

UGC 2885

Vera Rubin's Galaxy

Benne W. Holwerda (University of Louisville)

Rupali Chandar, Pauline Barmby, Saavik Ford, Jeremy
Bailin, Molly Peeples, Joanna Bridge, Alice Jacques,
Kyle Hixenbaugh, Shawn Knabel, Ren Mullins



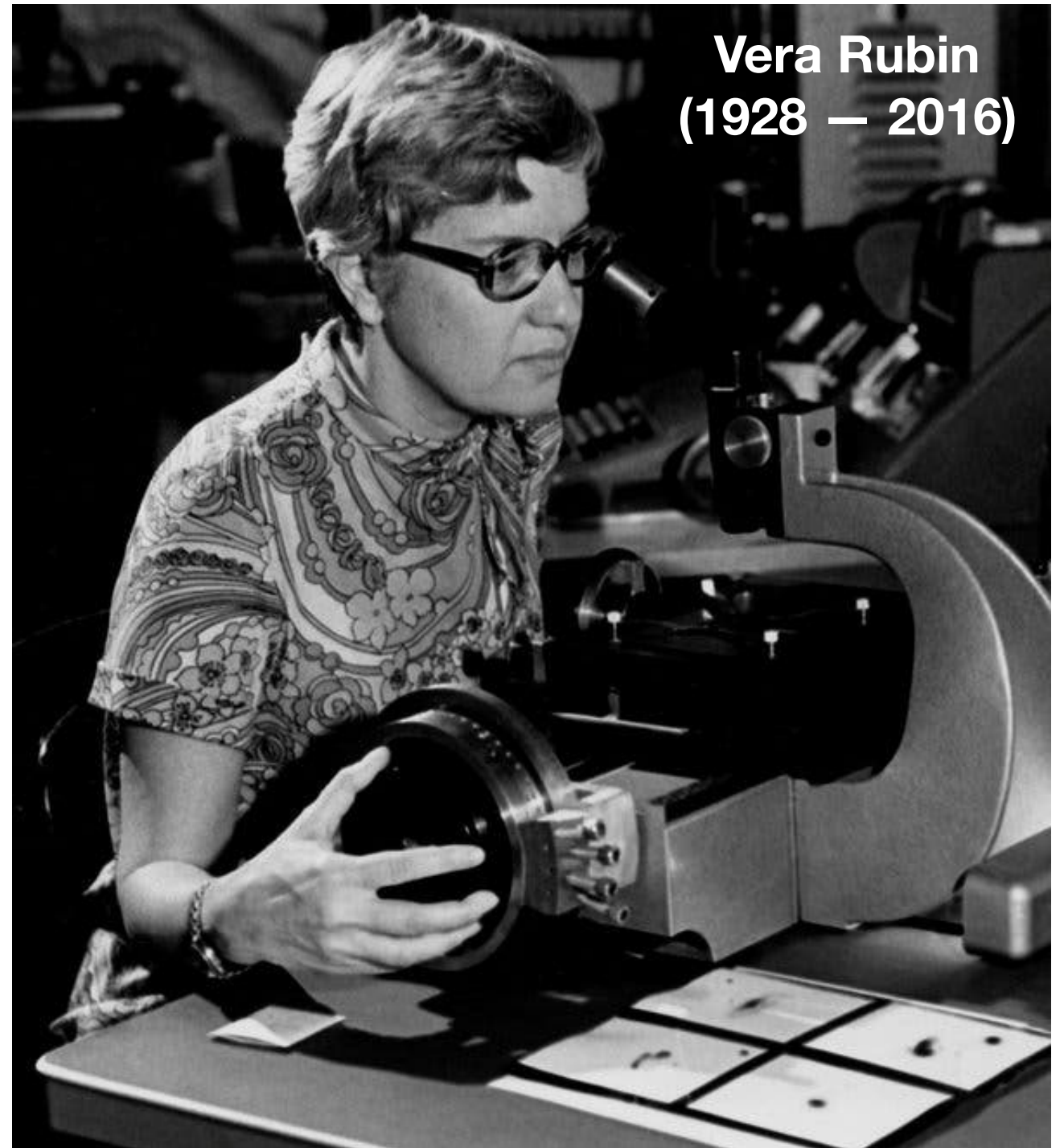
@benneholwerda



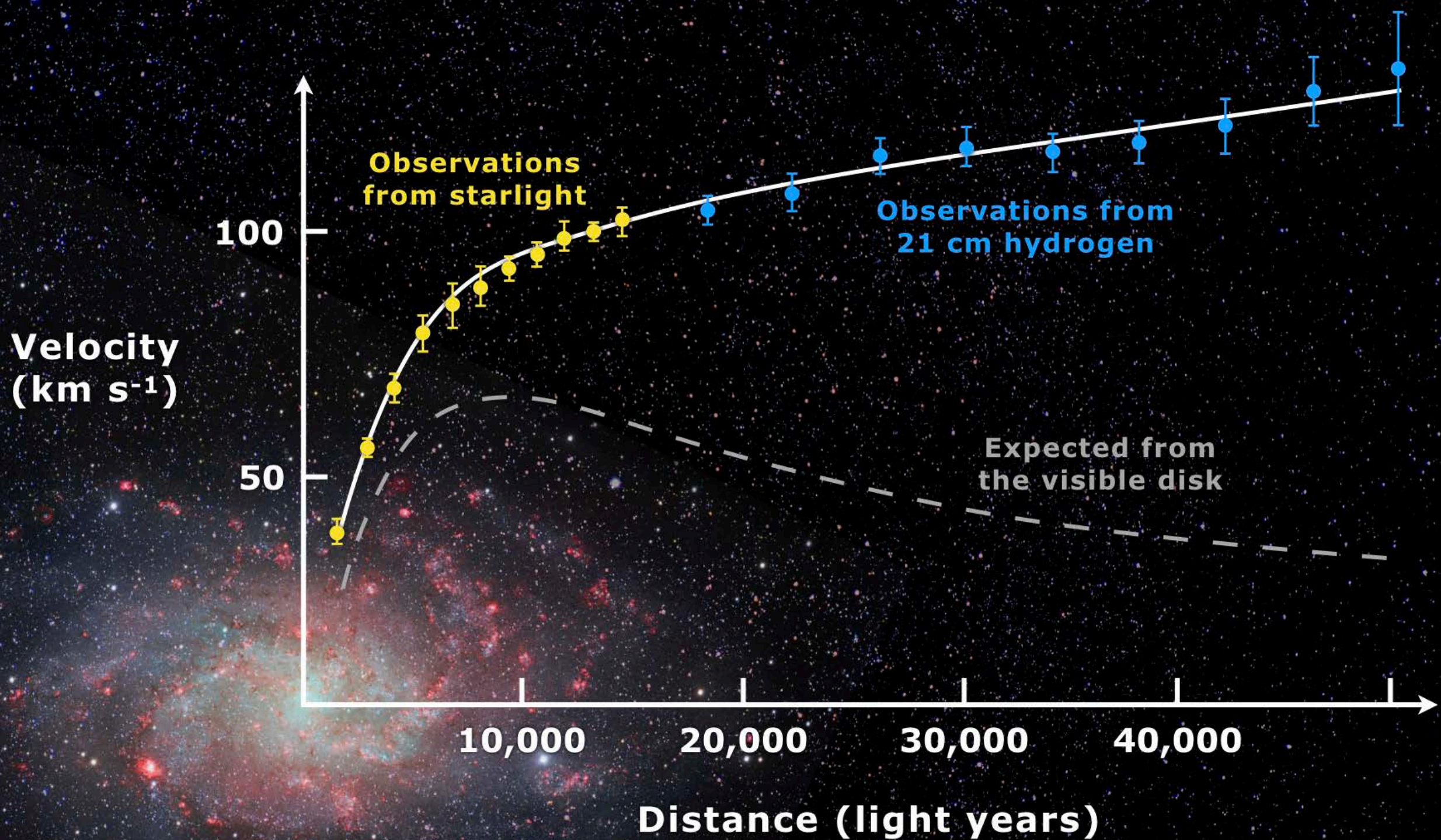
benne.holwerda@gmail.com

Vera Rubin

- Published one of two studies showing evidence for dark matter in galaxies from their rotation.
- Encouraged and supported young scientist throughout her career.

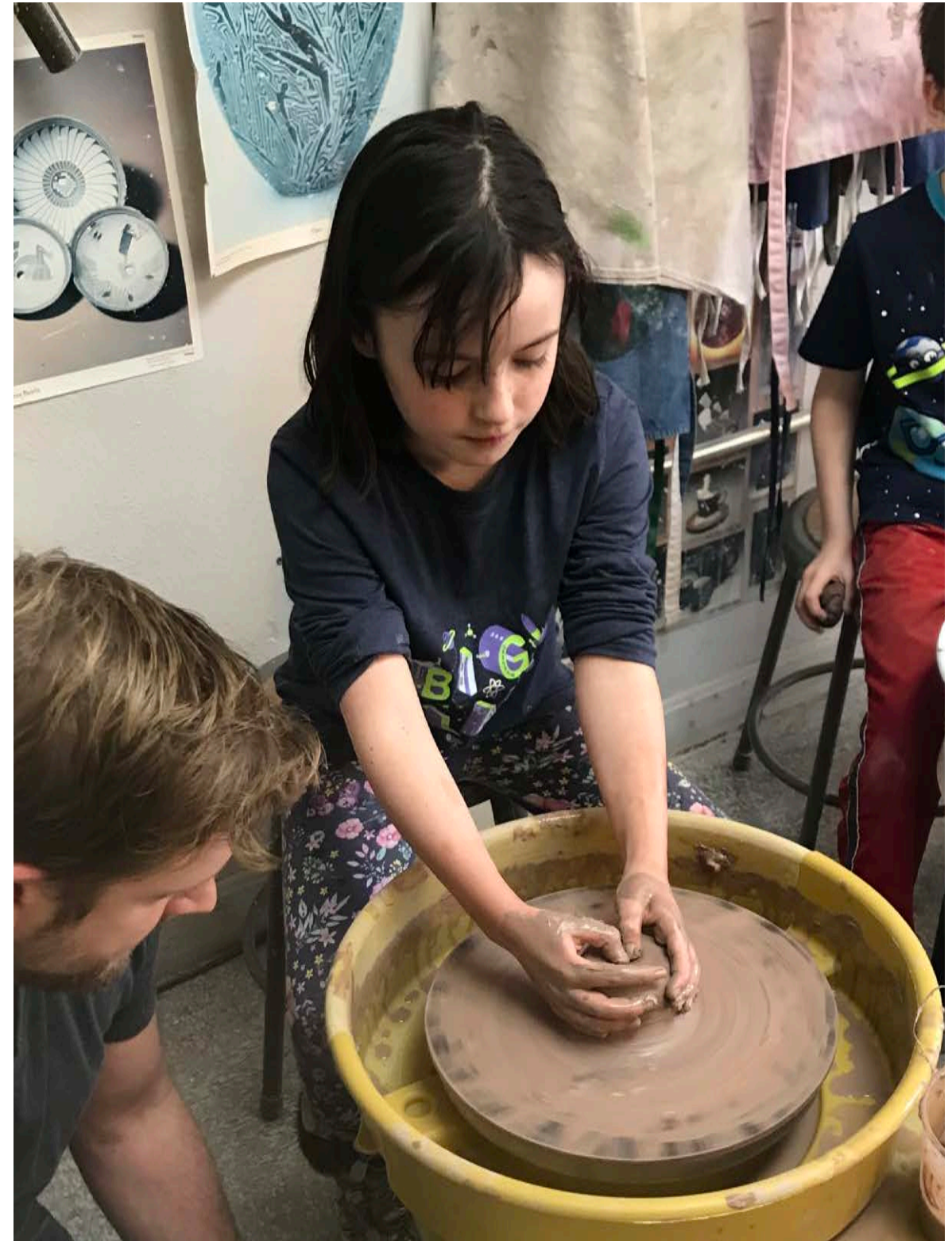


Galaxies Rotate



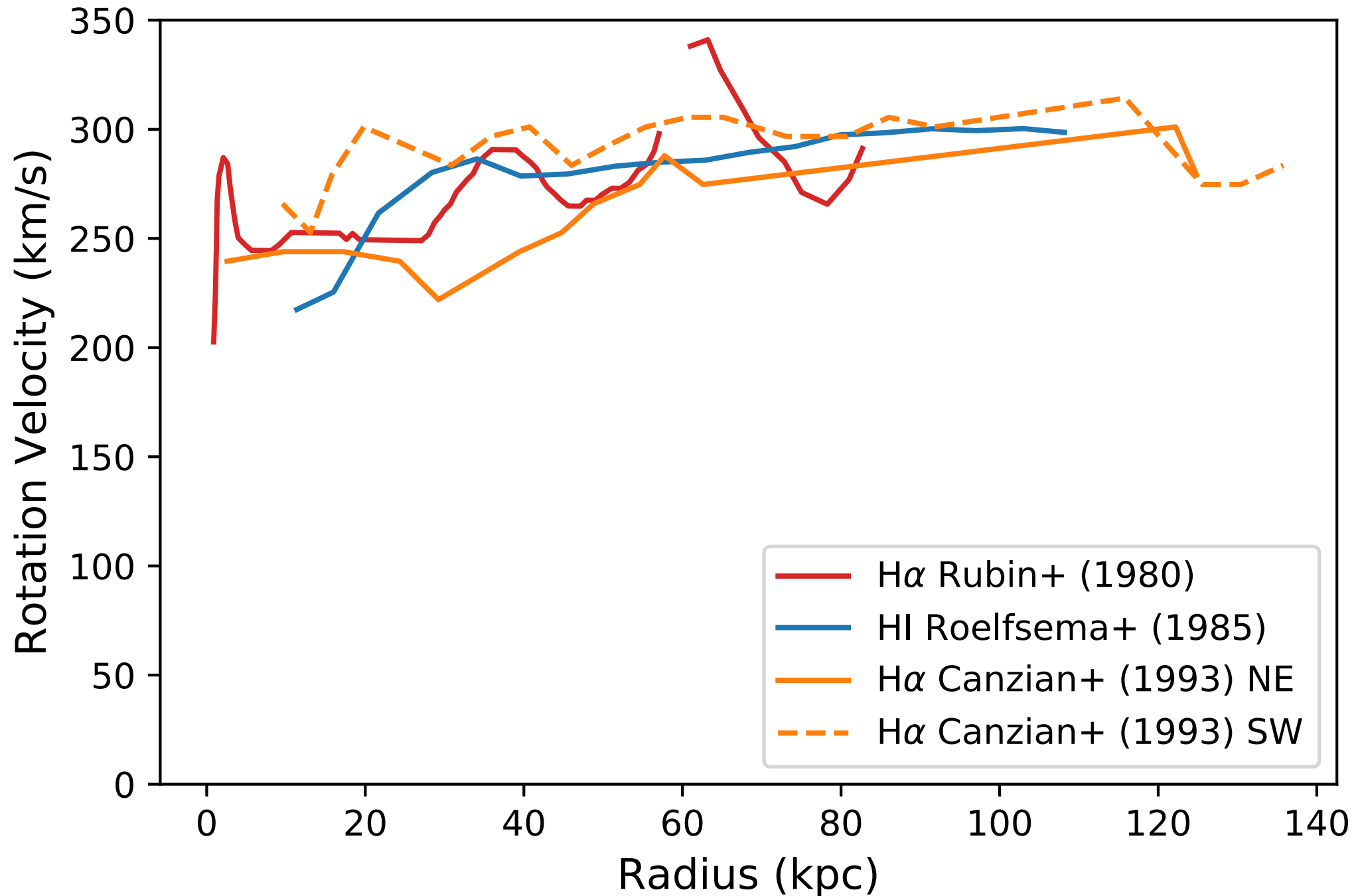
Galaxy Rotation

- Galaxies do not rotate as a disk.
- They do not rotate like the planets around the sun either.
- Flat rotation means they spin as something in between with more mass throughout the disk.



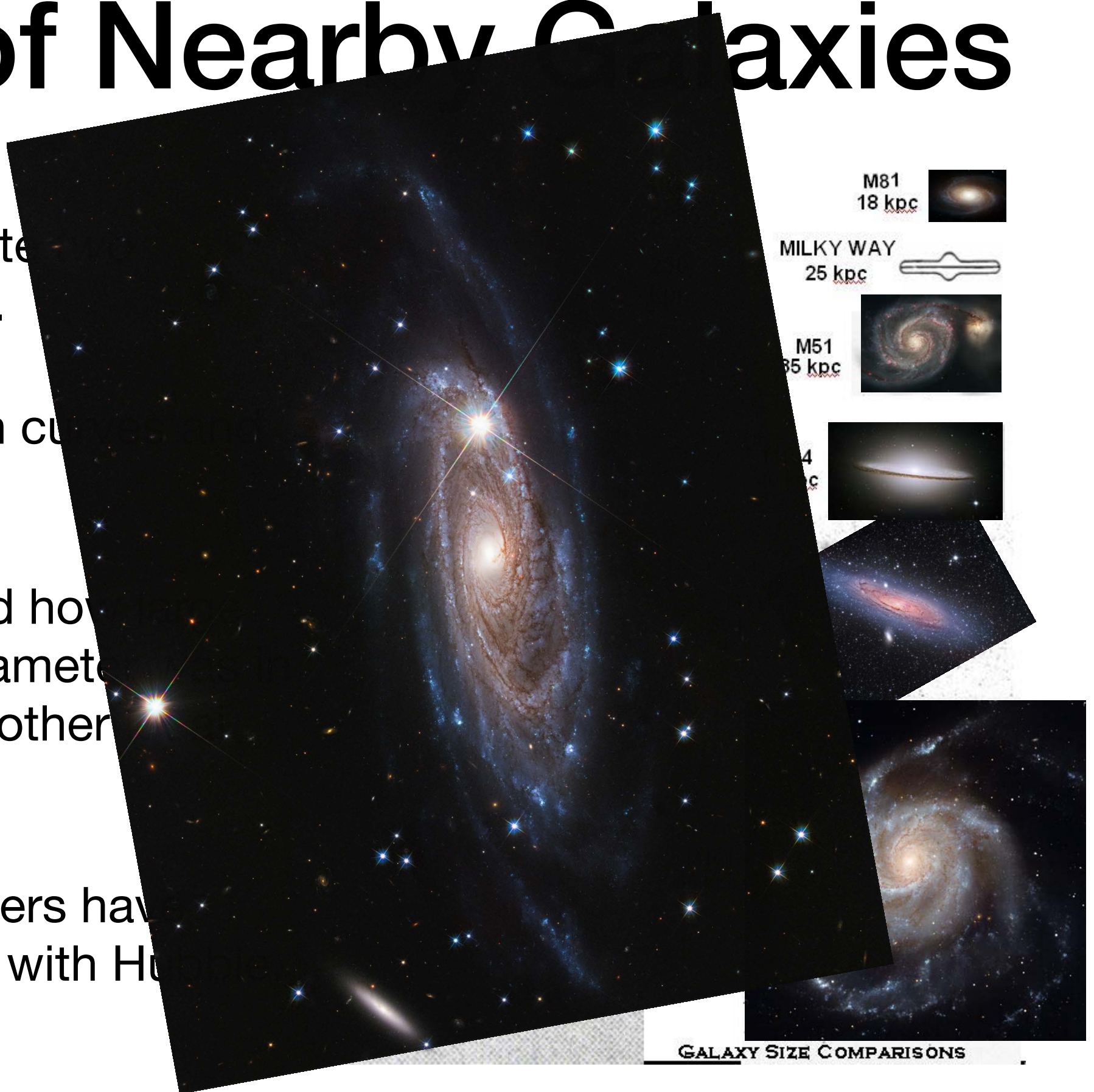
One of the original rotation curves.

UGC 2885 Rotation Curves



Sizes of Nearby Galaxies

- Vera Rubin wrote papers in 1980.
- One on rotation curves and dark matter.
- The other noted how UGC 2885's diameter is a comparison to other galaxies.
- Each of the others have been observed with Hubble.





Grow A Giant

- Rubin's Galaxy is much more massive and bigger than any typical spiral galaxy.
- The question is how to grow a disk galaxy that big without merging two mid-sized galaxies together.
- Mergers leave a mark in the population of globular clusters in and around the galaxy. We see a range of ages of the globular clusters.
- It seems to have relatively few Globular Clusters for its size implying a gradual acquisition of mass.



@benneholwerda



benne.holwerda@gmail.com

+1 502 389 7348