Title:	Milky way rotational curve measurments with 21cm horn antenna
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Keywords:	Milky way curve horn antenna
Issue Date:	May-2023
Publisher:	IISER Mohali
Abstract:	In this thesis, we probe the Milky Way galaxy at the HI line to obtain the rotational curve of our galaxy. For this, first, a 21 cm Horn antenna is simulated and built such that it is sensitive enough to receive signals from the Milky Way. Then Milky Way is observed at a galactic latitude from 0 ◦ − 180 ◦ to receive the Doppler shifted signals from the HI clouds since they are rotating around the galactic center. Velocities and distances of these HI clouds in the Milky Way are calculated using the tangent point or vector velocity method. We are able to get the flat rotational curve with our measurements, with an average velocity of 225.5Km/s. The distance from the galactic center covered by this project is from the range of 4kpc ± 3kpc to 11kpc ± 8kpc.
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