

A Combined Approach for Using Machine Learning with the SKA and LSST

Speaker: James Dawson

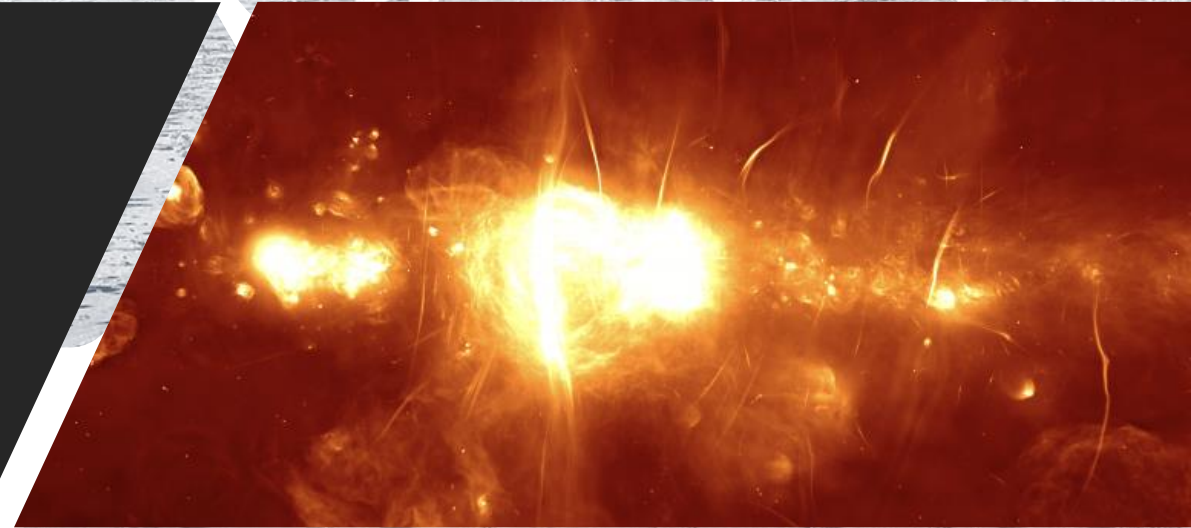
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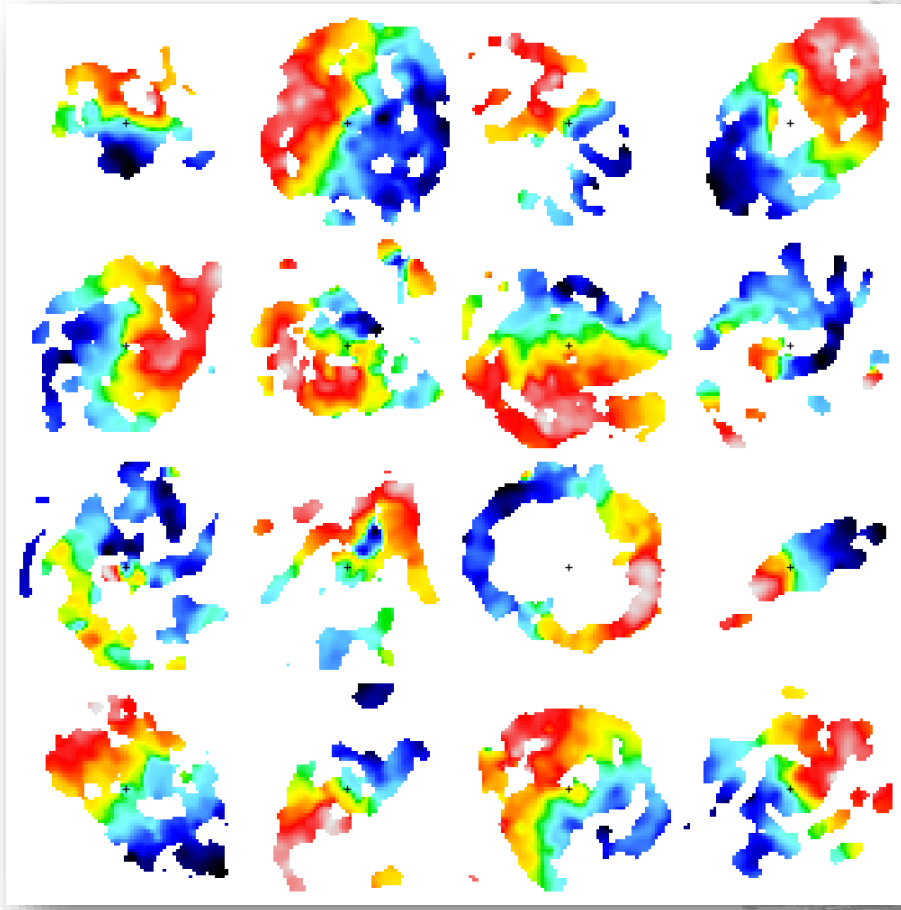


Introduction to My Research

- Largest interferometer in the world
- 160 Terabytes per second
- Primarily observing HI gas for galaxy studies
- Raw data too big to store, requiring fast filtering

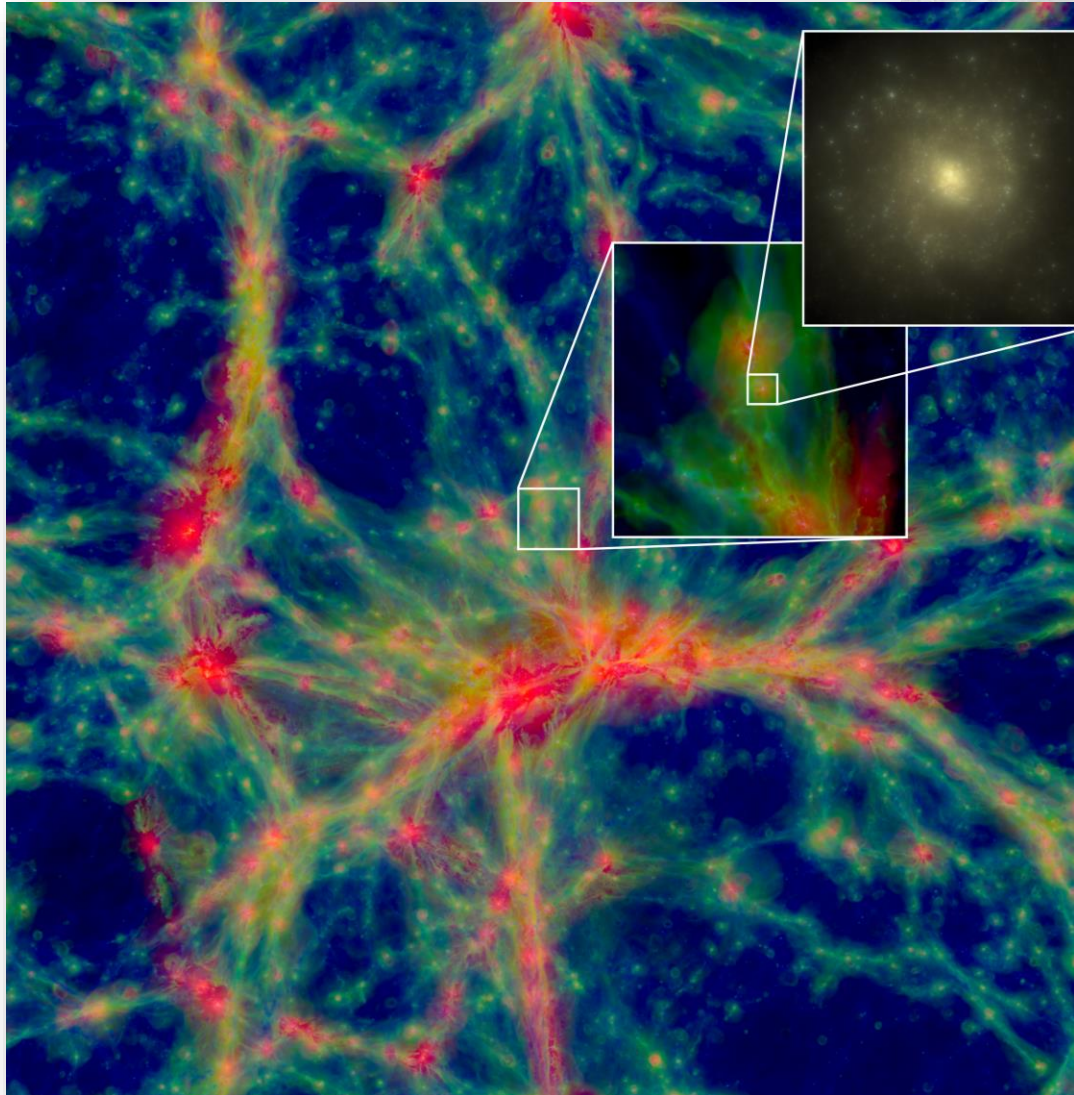


Introduction to My Research

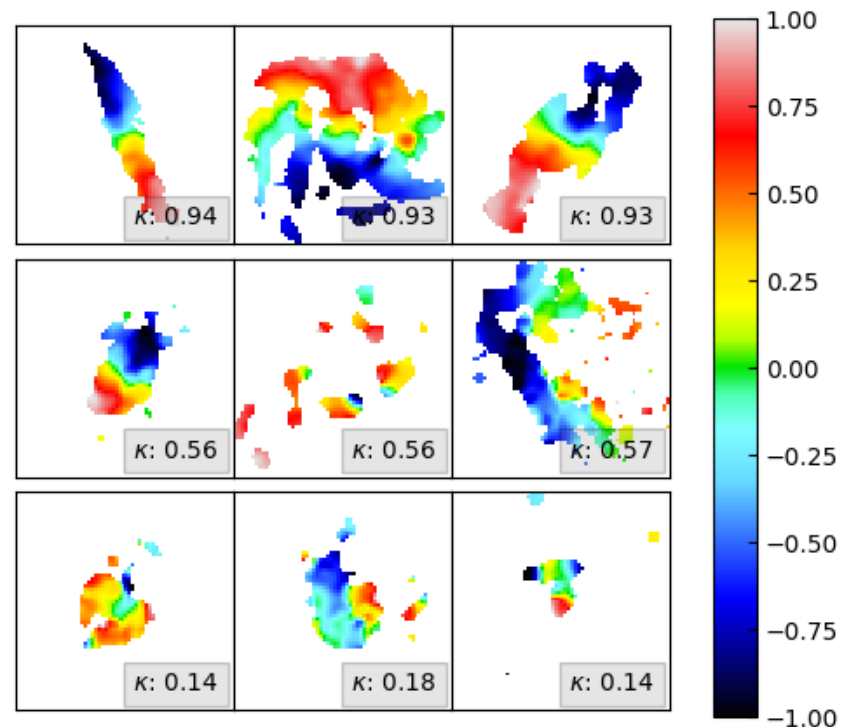


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of the
Universe?

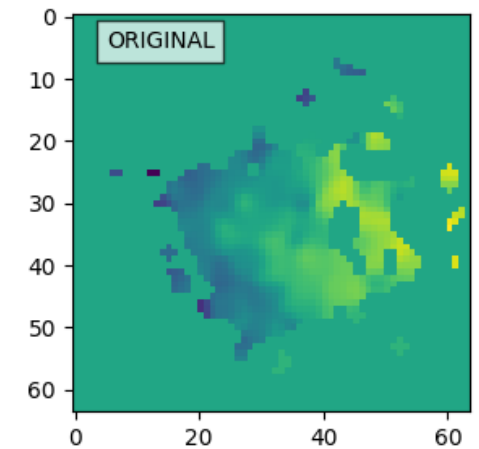
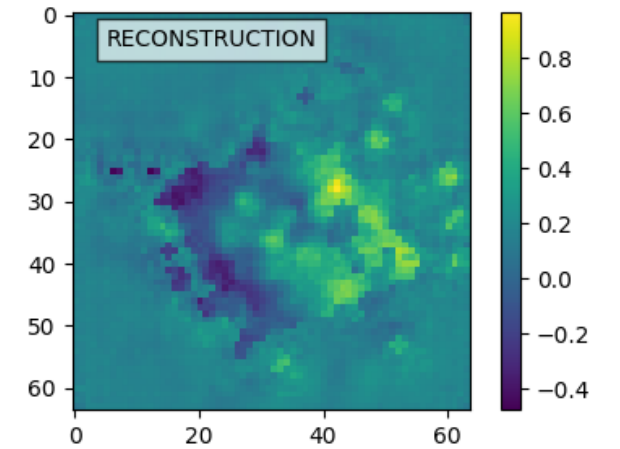
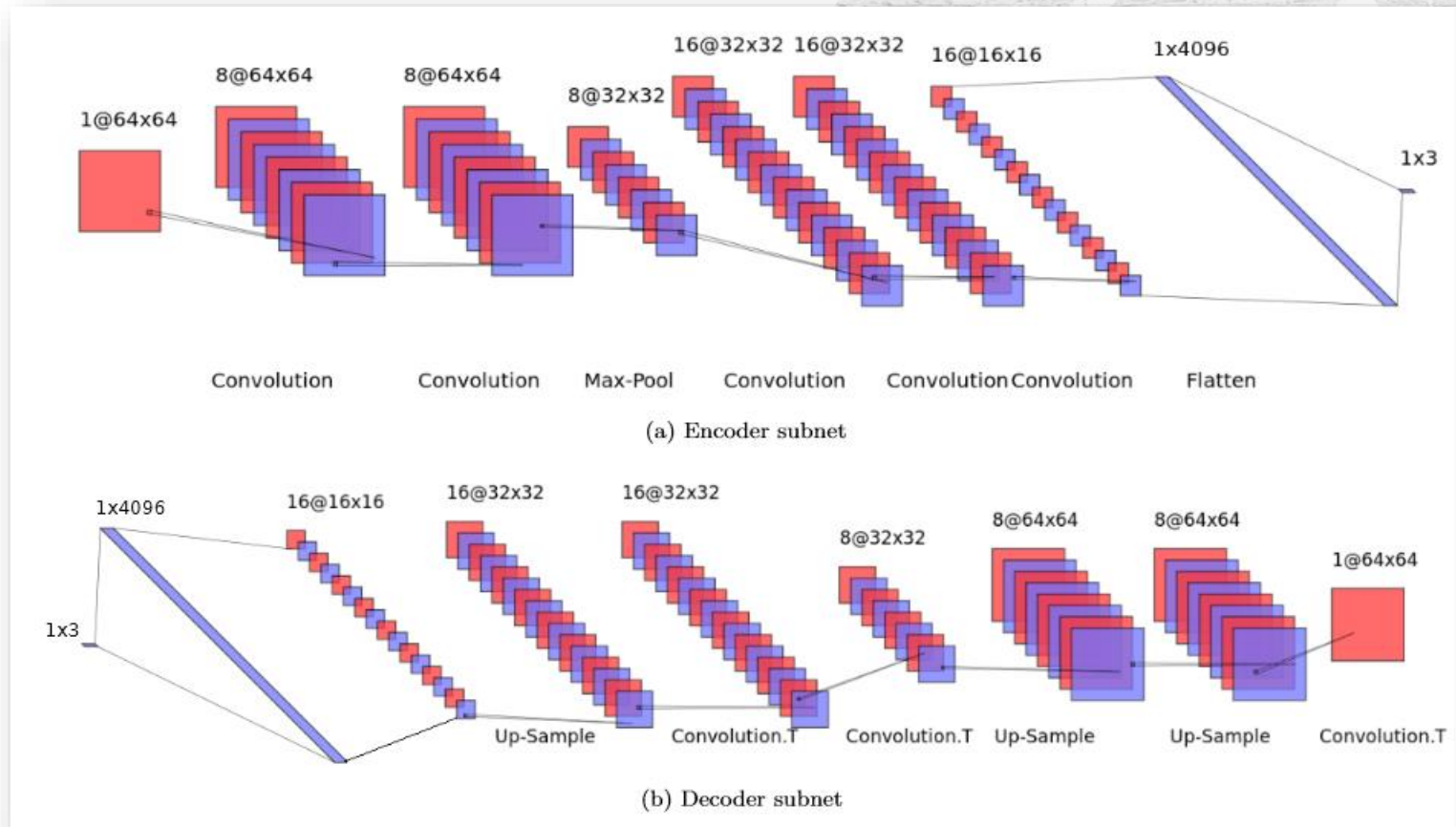
Machine Learning Methods



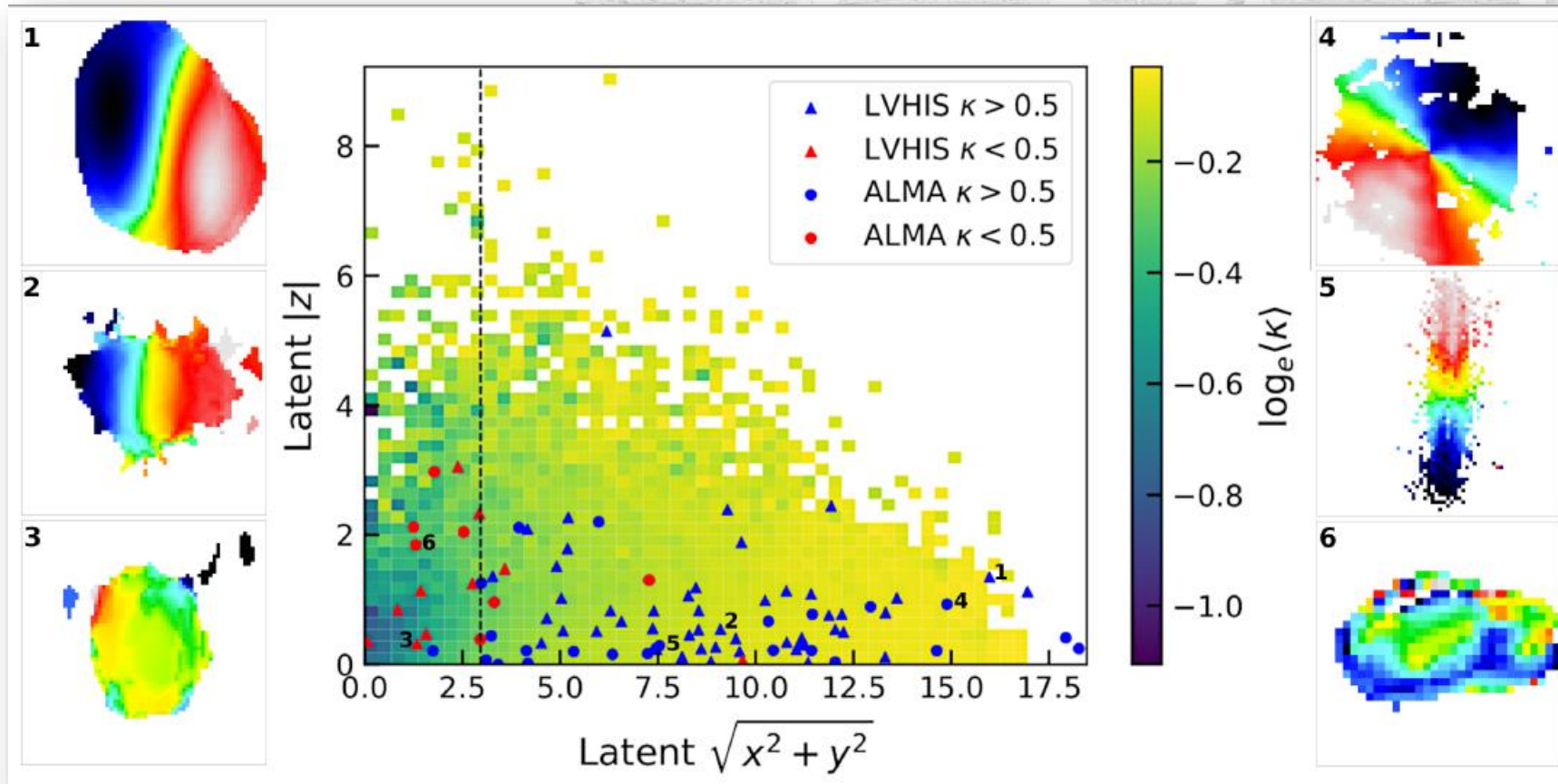
$$\kappa = \frac{K_{rot}}{K} \quad , \quad K_{rot} = \sum_{i=1}^N \frac{1}{2} m_i \left(\frac{j_{z,i}}{R} \right)^2 \quad , \quad K = \sum_{i=1}^N \frac{1}{2} m_i v_i^2$$



Machine Learning Methods



Machine Learning Methods



An aerial photograph of a large, flat, sandy or grassy field. In the foreground, a satellite dish is visible on the ground. The field is filled with numerous white balloons, some of which are clustered together. The text "Question time" is overlaid in the center of the image.

Question time