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## Magnetic Measurement of Tapered Gap U50 Undulator

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The Tapered undulator provides interesting possibilities for keeping the undulator in resonance with the electron beam along the length of the undulator. The U50-II [1,2] undulator at Laser and Insertion Device Application Laboratory of DAVV, India is a 1000mm length, 50mm period length undulator. The four heavy-duty precise lead screw attached to the mechanical girder allows its gap to be tapered. In this paper, we report the field integral, phase error measurement of the tapered U50-II PPM undulator by Hall probe method and compare its accuracy by stretched wire result [3].

### Funding Agency

### Footnotes

- [1] Mona Gehlot et al, undulator development activities at DAVV- Indore, FLS-2018, China.doi:10.18429/JACoW-FLS2018-WEP2PT030.
- [2] M. Gehlot, S. M. Khan, et al, "Magnetic Field Integral Measurements with Stretched Wire and Hall Probe Methods", IEEE Transactions on Magnetics, vol. 56, May 2020.doi: 10.1109/TMAG.2020.2976031.
- [3] M. Tischer et al, Magnetic Tuning and Installation Modifications of U48 undulator for Delhi Light Source (DLS). IPAC2021, Brazil.doi:10.18429/JACoW-IPAC2021-WEPAB13.

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