ReTrOH

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Revisiting the Spectral Evolution of μ Centauri: Insights from Historical Data Digitized by the ReTrOH Project

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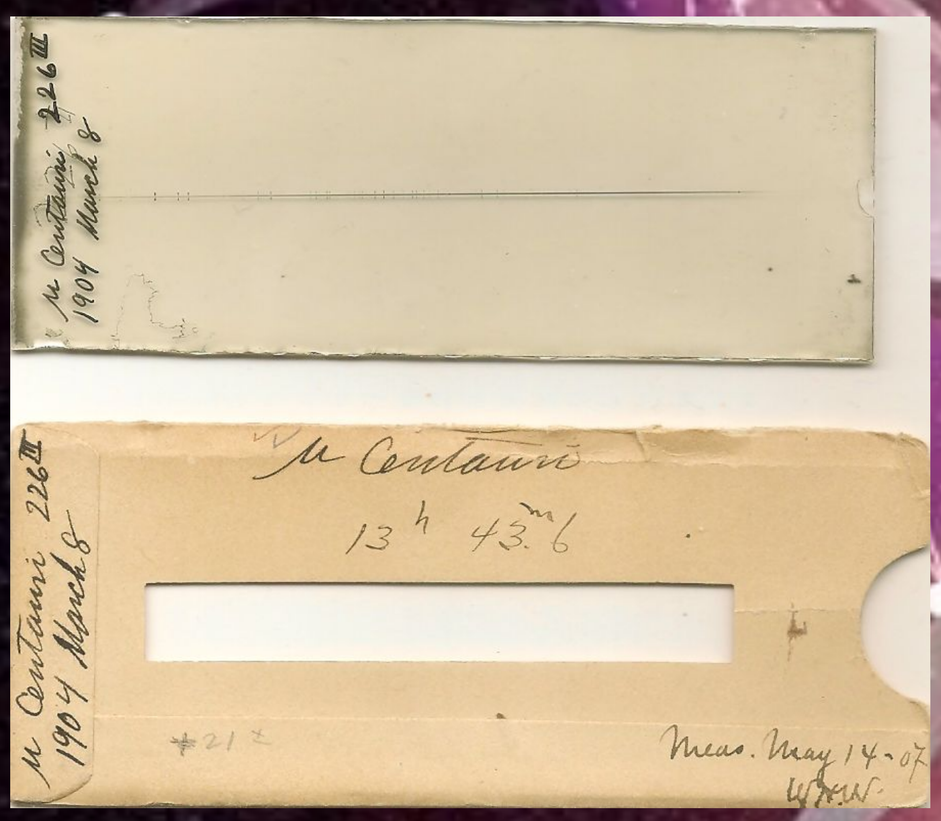
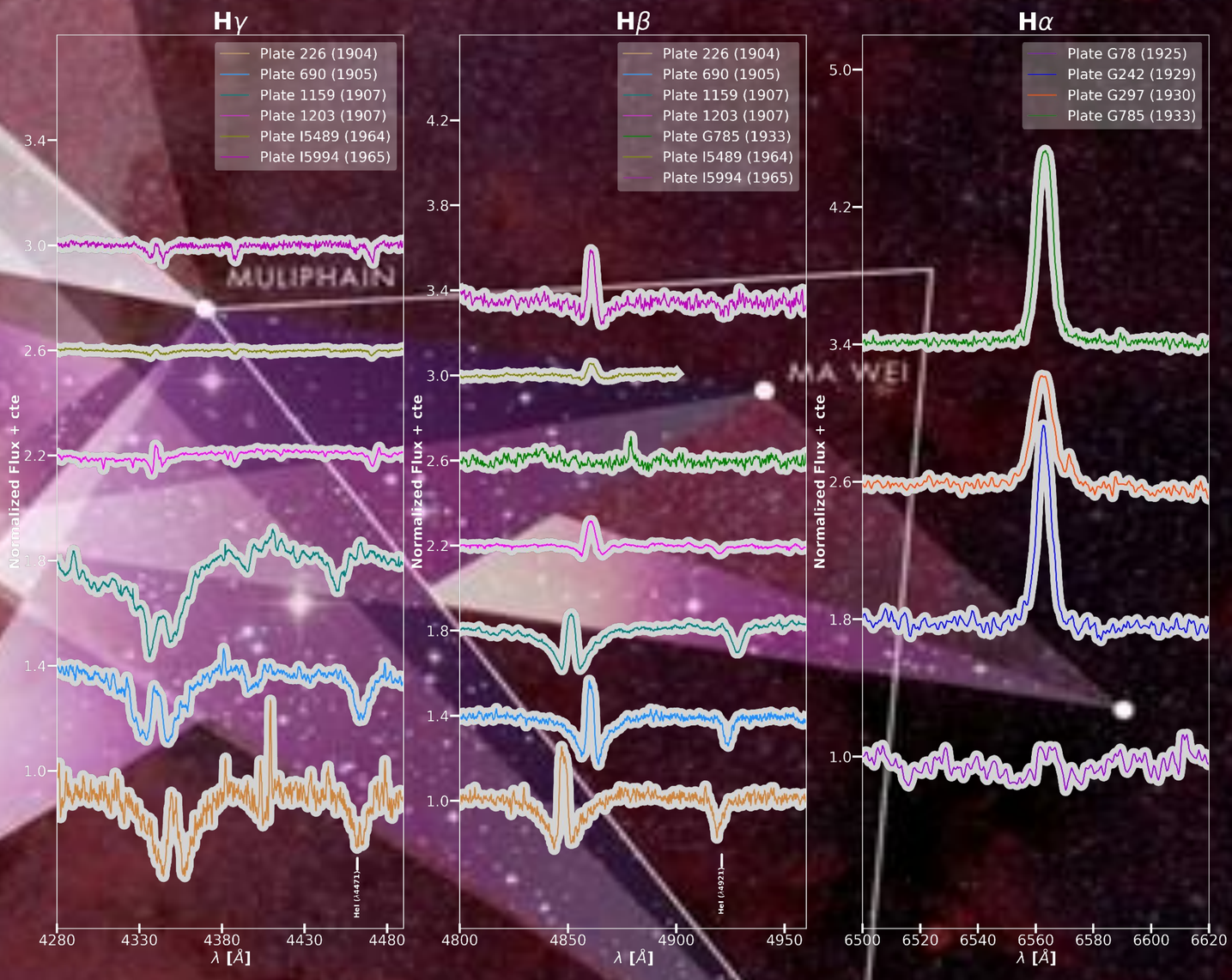
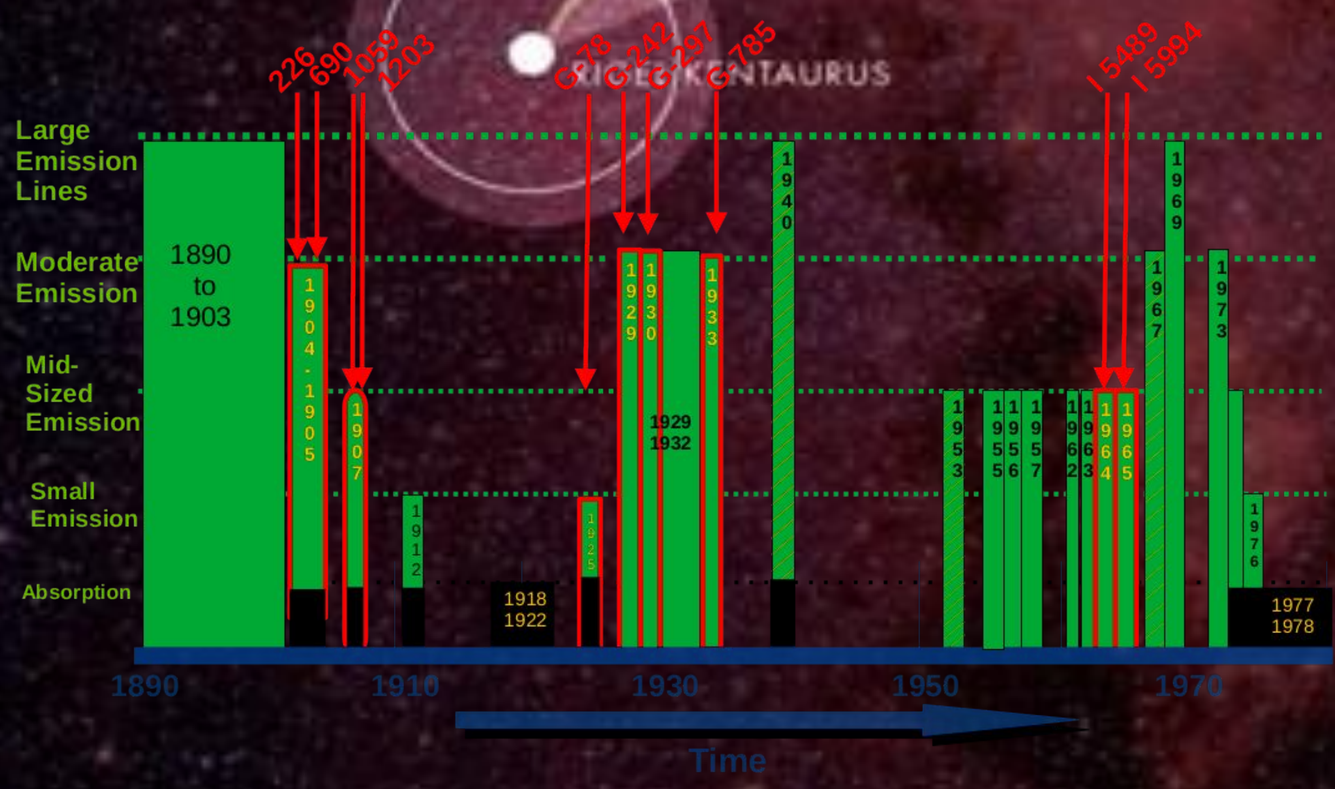
μ Centauri (HD 120324) is recognized as a non-radially pulsating Be star that has experienced multiple outbursts similar to those observed in γ Cas. These recurrent events have resulted in the temporary disappearance of its emission lines, with notable occurrences documented around 1918 for approximately a decade and again from 1977 to 1989.

As part of the ReTrOH project, aimed at recovering a vast repository of historical spectroscopic and photometric plates from the Observatorio Astronómico de La Plata, we have successfully digitized plates associated with μ Centauri. This extensive collection encompasses spectra acquired during the periods 1904-1907, 1925-1936, and 1953-1971. Our poster presentation provides a glimpse of these spectra, accompanied by an initial morphological analysis and a comparative study with previously published data.



The oldest original spectroscopic plate in the μ Centauri collection was acquired on 8 March 1904. We have found evidence that the observation was made by W. H. Wright, Astronomer in charge of the D. O. Mills expedition to Chile, otherwise known as the Southern Station of the Lick Observatory, Cerro San Cristobal, Santiago de Chile.





The spectra were extracted using IRAF tasks and the method developed by Meilan (2018).
In most cases, the information pertaining to the comparison spectra is irrecoverable. Consequently, the wavelength calibration may exhibit some inaccuracies, as evidenced by the Hβ line.

Long-term Hα/Hβ emission behaviour of μ Centauri between 1890 and 1980. Red arrows indicate scanned spectra presented in this poster. Those indicated with the suffix "G" correspond to plates that belong to Mount Wilson Observatory, and their current location in La Plata, as those obtained in Cerro San Cristobal in the early 1900s, remains a mystery.

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