



ARAS

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Recent publications of interest for amateur spectroscopy

N° 2011-3

2011 October to December

Be Stars

Properties and nature of Be stars : 29. Orbital and long-term spectral variations of γ Cassiopeiae

<http://arxiv.org/abs/1111.3761>

RR Lyrae

Chemical Compositions of Variable Field Horizontal Branch Stars: RR Lyrae Stars

<http://arxiv.org/abs/1110.0548>

Symbiotic Stars

An incisive look at the symbiotic star SS Leporis -- Milli-arcsecond imaging with PIONIER/VLTI

<http://arxiv.org/abs/1112.1514>

Formation of a disk structure in the symbiotic binary AX Per during its 2007-10 precursor-type activity

<http://arxiv.org/abs/1110.2801>

Symbiotic stars: Observations confront theory

<http://arxiv.org/abs/1110.2361>

The spectroscopic evolution of the symbiotic-like recurrent nova V407 Cygni during its 2010 outburst.

II. The circumstellar environment and the aftermath

<http://arxiv.org/abs/1112.2247>

(with C. Buil's spectra)

Symbiotic stars as possible progenitors of SNe Ia: binary parameters and overall outlook

<http://arxiv.org/abs/1110.1847>

Novae

On the Progenitors of Galactic Novae

<http://arxiv.org/abs/1112.2589>

Convective Undershoot Mixing in Nova Outbursts - the Dependence on the Composition of the Underlying White Dwarf

<http://arxiv.org/abs/1111.6777>

Investigation of the Progenitors of Nova Explosions

<http://arxiv.org/abs/1111.5524>

Recurrent novae (RNe) play an important role as one of the suspected progenitor systems of Type Ia supernovae (SNe) which are used as primary distance indicators in cosmology. Thus, it is important to investigate the nature of their central binary systems to determine the relation between the parameters of the central system and outburst type, and finally ascertain the population of novae that might be available to give rise to the progenitors of Type Ia SNe. [...]

Historical light curve and search for previous outbursts of Nova KT Eridani (2009)

<http://arxiv.org/abs/1110.4637>

Supernovae

Novae and accreting white dwarfs as progenitors of Type Ia supernovae

<http://arxiv.org/abs/1110.0055>

Spectral modeling of nebular-phase supernovae

<http://arxiv.org/abs/1112.4659>

Type Ia Supernovae and the discovery of the Cosmic Acceleration

<http://arxiv.org/abs/1112.0706>

I present a review of the research and analysis paths that converged to make Type Ia SNe the most mature cosmological distance estimator of the present time. The narrative starts with the first works in the early decades of the 20th century and finishes with the more recent results. [...]

The supernova Ia 2011fe in M101, its tip of the red-giant branch (TRGB) distance, and the value of H_0

<http://arxiv.org/abs/1112.0439>

Constraining the physical properties of Type II-P supernovae using nebular phase spectra

<http://arxiv.org/abs/1112.0035>

We present a study of the nebular phase spectra of a sample of Type II-Plateau supernovae with identified progenitors or restrictive limits. The evolution of line fluxes, shapes, and velocities are compared within the sample, and interpreted by the use of a spectral synthesis code. [...]

Type-Ia supernova rates and the progenitor problem, a review

<http://arxiv.org/abs/1111.4492>

Supernova 2011fe from an Exploding Carbon-Oxygen White Dwarf Star

<http://arxiv.org/abs/1110.6201>

Solar system

Thirty Years of Cometary Spectroscopy from McDonald Observatory

<http://arxiv.org/abs/1112.4770>

Miscellaneous

Isolated neutron stars and studies of their interiors

<http://arxiv.org/abs/1111.1158>