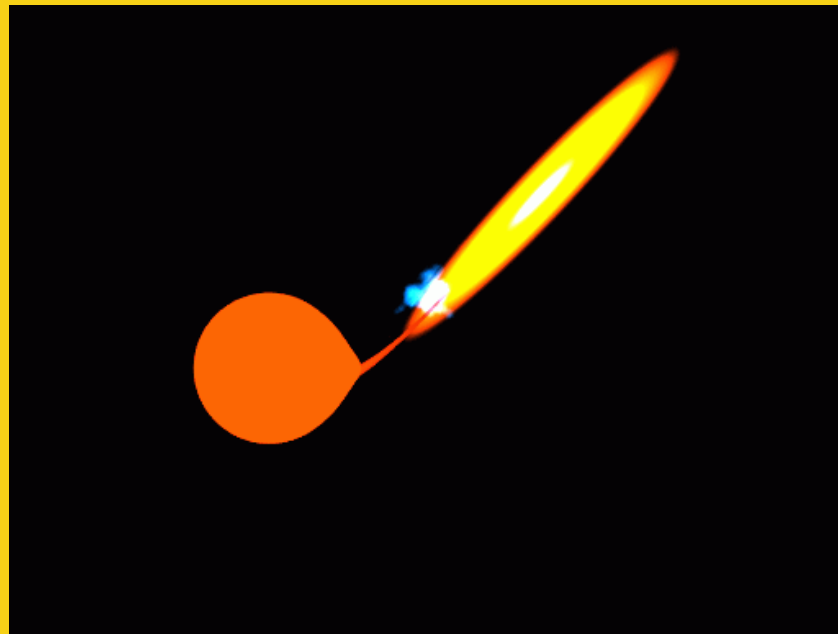


Campaign on a possible ER UMa Dwarf Nova from the Catalina Real Time Sky Survey



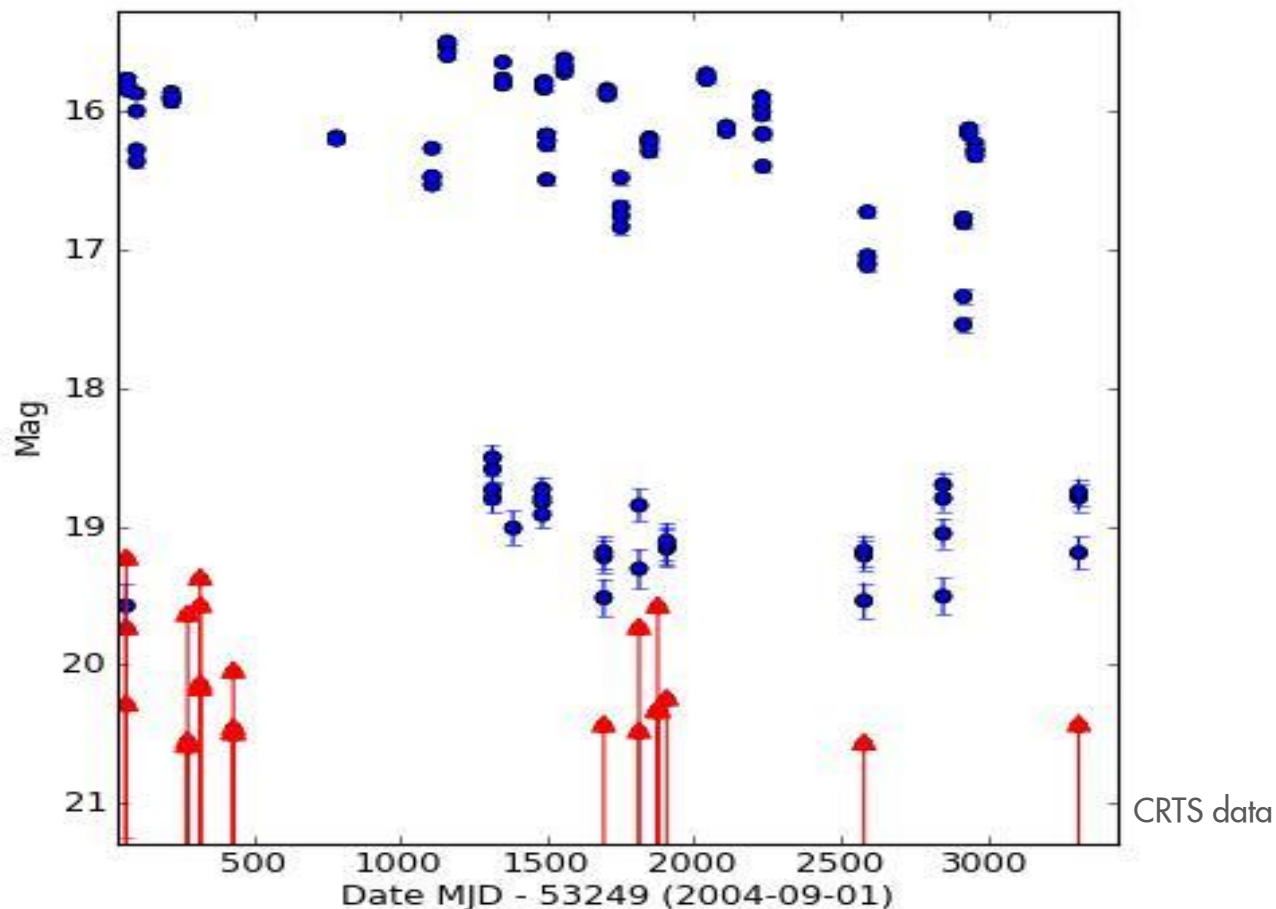
Jeremy Shears
BAA VSS
York, 2015 June 21

CSS 121005:212625+201948 IS AN ACTIVE VARIABLE

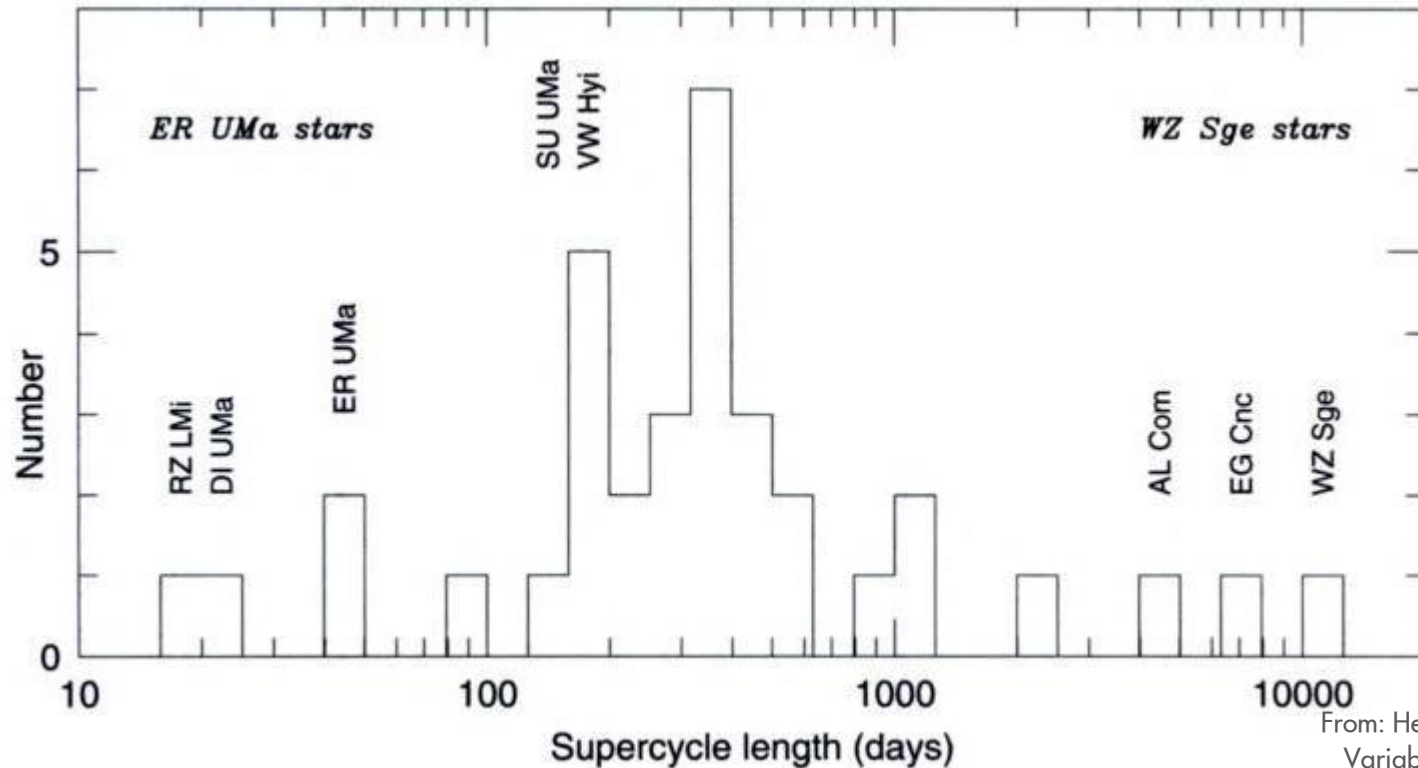
Identified as a possible ER UMa dwarf nova by John Greaves (2012 Oct)

Multiple outbursts in CRTS data. Also in SDSS and POSS. "In outburst as much as not"!

Blue object, varies between magnitude 15.5 and >20.5



ER UMA DWARF NOVAE HAVE SHORT SUPERCYCLES



From: Hellier C: Cataclysmic Variables (Springer Praxis)

→ Accretion rate decreasing

ER UMa systems: ER UMa, V1159 Ori, RZ LMi, DI UMa, IX Dra

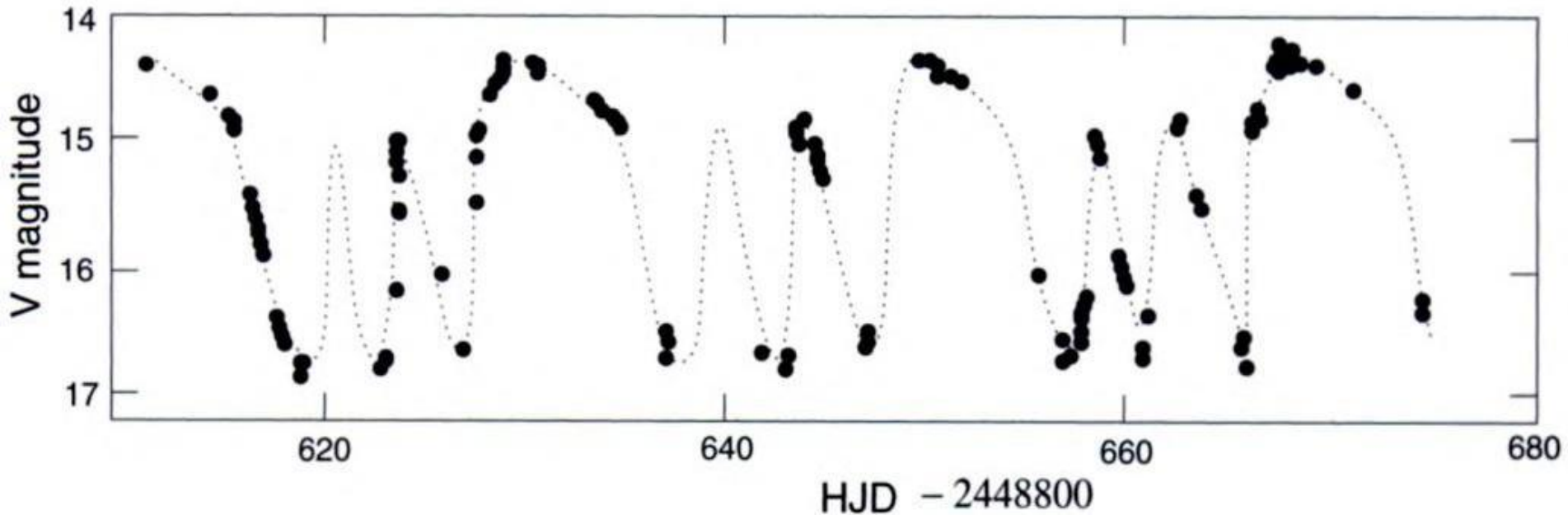
Short supercycle length (20 to 50 days)

Multiple “normal” outbursts, ~every 4 days

Usually doing “something”!

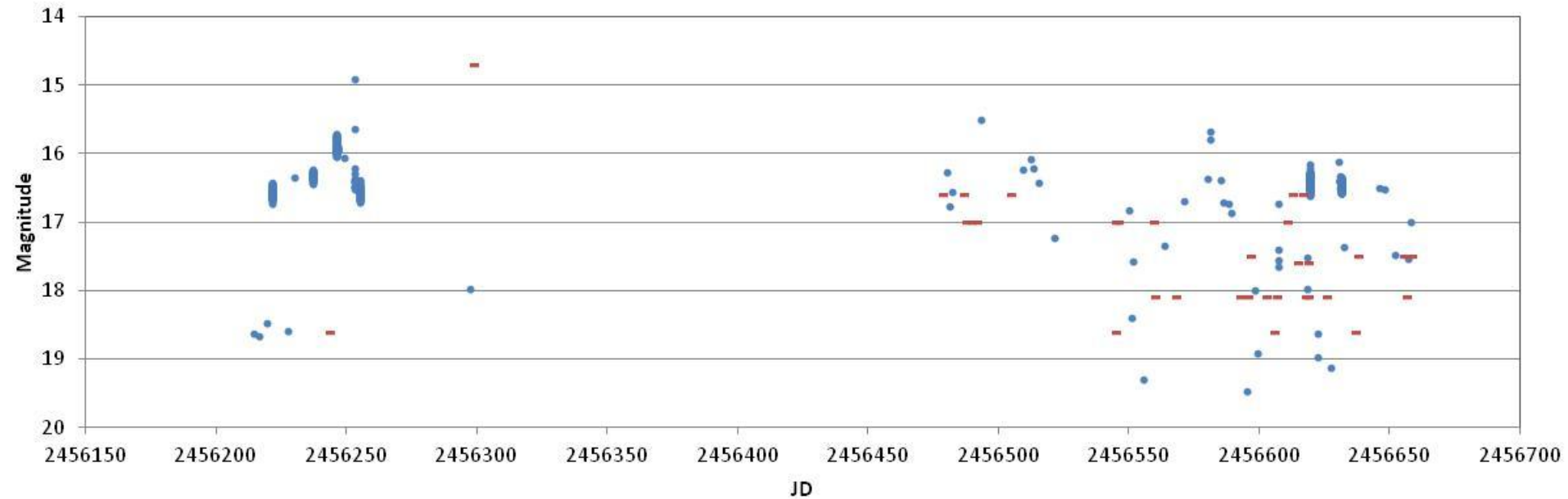
RZ LMI SPENDS HALF IT'S LIFE IN SUPEROUTBURST

... with typically 2 normal outbursts in between



From: Hellier C: Cataclysmic
Variables (Springer Praxis)

2012-13 LIGHT CURVE



CCD Observers: Ian Miller, Roger Pickard, Richard Sabo & Jeremy Shears

Multiple outbursts, some <4 days, some ~11 days.

Intervals of 9 to 11 days, but coverage incomplete

Late April 2014 an outburst to 15.8V which lasted ~11 days

Some time series photometry conducted

- superhumps not detected yet (but runs during suspected superoutburst were short)
- but some ER Uma's show humps at all times

OBSERVING CAMPAIGN AIM AND METHOD

AIM

To confirm whether or not CSS 121005:212625+201948 is an ER UMa dwarf nova, or some other type of variable

Outburst frequency and duration

Length of its supercycle?

METHOD

Nightly observations – report to VSS and/or AAVSO

If superoutburst suspected, then time-series photometry to look for superhumps (C filter is fine) and determine P_{sh}

Method, chart and sequence available from VSS web pages (and AAVSO)

DURATION OF CAMPAIGN

From now until end of season (January 2015?)