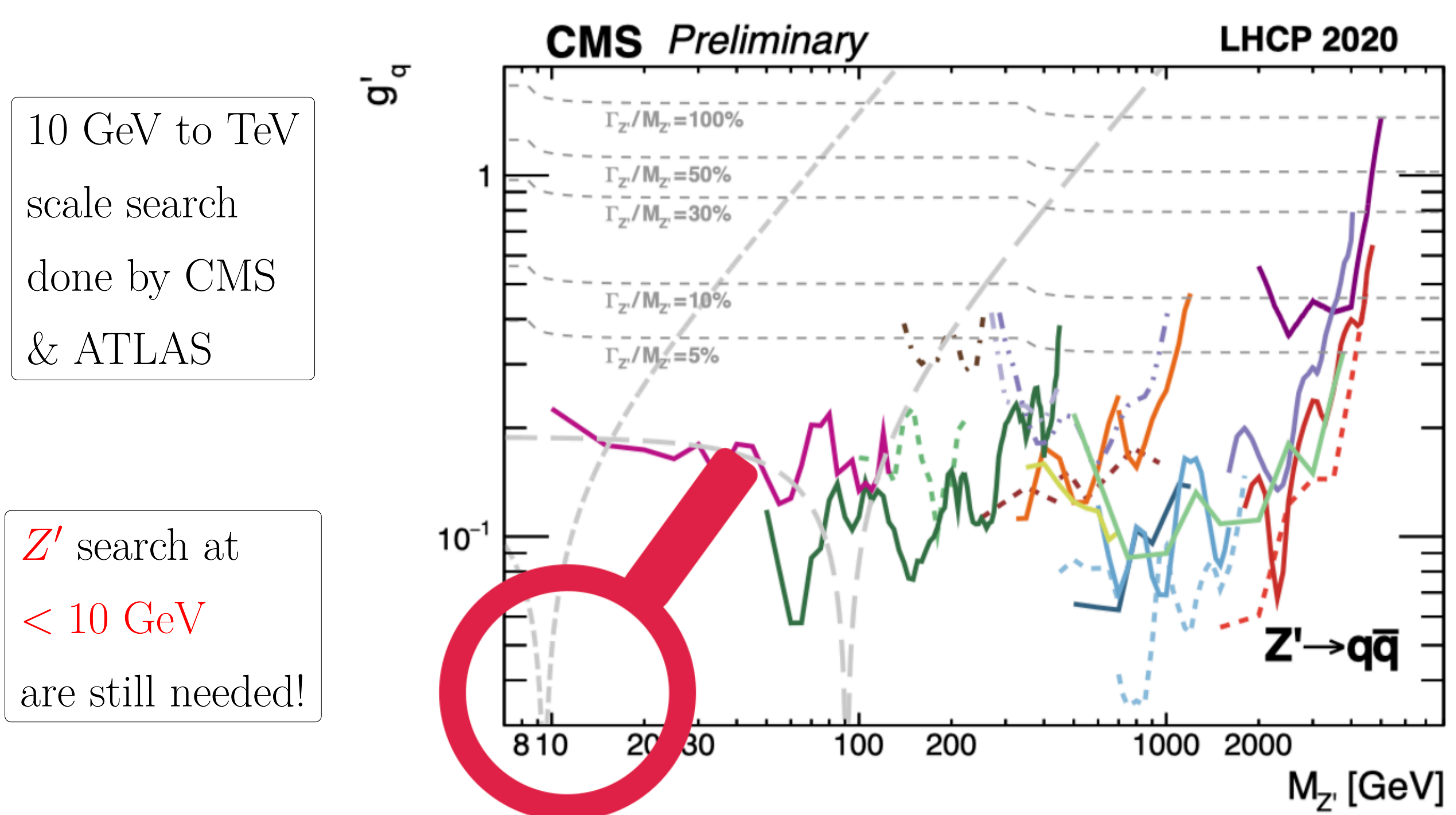
Jiabao Zhang (张嘉宝), in collaboration with Dr. Chia-Wei Liu(劉佳韋),
under supervision of Prof. Chao-Qiang Geng(耿朝強)
Hangzhou Institute for Advanced Study, UCAS



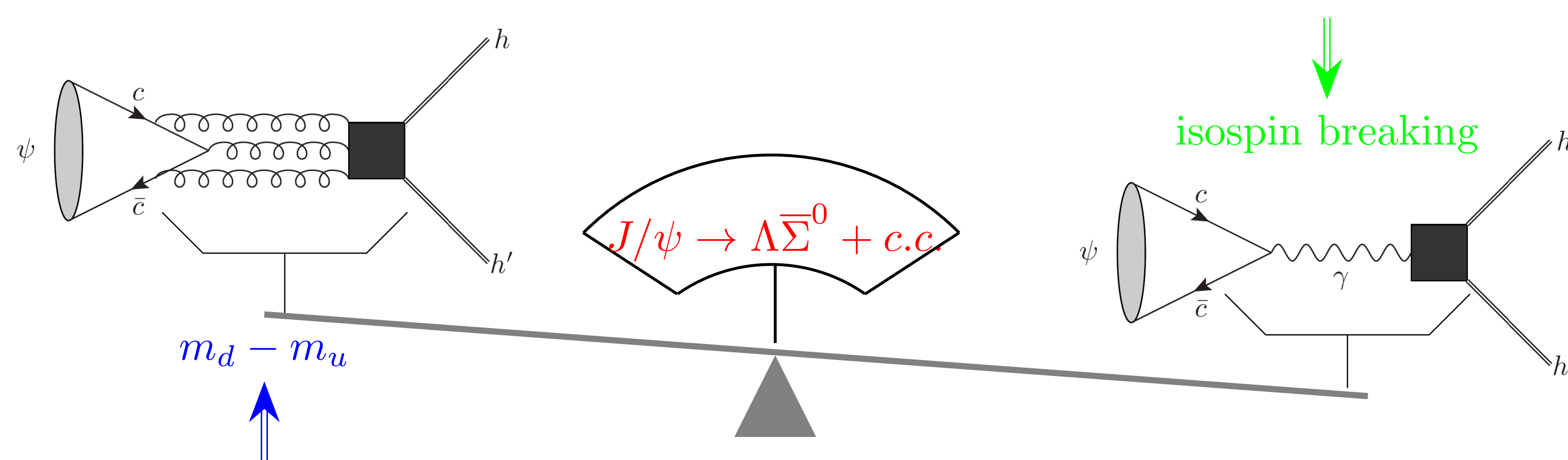
Background



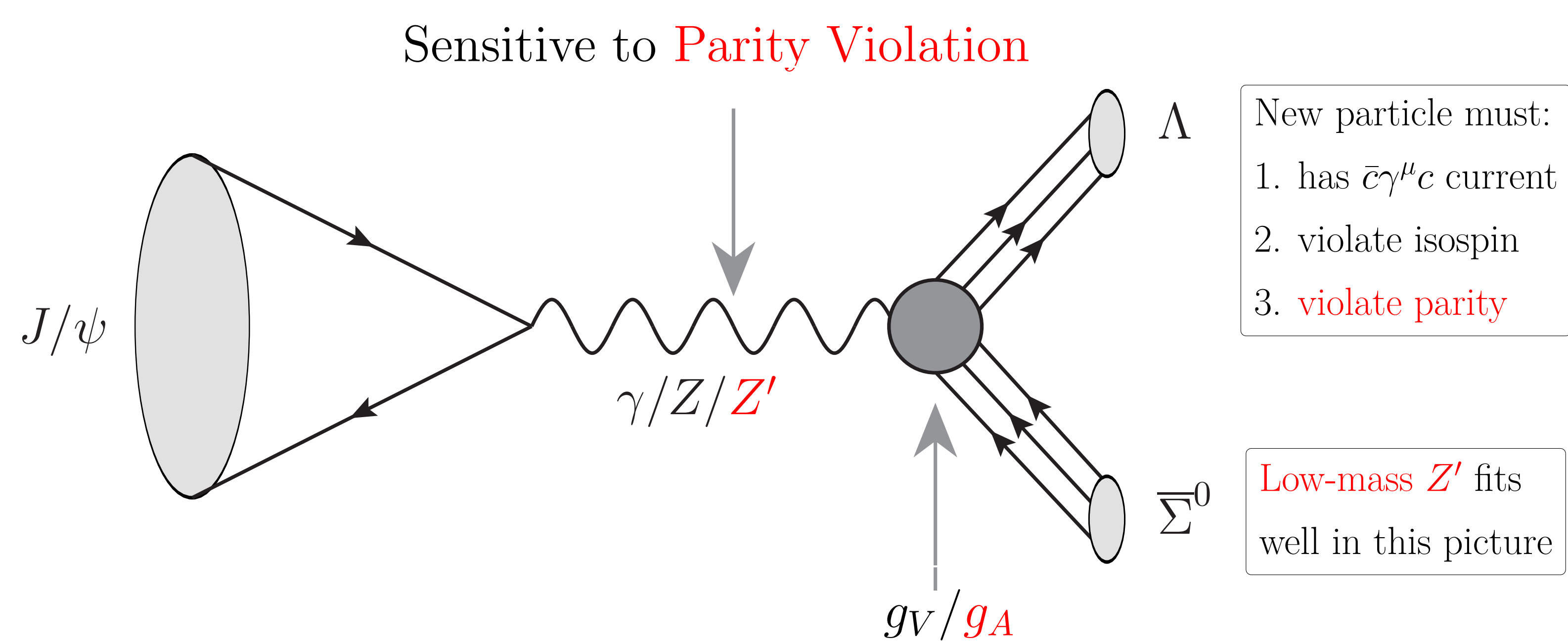
Entangled Hyperon Pair & Rich Physics in Angular Distribution!



Motivation



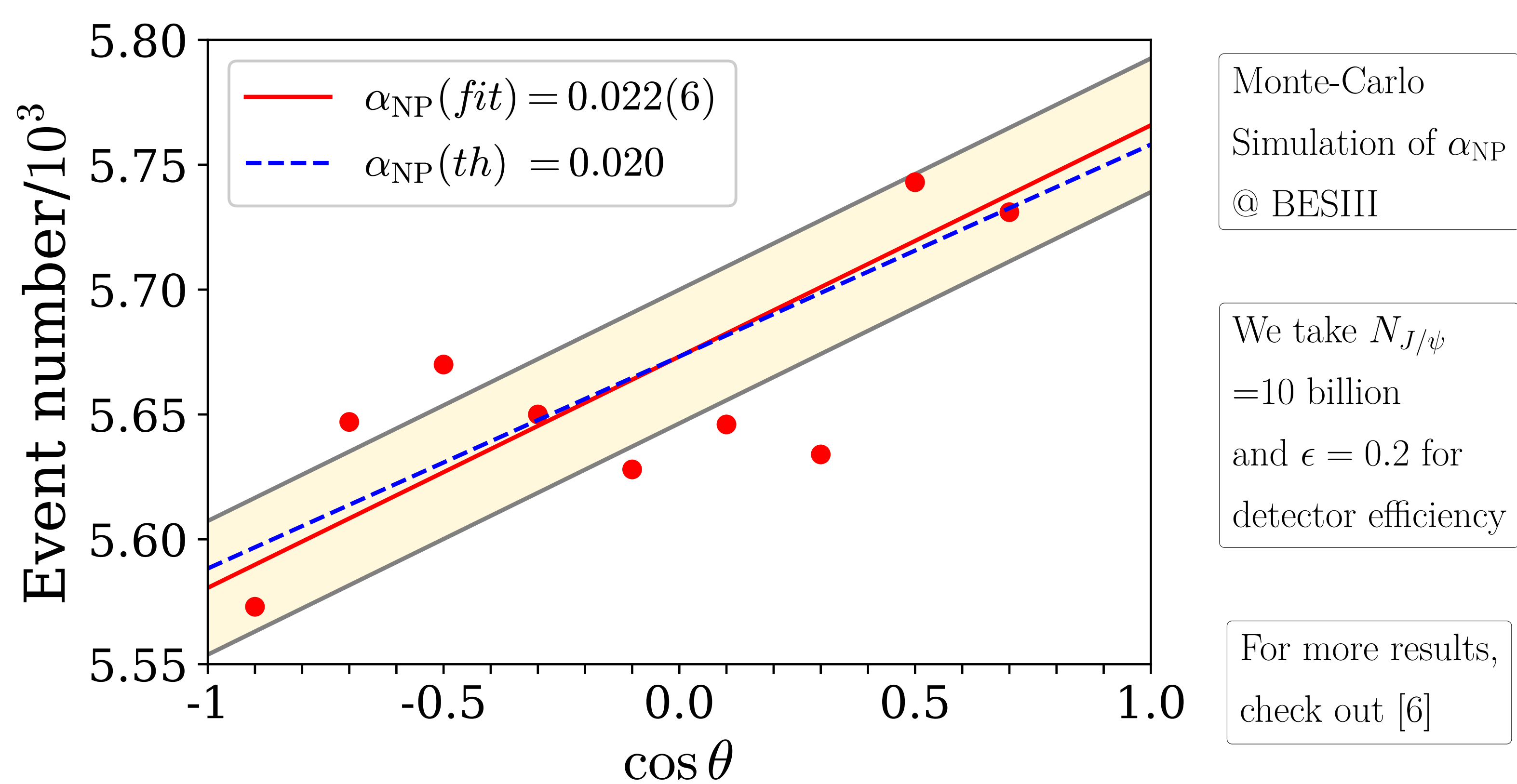
The reversed ratio between Strong and Electromagnetic amplitudes



Results

Channels	$10^5 \mathcal{B}$		α_ψ	
	This work [5]	Exp.	This work	Exp.
$J/\psi \rightarrow \Lambda\bar{\Sigma}^0 + c.c.$	2.40 ± 0.40	2.83 ± 0.23 [1]	0.314	0.418 ± 0.030 [4]
$\psi(2S) \rightarrow \Lambda\bar{\Sigma}^0 + c.c.$	0.30 ± 0.05	0.16 ± 0.07 [2] 1.23 ± 0.24 [3]	0.461	

\mathcal{B} for branching fractions, α_ψ for decay asymmetries. Red result comes after our paper.



References

参考文献

- [1] M. Ablikim et al. [BESIII], Phys. Rev. D 86, 032008 (2012).
- [2] M. Ablikim et al. [BESIII], Phys. Rev. D 103, 112004 (2021).
- [3] S. Dobbs, K. K. Seth, et al, [CLEO] Phys. Rev. D 96, 092004 (2017).
- [4] M. Ablikim et al. [BESIII], arXiv:2309.04139.
- [5] C. Q. Geng, C. W. Liu and J. Zhang, Eur. Phys. J. C 83, no.10, 973 (2023).
- [6] C. Q. Geng, C. W. Liu and J. Zhang, arXiv:2309.11066.

Check These Out!



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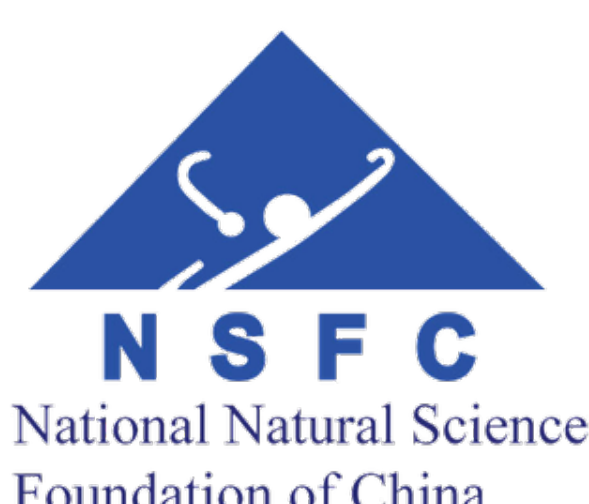


Eur.Phys.J.C 83 (2023) 10, 973



2309.11066

Acknowledgement



These work are supported in part by the National Natural Science Foundation of China (NSFC) under Grant No. 12147103 and 12205063.
Special thanks to Prof. Xiaorong Zhou(周小蓉) and Dr. Zekun Jia(贾泽坤) from the USTC!!