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FLARE PHOTOMETRY OF YZ CANIS MINORIS

During January 1975 the flare star YZ Canis Minoris [R.A. = $7^{\text{h}}42^{\text{m}}$, declination = $3^{\circ}39'$ (1968.0), visual magnitude 11.6] was monitored at Boyden Observatory for a total time of $30^{\text{h}}02^{\text{m}}54^{\text{s}}$. The telescope used in this work was the 41 cm Nishimura Reflector fitted with a Johnson B filter. An uncooled EMI6256A photomultiplier tube was used as a detector.

From the following table it will be seen that there was one major flare and one minor flare. Other small flares are marked as questionable due to poor observing conditions with an ensuing noisy signal.

The flare of $\frac{I_{\text{O+f}} - I_{\text{O}}}{I_{\text{O}}}$ value = 9.06 at $22^{\text{h}}49^{\text{m}}35^{\text{s}}$ on the night of 10-11th January was confirmed visually.

A.H. JARRETT and J.B. GIBSON
Boyden Observatory
Department of Astronomy
University of the Orange Free State
Bloemfontein,
Republic of South Africa

FLARE SUMMARY FOR YZ CM1 - JANUARY 1975

Date	Total hours	Rise	Max. U.T.	Ends	Comments	$\frac{I_{O+f-I}}{I_O}$	Air mass Max.
03-04	3 ^h 18 ^m 00 ^s				No flares		
Monitoring Times:		22 ^h 43 ^m 46 ^s - 22 ^h 47 ^m 48 ^s					
U.T.		23 56 30 - 02 10 18					
04-05	3 ^h 46 ^m 48 ^s				No flares discernable above noisy level.		
Monitoring Times:		22 ^h 21 ^m 00 ^s - 23 ^h 53 ^m 30 ^s					
U.T.		23 59 30 - 02 13 48					
05-06	2 ^h 45 ^m 24 ^s				Flare? Moonlit and some clouds	0.21 [±] 0.10	1.4304
Monitoring Times:		01 ^h 11 ^m 44 ^s - 01 ^h 11 ^m 48 ^s		01 ^h 13 ^m 42 ^s			
U.T.		23 ^h 23 ^m 12 ^s - 00 ^h 24 ^m 00 ^s					
U.T.		00 31 00 - 02 15 48					
08-09	1 ^h 43 ^m 30 ^s				Slow flare? Moonlit high cloud present	0.26 [±] 0.12	1.3615
Monitoring Times:		00 ^h 41 ^m 48 ^s - 00 ^h 42 ^m 06 ^s		00 ^h 43 ^m 18 ^s			
U.T.		00 53 06 - 00 53 30		00 56 30			
Monitoring Time:		00 ^h 33 ^m 12 ^s - 02 ^h 16 ^m 42 ^s					
U.T.							
09-10	3 ^h 02 ^m 54 ^s				Flare. Moonlit high cloud present	0.32 [±] 0.11	1.4035
Monitoring Times:		22 ^h 48 ^m 24 ^s - 22 ^h 48 ^m 54 ^s		22 ^h 51 ^m 00 ^s			
U.T.		23 02 24 - 23 02 42		23 04 00			
Monitoring Times:		22 ^h 20 ^m 30 ^s - 00 ^h 07 ^m 24 ^s			Could be a slow flare but noisy signal	0.17 [±] 0.14	1.1857
U.T.		00 12 36 - 00 47 12					
U.T.		00 56 48 - 02 18 12			Could be a slow flare but very doubtful	0.1 [±] 0.1	1.1900

FLARE SUMMARY FOR YZ CM1 - JANUARY 1975 cont.

Date	Total hours	Rise	Max. U.T.	Ends	Comments	$\frac{I_{O+f}-I_O}{I_O}$	Air mass Max.
10-11	3 ^h 56 ^m 54 ^s	22 ^h 47 ^m 54 ^s	22 ^h 49 ^m 35 ^s	00 ^h 54 ^m 00 ^s	Flare visually confirmed	9.06 ⁺ 0.19	1.1866
Monitoring Times: 22 ^h 18 ^m 48 ^s - 01 ^h 06 ^m 54 ^s							
U.T. 01 12 06 - 02 20 54							
11-12	4 ^h 00 ^m 18 ^s	00 ^h 02 ^m 36 ^s	00 ^h 02 ^m 58 ^s	00 ^h 18 ^m 30 ^s	Flare	1.11 ⁺ 0.12	1.2925
Monitoring Times: 22 ^h 14 ^m 36 ^s - 22 ^h 44 ^m 00 ^s							
U.T. 22 48 12 - 02 19 06							
12-13	3 ^h 19 ^m 00 ^s	23 ^h 49 ^m 18 ^s	23 ^h 49 ^m 25 ^s	23 ^h 49 ^m 42 ^s	Possibly a small flare, preceded by a slight dip in trace	0.18 ⁺ 0.07	1.2618
Monitoring Times: 22 ^h 14 ^m 24 ^s - 22 ^h 47 ^m 06 ^s							
U.T. 22 53 48 - 01 40 06							
16-17	4 ^h 10 ^m 06 ^s				Nothing clearly greater than noise and sky variations		
Monitoring Time: 22 ^h 14 ^m 30 ^s - 02 ^h 24 ^m 24 ^s							
U.T.							