

## **A VARIABLE STAR OBSERVING HISTORY - AN OBSERVER PROFILE**

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Accounts of how I first got started in astronomy have appeared in *Popular Astronomy* and in *The Astronomer*. This account highlights key events which have influenced the development of my variable star observing.

### **RY Dra 1977**

My first variable star observation was made on January 11, 1977, having read in a book that RY Dra was an interesting star to observe. Using 10 x 50 binoculars, I estimated it at magnitude 6.65. Five nights later it still seemed to be at the same brightness, so I concluded that variable stars weren't that interesting!

### **R UMa 1977**

My log book shows no more variable star observations until September 17, 1977. At the time I was using some variable star charts that were included in an astronomy book to test how faint I could see using my 10 x 50 binoculars. Among the charts used was one for **Chi Cyg** and, as an aside, I noted that Chi Cyg was at magnitude 6.1. During some more tests on October 31, I noted that **R CrB** was below magnitude 7.2. However, the most significant observation was made on November 6, when R UMa was seen at magnitude 8.6, having been invisible on several previous checks. Over the next few months I observed it on a regular basis, producing a light curve that I was quite pleased with, although I later saw a light curve published which suggested that it had actually peaked 2 to 3 weeks later than in my light curve.

### **W Cyg and R Lyr 1978**

Having produced a light curve for R UMa, I was hopeful of producing similar light curves for these two variables. However, although the **W Cyg** light curve did show it slowly brightening over the next few months, the 131 day period was not immediately obvious and the brightness range was much less than the listed 5.0-7.6. The R Lyr light curve was rather disappointing. My expectation of Mira-type reliability was thus shown to have been unrealistic.

### **R Tri 1978**

Although various other variables (**CH Cyg**, **R CrB**, **TX Dra**, **Y CVn**, etc) were observed in the early part of 1978, my log book shows a drift towards observing Mira-type variables, as these seemed to be more interesting. I had no set of predictions to work from, so I had to discover maxima by trial and error. A particularly good set of observations was obtained for **R Tri**, seeing it rise from magnitude 8.9 in early March, to a bright peak in late March, before losing it in the evening twilight of mid April.

### **TA 1979**

In Oct 1978 I arrived at Edinburgh University and joined the University Astronomical Society

(EUAS). This introduced some competition from meteor observing and Jupiter observing, and my variable star observations became less frequent, although my log book shows numbers picking up again from April 1979 onwards. One thing that I did notice, was how my estimates of some variables showed *jumps* of several tenths of a magnitude when I moved from the term-time, sodium-lit skies, to the dark skies of East Yorkshire during vacations. Membership of EUAS introduced me to *The Astronomer* magazine, and following correspondence with Melvyn Taylor, who was then the TA variable star editor, I started reporting my observations from the summer of 1979 onwards.

#### BAA 1980

My access to variable star charts was initially restricted to those that had been published in books and magazines. My prime reason for joining the BAA VSS was actually to gain access to more charts!

#### **Nova Vul 1984 No 1 and CH Cyg**

After being quite active in 1980-81, my variable star observing dropped off in the last year of my degree, and when I started work. I became unemployed in the summer of 1984, and the resurgence of my variable star observing was boosted by the timely appearance and persistence of the above nova (which remained visible in binoculars for several months) and by that summer's dramatic fade of CH Cyg.

#### **Nova And 1986**

I moved to Oxfordshire in 1985 and my variable star observing continued at a productive rate. I observed this nova several times during late 1986. My last estimates were just glimpsing it at magnitude 9.3 on January 4 and 5, 1987. Rather embarrassingly, when I received TA, I read that it had faded dramatically from magnitude 9.9 on January 4 to magnitude 11.0 on January 5. Thus I had fooled myself into thinking that I had seen it.

#### Hillside Drive 1990

In December 1987, I moved to Bath and my variable star observing again dropped off due to the lack of a good observing site. I moved to Leek in late 1989, but my observing didn't really pick up again until the following summer when I bought a house on the western edge of Leek. Some observing was possible from my back garden, and from several sites within reasonable walking distance. Consequently my observing picked up again.

#### **Nova Cyg 1992**

This nova appeared in February 1992, and I observed it on several occasions. Guy Hurst was surprised by magnitude estimates that I phoned in to TA as they were nearly a magnitude fainter than those of most other observers, although I was seeing it fade at the same rate as other observers. This was a dramatic illustration of how one observer can see a star systematically brighter or fainter than other observers. Although off-putting at the time, fortunately I didn't let it put me off observing, and experience over the years has shown that there are a number of stars (e.g. **W CMa**, **rho Cas**, **P Cyg**, **AT Dra**, **TX Psc**) that I routinely see significantly fainter than do other observers.

#### JAS VSS (later SPA VSS) 1992

I took over from John Isles as JAS VSS Director in the summer of 1992, and held this post until summer 2000. One of the most interesting parts of the job was seeing other observers' reports, and the way in which different observers see the same basic variations in stars, whilst seeing the star as systematically brighter or fainter than other observers, and how, by allowing for these differences, a scatter diagram can be turned into a nice smooth light curve. It was also interesting to see how even the most experienced observers do sometimes make mistakes (such as reporting Beta Lyrae at maximum when everyone else is seeing it near mid eclipse).

#### 11 x 80 Binoculars 1992

I had always been frustrated by my inability to see various binocular variables on moonlit nights. Buying a pair of 11 x 80 binoculars allowed me to follow them throughout the month, and my 10 x 50 binoculars were progressively retired. Interestingly I didn't go on to observe lots of new fainter variables, I merely used them to extend my ability to follow the stars that I was already observing.

#### PCs and the Internet 1996

Despite working with computers since the mid 1980s, I didn't buy my first home PC until early 1996. Nowadays, it is routine to rapidly receive news of activity via e-mail, whereas, in 1984, a paper circular reporting the discovery of **Nova Vul 1984** No 2 took a week to reach me due to Christmas postal delays. Correspondence with observers elsewhere in the world is also much quicker and cheaper via e-mail than it used to be on paper.

#### BAA VSS Eclipsing Binary Director 1999

I had observed various eclipsing binaries such as **RZ Cas** and **U Cep** over the years and added these two to the SPA VSS programme during my period as Director, in order to include some binocular variables. Indeed, during the 1990s the SPA VSS became one of the main contributors of Eclipsing Binary observations to the BAA VSS, and this was presumably a factor in me being offered the post of Eclipsing Binary Director in 1999.

#### Astronomy Now 2002

I took over the writing of the Variable Star Scene column from June 2002. The column is written two months in advance of publication, and so it is necessary to think ahead to how favourably placed variables will be at that time. This has its risks: in late January 2003, I wrote the column for the April issue to feature R CrB, but in mid-February it faded dramatically dropping below the limit of the accompanying finder chart. Fortunately it brightened again in late March.

In summary, it can be seen that the development of my variable star observing has depended on various chance events, ranging from contact with individuals, to events in the night sky. The reliability of Mira-type variables was key to driving my initial enthusiasm, whereas unrealistic expectations of semi-regular variables made them unrewarding for a newcomer. Access to a good observing site is critical. Had my career caused me to live in the centre of a large city, my variable star observing might well have come to an end. There have been various setbacks which could easily have diverted me away from VS observing, but fortunately they did not. Who knows what the future years will bring !