SpArc: Preservation of 20 Years of Spectrographic Data

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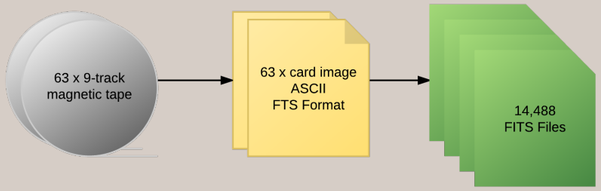
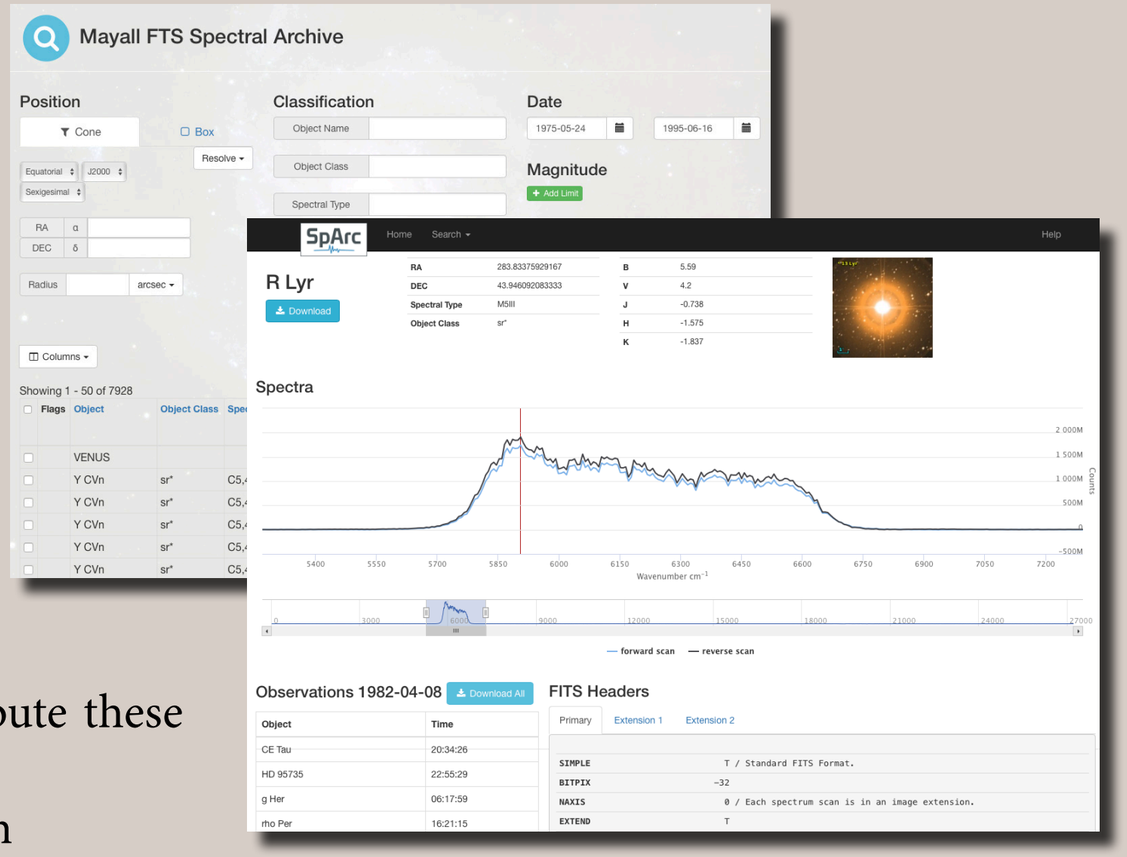
Mayall Fourier Transform Spectrograph (1975-1995)

- ~15,000 infrared spectra taken over 20 years
- ~120 refereed papers (20 since 2000)
- Coverage from 0.3 - 30 microns
- Resolution of ~20 cm^{-1} to 0.005 cm^{-1}
- Magnitude limit in the K band was about K=4 for resolving power R = ~20,000 with S/N of 100 in 4 hours of observing

- 900 individual (non-solar system) targets observed
- 780 individual stars, most with multiple observations
- Observations of the Galactic center, variety of protostars and Galactic star-forming regions, and several galaxies
- Multiple observations of Mercury, Venus, Mars, Jupiter, Saturn, Uranus, Neptune, Comet IRAS, Titan, Io, and the Moon





- Data were stored on 63 x 9-track magnetic tape until late 90's
- Dumped as ASCII representation of FTS format
- Last 2 years - conversion to FITS
- Original metadata preserved and enhanced
- SpArc (Spectra Archive) at IU created to preserve and distribute these spectra
- Available now http://sparc.sca.iu.edu - no registration, no login
- Preprint paper with more details: https://arxiv.org/abs/1610.02535