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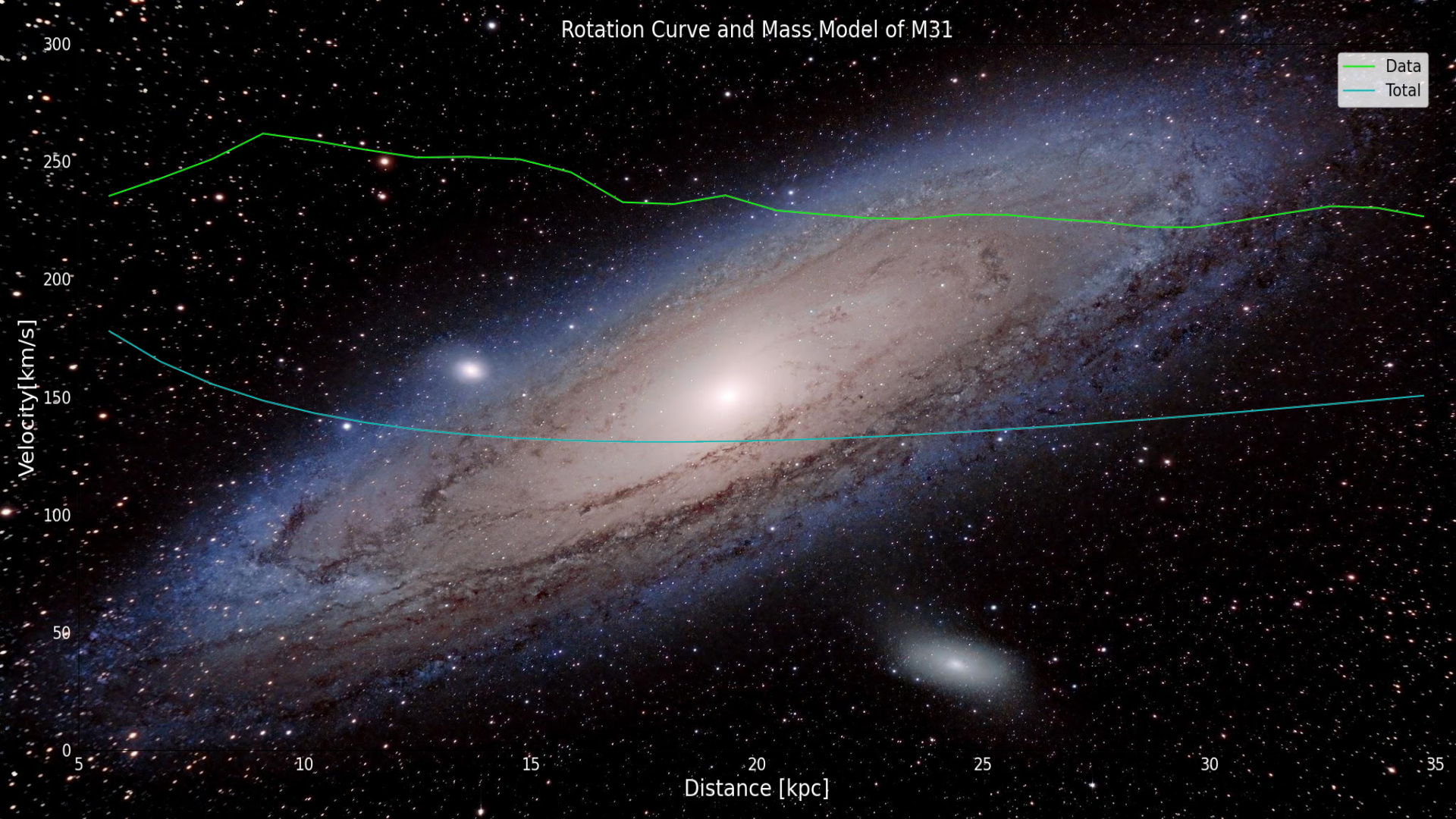
Rotation Curve and Mass Model of M31
Data
Total
Velocity[km/s]
300
250
200
150
100
50
0
5
10
15
20
25
30
35
Distance [kpc]

This figure depicts the difference between the expected data of the Andromeda Galaxy (green line) and the actual orbital velocity that was observed (blue line). These curves represent the speed at which the stars and gas that make up the galaxy are moving compared to their distance from the center of the galaxy. From the figure, we see that there is something missing from the observed curve, which we determined to be dark matter. This dark matter is a material that does not emit light and therefore, we cannot see it with our eyes. This makes it difficult to detect without looking at the galaxy rotation curves and comparing them.