

4.23 -055 102 612 2.716 (2) 1970
4.22 -065 105 621 2.714 (2) 1973

811 4.24 -735 820 -216 2.221 26 Jan 75

4.22 -745 819 -241 2.225 27 " "

4.24 -734 834 -219 2.221 25 " "

4.28 -760 847 -237 ~~2~~ 15 Aug 75

4.24 -734 826 -216 2.223 19 " "

4.26 -747 824 -214 ~~3~~ 24 " "

4.25 -744 824 -218 2.214 31 Oct 75

4.23 -725 809 -226 2.226 23 Nov 75

4.23 -734 810 -214 2.222 27 " "

4.25 -743 817 -211 2.214 29 " "

4.28 -732 828 -210 2.222 30 Dec 75

4.28 -748 834 -231 2.223 1 Jan 76

4.28 -742 834 -208 2.223 4 " "

9698

22 42.7

+55

38

121

III

216174

8689

22 48.9

-63

27

APB

5101 00 018-16 48 142 TL

50.14 46.5

8442

22

139

-26

09

100

9738

22

558

+3

32

121

III

6.29 + 1.13 + 1.09 C

8736

22

52.3

+85

06

105

217157

8741 22 57.0 -13 20 9.15

6.07 71.45 71.76

545 40.565 @ 10965

8742

02

56.9 + 00

42

9181

5.42 + 0.59 + 0.85

8743

22 57.4

-25

26

9120

S.L.L 4126

217814

87744

22 570 + 52 28 142

8746 22 57.7 -25 54 9121

6.29 + 1.0

9749 22 58.2 = 51 13 9102

5.69 + 1.41 + 1.48 =

5.02 + 0.54 (10) 102, 65

8750 22 58.1 -00 05 964

6.20+89-160 C

9751

22

58.2

+2

45

9104

$$5.93 + 1.34 + 1.55 \quad \checkmark$$

$$5.10 + 0.505 \quad (2)$$

9754

22

58.6

-29

02

912

5.544135

9757

22

58.8

-7

20

\$115

6.20 + 1.42 + 1.24

559 10.555 @ 102.65

4761

~~4754~~

22

59.4

+56.50

192.11

217673

6.20 +1.50 +1.53

8763

23

00.0

-6

51

g m r

6.14 +1.50 +1.50 $\frac{g}{m}$

5.24 +1.875 (4) 102.65

8764 23 60.1 → 21 05 6-5

5.97 + 94

92771

23

012

-41

45

9121

5.80 + 107

1040PM 24 Dec 1:15AM 25 Dec 3 hr
Bm < 0.01
24 Dec
25 Dec

3140 7 58 35 -39 12 5.23 +40

3154 8 00 32 -37 12 5.95 +14 A3 Cp*

3350 8 26 46 -52 59 5.08 +25

3341 Cp* 8 25 36 -52 48 6.14 A0 Cp*

AD7455F 8 41 55 -46 43 6.94 +25 2 hr < 0.01
Dec 25 AM

74531 Cp* 8 41 50 -48 04 7.1 B9 1:30 → 3:30

3678 9 01 02 -55 26 5.42 +32

OUT

717 02 24 03 -60 27 5.34 +0.40 F2HP

H015234 02 24 03 -61 37 8.0 F2 GP*

778 02 36 04 -52 41 5.30 +0.27 E

702GP* 02 39 23 -54 41 5.26 dF5 GP*

14043760 06 16 70 -10 42 6.7 +38 ← 1.5 hour
43293 06 14 04 -11 54 6.56 A2 GP* ⁰² > 0.01

1348 10PM 2-224 1 AM 2522 ← 1549 Dec 24/25
HR 2661 07 00 37 -58 54 6.00 +31 ← 30min CAOP
2674 07 02 48 -59 68 5.50 -12 89 GP*

C17477 ppt
ppt

[18	30	16	-42	20.5	8.7 var?	42
[15	28	25	-41	09	8.6 A2	

var?

4 100123

65867

7 57 38

51

22

6.44 to 0.24 to 10 Cgs

6.48 to 0.255 to 0.14 31 Dec 71

6.44 to 0.27 to 0.11 3 Jan 72

6.48 to 0.235 to 0.025 19 Jan 72

6.50 to 0.215 to 0.145 27 Jan 72

HR9895 Van? 23 22 13 -53 54 6.15 1477

B Van? 27" 7.4 A

220338 4* 23 21 40 -55 48 6.5- 120

#12

137549

15

27

50

-17

20

~~4.24~~ g.Fip

HR 5750

15

24

50

-16

30

5.86 g.Gc

Hand

can? ✓

Copen 1201 18 30 18 -42 20

9.24+0.25

$24 \mu\text{m} 20$ 8.76 10.32+0.16

17468 18 30 00

-41 08 9.1 F8 9.6 +0.46 -0.06

$24 \mu\text{m} 20$

17461 18 29 30

-41 05 8.9 F0 8.57 +0.335 +0.14

HR7088 18 49 00

-22 12 6.24 A7111

~~70789p~~
70789p

16 47 49 -19 10 6.74 A40

14350 →

145361

HR 6019

5954 sp*

{ 16 11 07) -55 28 5.80 1024 Van?

{ 16 06 50 -57 51 5.79 89

HR-380

17

10 00

-43

12

3.33 +40

Pygmy
135

6420 sp*

17

16 44

-44

05

5.76 B9

(over)

186786

19 46.2 -65 W -409

(HAND⁷⁵²⁴WRITING)

6.04 + 0.315 + 0.07 (2) FOM

β [m] [g] E-y

2.740 190 778 .187

Δ [m] 024.7
153

+27 $\frac{54}{27}$

+112
-158
-46

$\frac{+1.2}{+87}$ 46

-32 .53
-21 -45

→ 34 07 -28 27

3.5 hours Var?

22413 3 ~~333~~ -28 30 8.85 10.25

~~22424 3 34 13 -24 32 8.95 0~~

22582 3 35 43 -28 13 8.7 8.5 CP#

8m = 0.088
+0003 (AD) 3.5 min
1970

5556i 4 42 08 -8 52

6.75 PM } 10"
6.7 6.8 PM }

HR 4809 → 12 37 11 -18 05 6.08 dA6 Van?
 (Hyale) 1227 sp → 12 40 16 -19 35 6.03 F2 Van?
~~4809 sp~~ → 12 37 11 -18 15 6.05 dA6 ~~comb~~
 4778 12 31 49 -19 37 6.15 A5 ← sp.

HR 5345 14 16 39 -33 05 6.48 F3 Van! Hyale
~~5337~~ 14 14 31 -33 07 6.56 F0 sp

4827 12 46 16 -19 35 6.02 F2 Hyale Van?
 4797 sp* 12 34 24 -20 21 6.12 A5
 4809 12 37 11 -18 05 6.02 F2 Van?

8.66 +0.305 ~~+0.20~~ MM² 71

71
160363 $\frac{2}{2}$

11 31 21 -11 52 8.64 +30

160515

11 32 45 -12 43 8.1 F8

71

8.32 +0.45 -0.12 19mm² 71
8.35 +0.47 -0.085 22mm²
8.32 +0.475 -0.10

~~160515~~

113537 \leftarrow

13 03 20 -46 57 6.43 +39

160493

\checkmark 13 09 40 -48 12 5.32 g100

4/Jan 21 721 +0.025 +0.10

133604 e - 15 04 32 -23 13 9.2

14R 5614 15 04 26 -25 40 6.59 89

13L 00 6.65 -0.02 -0.34 4/Jan 21

135206 e - 15 12 44 -19 20 6.74 +1.5
135168 15 12 32 -18 57 7.36 4.5



15 11 00 -18 01 6.54 +2.0 10.28 10.28 71
15 10 07 -87 36 7.54 N6 7.54 H888014
val: 1007 346



MV = 4.8

6.46 +0.30 +0.07

HN 6366 ✓ 17 06 52 -30 22 5.55 730

6389 ✓ 17 11 02 -32 24 5.57 814

7161 ✓ 18 49 47 -3 21 6.04 730

7143 ✓ 18 54 49 -1 50 6.2 40

1861

5.34 - 082 076 026 2-10 3 8923

5.32 - 754 + 775 - 707 2.125 14 Jan 76
 5.35 - 750 773 - 703 2.119 14 Jan 76
 5.34 - 760 776 - 756 2.125 24 Jan 75

5.35 - 754 785 ~~782~~ 2.121 27 " "

5.35 - 763 796 - 790 2.122 29 " "

5.39 - 753 778 - 700 2.134 12 2475

5.34 - 754 783 - 710 2.140 14 " "

5.34 - 753 781 - 715 2.124 31 " "

5.26 - 743 787 - 703 2.125 26 Sept 75

5.34 - 762 776 - 800 2.124 28 Nov 75

5.30 - 752 776 - 802 2.120 24 " "

5.30 - 754 766 - 709 2.125 25 " "

5.35 - 754 784 - 706 2.122 11 Dec 71

5.35 - 762 774 - 707 2.123 12 " "

5.30 - 763 782 - 805 2.131 22 " "

5.37 - 751 775 - 798 2.123 30 " "

5.34 - 752 787 - 795 2.125 3 Jan 76

5.34 - 761 796 - 812 2.126 4 " "

5.34 - 749 797 - 811 2.123 15 " "

581

4.64 1207 +170 7645 2.726 ② 1570
 4.62 1144 +184 629 2.733 ③ 1573

4.64 -498 +423 -192 2.234 15 Jan 76
 4.67 -493 +425 -193 2.239 16 Jan 76

4.67 -500 921 -176 2.240 18 Jan 76

4.66 -518 +456 -180 2.241 28 Jan 75

4.62 -526 911 -235 - 28 May 75

4.64 -507 509 -166 2.255 18 May 75

4.68 -501 931 -186 2.241 19 Jan 75

4.69 -504 924 -178 2.246 13 Oct 75

4.66 -504 919 -174 2.241 14 Jan 75

4.65 -504 934 -177 2.249 31 Jan 75

4.64 -479 909 -185 2.239 23 Nov 75

4.63 -490 924 -181 2.245 24 Jan 75

4.66 -498 923 -194 2.239 25 Jan 75

4.66 -489 909 -173 2.241 27 Jan 75

4.68 -505 921 -154 2.235 11 Dec 75

4.69 -494 914 -174 2.234 12 Jan 75

4.67 -495 928 -199 2.236 22 Jan 75
 4.63 -496 904 -210 2.233 3 Jan 76
 4.65 -500 914 -172 2.239 4 Jan 75

7254 ←

19 48 20

-65 41

6.04 +131 ←

6.04 +0.32 +0.07 ^{4 Jun 71} Var 2 hr

7513

19 47 00

-66 53

6.44 +1.48 102

6.44 +1.495 +1.64
5 Jun 71

8102 ←

21 10 02

-14 35

6.45 +130 +1.61

6.48 +0.31 +0.15 ^{6 Jun 71} Curk

8118

21 12 39

-10 43

6.49 -08 89

6.75 -0.06 -0.235 6 Jun 71

12.00

CD - 38° 245

0° 45 28 - 37° 47 23

119 1284
19265

11.

very peculiar SB 319

12.0000 b-y m1 c1
+582 .037 .438

531 m050 525

very wide K lines

m No lines.

19265

m R-I color.

558 079 554 2816a

12.02 - 158 798 - 354 26

11.97 - 210 735 - 415 8 pm 77

12.00 - 194 266 - 297

of
10.55 +0.40 250776
11.62 +0.345 27000776
11.61 +0.315 22 pm 77
(19265)

12.0

11.60 +0.37 (3)



322 168 865 2.625 (2) 1570

5964

4.13 -409 874 -411 2.144 13.475
4.15 -386 875 -354 2.145 18"
4.15 -367 874 -355 2.154 14"
4.16 -359 883 -383 2.143 18"
4.18 -384 875 -355 2.189 25"
4.12 -368 870 -364 - 25.887
4.16 -381 872 -376 2.189 26"
4.16 -371 876 -345 2.145 18.628
4.12 -378 869 -409 - 14"
4.17 -376 864 -409 2.140 21"
4.09 -373 878 -405 2.144 12.2075
4.11 -352 873 -358 2.145 27"

3003

480 416 1492

-442

31 Oct 25

481 179 1470

-416

1 Nov 25

~~486~~ 156 1476

-423

25 Nov "

484 175 ~~484~~

-430

24 "

484 179 1453

-413

25 "

488 164 1487

-439

27 "

484 157 1484

-415

11 Dec

483 155 1476

-417

12 "

488 160 1459

-432

30 "

485 151 1488

-429

3 Jan 26

488 178 1468

-416

4/11 "

480 184 1454

-404

16 " "

— 174 1466

-401

15 " "