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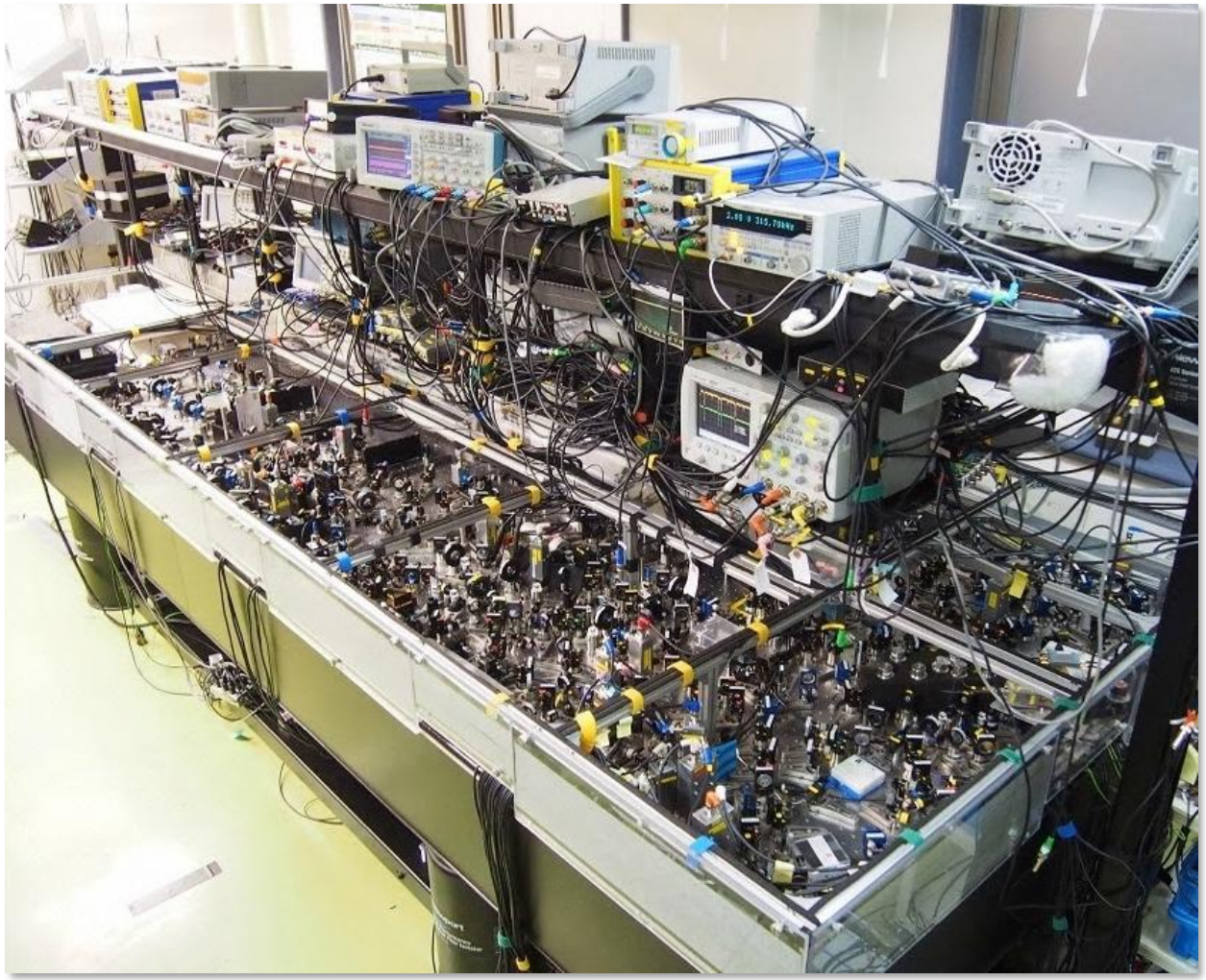

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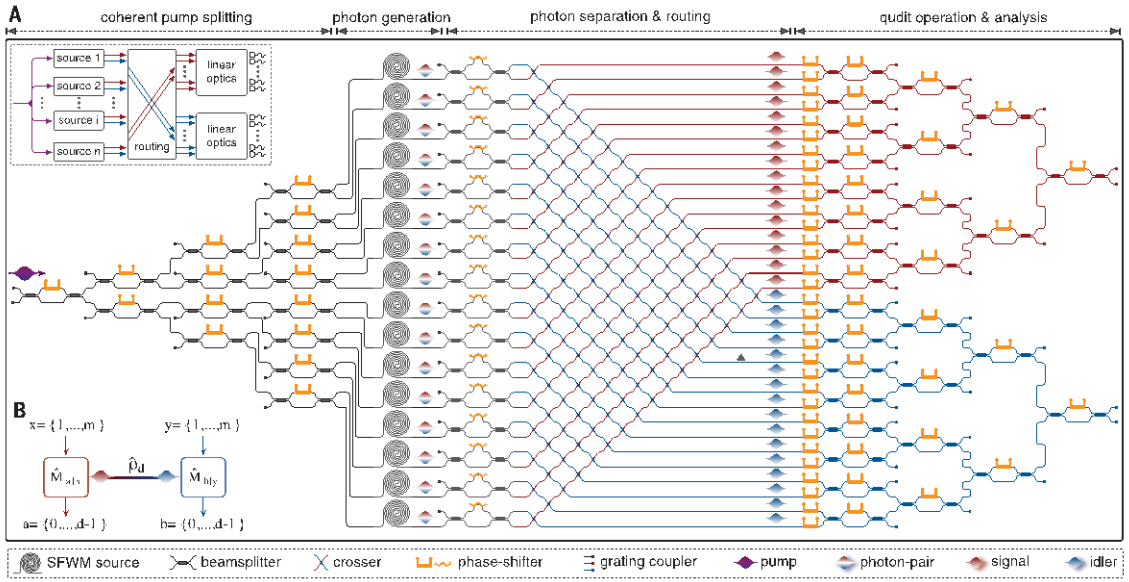

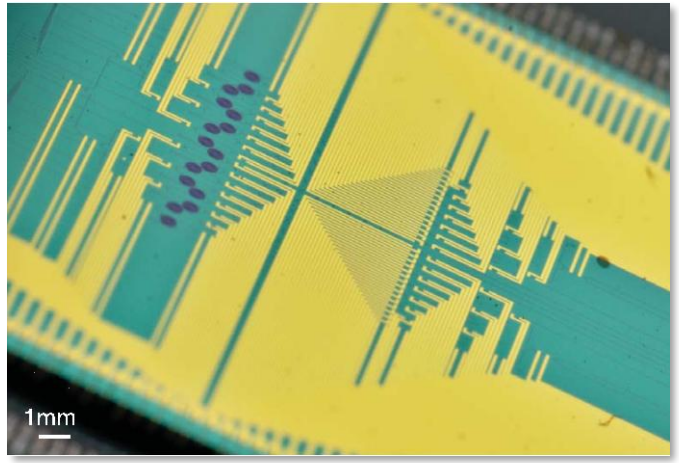

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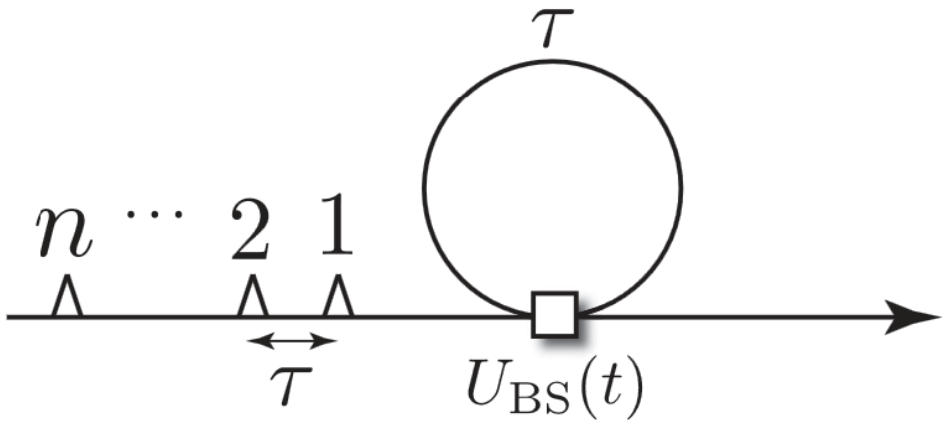

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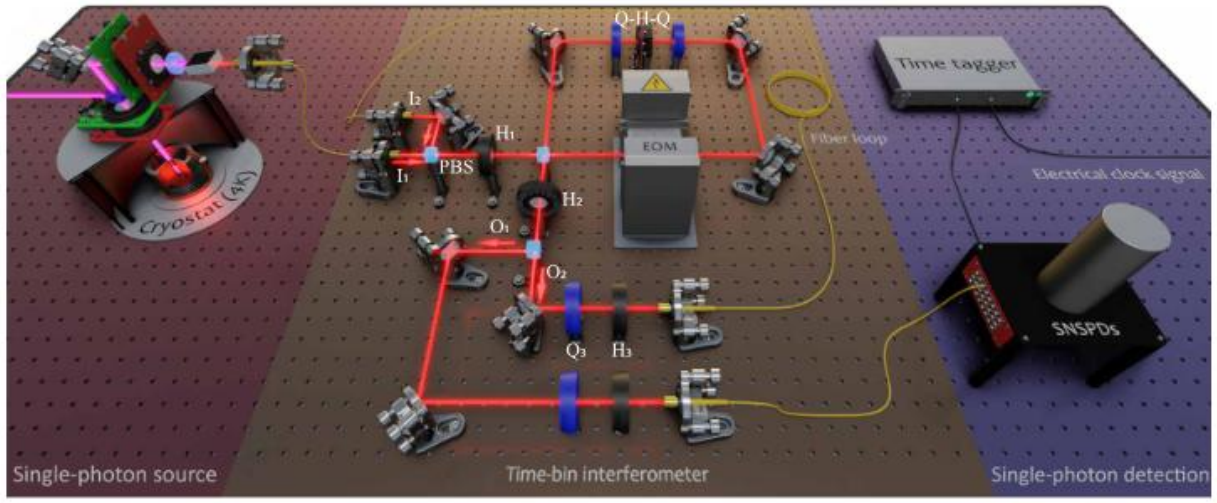

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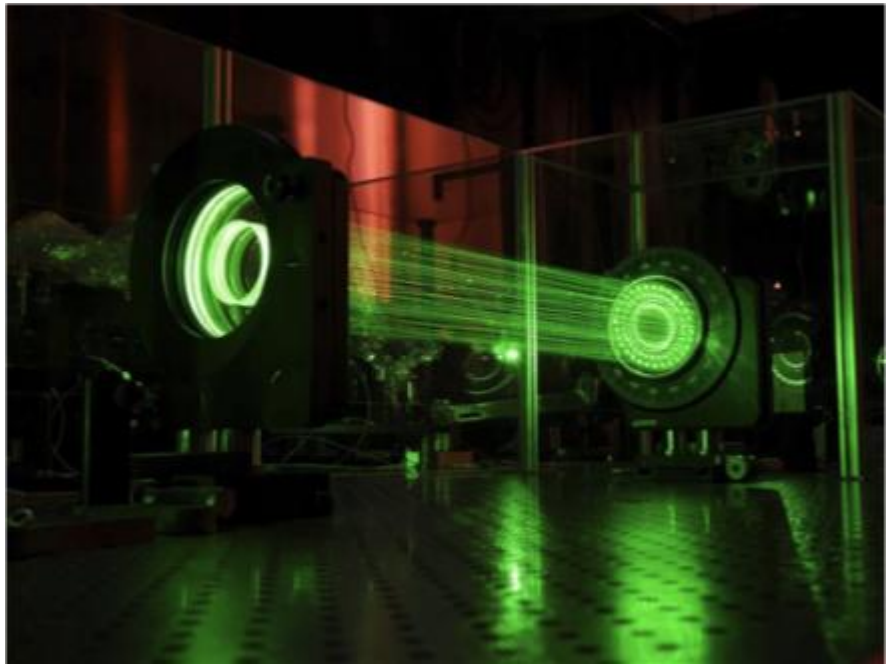

RESEARCH ARTICLE | FEBRUARY 05 2026

Highly efficient and broadband optical delay line toward a quantum memory

Yu Guo ; Anindya Banerji ; Jia Boon Chin ; Arya Chowdhury ; Alexander Ling

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APL Photonics 11, 026103 (2026)

https://doi.org/10.1063/5.0305471

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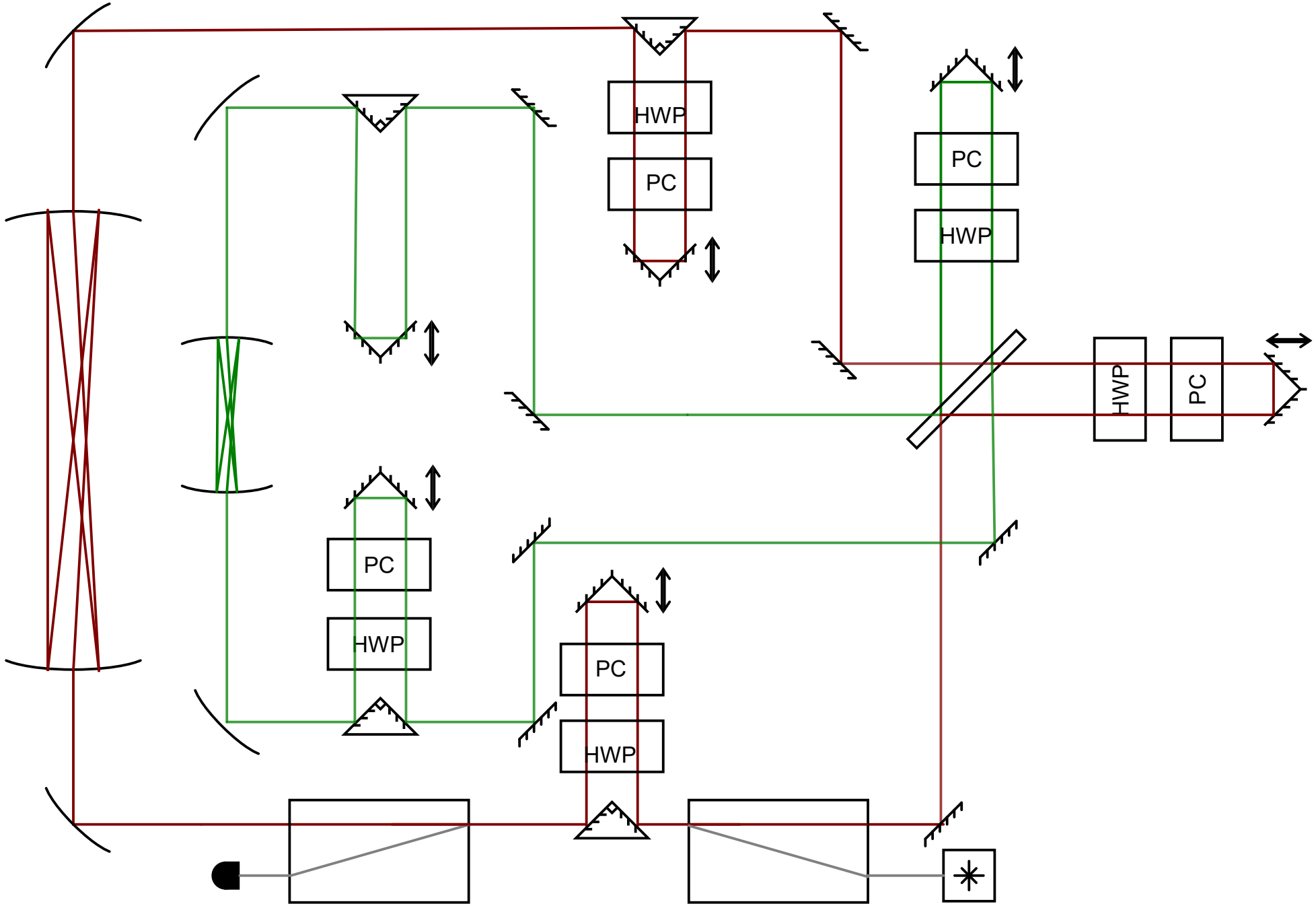

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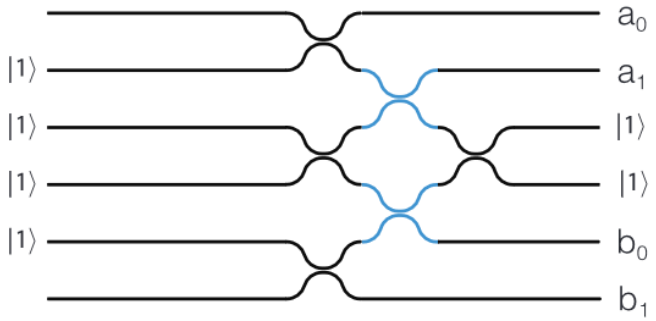
Component	Efficiency
Mirror	0.99995
Crystal	0.9975
QD Brightness	0.5
SNSPD	0.8
Small loop (30 mirrors, 4 crystals)	0.988553
Big loop (120 mirrors, 8 crystals)	0.974311
Pump rate (MHz)	40



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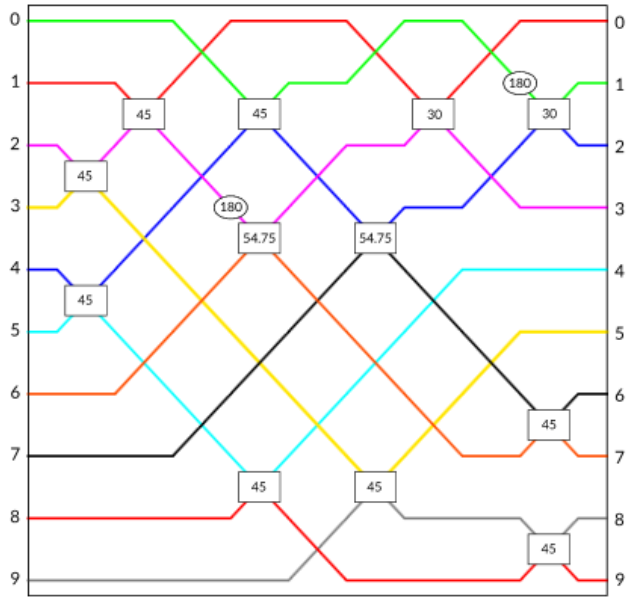
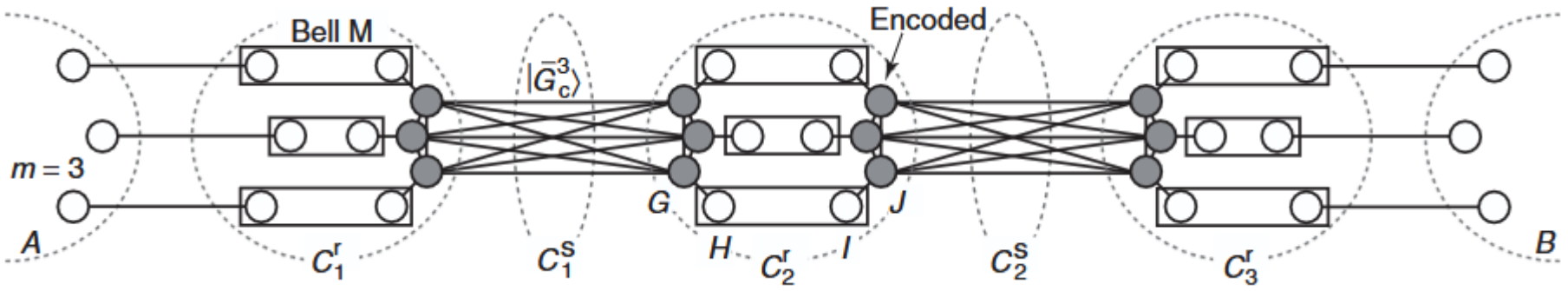


Gubarev et al., PRA 102 012604 (2020)
https://doi.org/10.1103/PhysRevA.102.012604

Scheme	Photons	Small loop	Big loop	Heralding	Total Success	Rate	State of the Art
Bell state	4	6	3	0.074	6.06E-04	24kHz	~kHz
GHZ	6	10	6	0.019	4.71E-07	18Hz	~Hz



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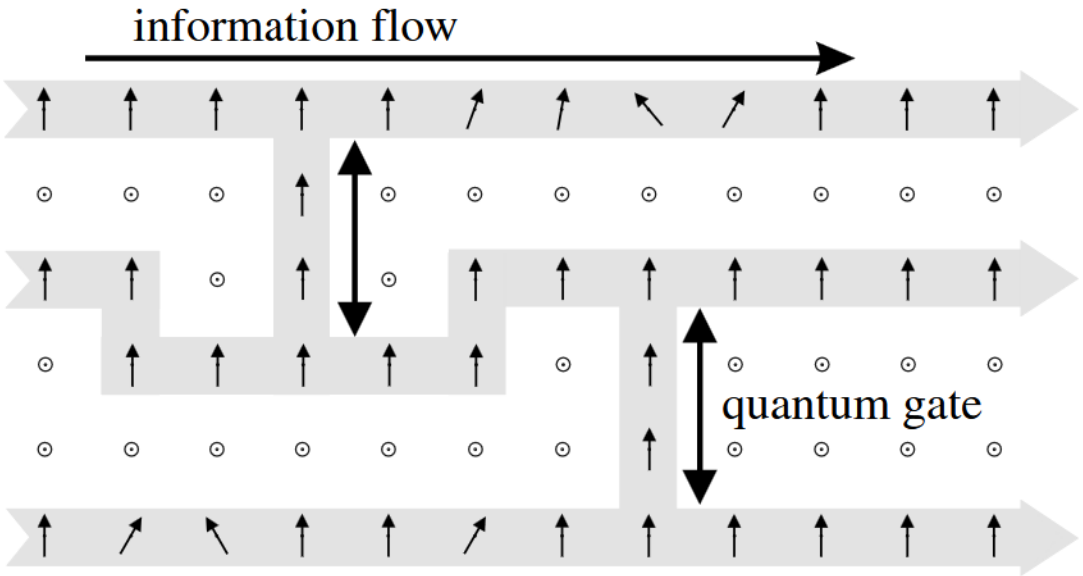

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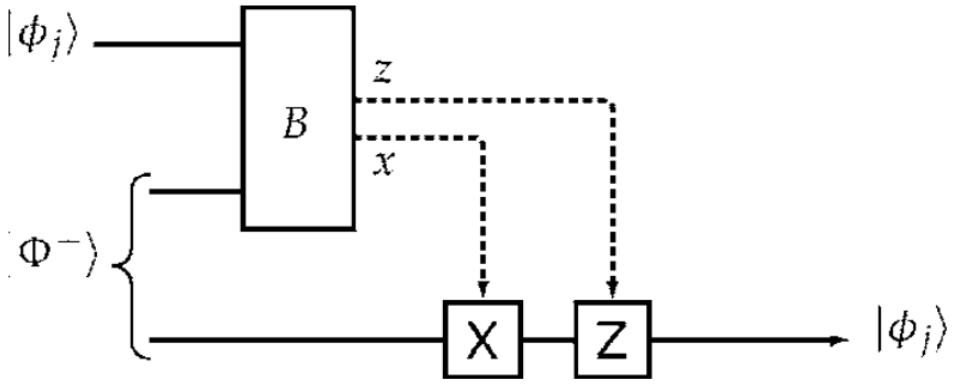

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