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<th>Pge</th>
<th>VSM</th>
<th>Object</th>
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<tr>
<td>1</td>
<td>51</td>
<td>Cover page/ index</td>
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<td>Nova Men 1995 (LMC)</td>
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<tr>
<td>3</td>
<td>51</td>
<td>Nova Men 1995 (chart 15°.4 = 1mm)</td>
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<td>4</td>
<td>52</td>
<td>V2204 Oph = NSV 10797</td>
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<td>5</td>
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<td>V2204 Oph (e chart)</td>
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<td>NSV 2186 (e chart)</td>
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<td>8</td>
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<td>9</td>
<td>54</td>
<td>V4334 Sgr (e chart)</td>
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<td>10</td>
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<td>V4334 Sgr (shell flash)</td>
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<td>11</td>
<td>55</td>
<td>V4334 Sgr (d chart)</td>
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<td>MN Peg (d chart)</td>
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<td>14</td>
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<td>V4361 Sgr = Nova Sgr 1996</td>
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<td>15</td>
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<td>V4361 Sgr (e chart)</td>
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<td>16</td>
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<td>CP Cru = Nova Cru 1996</td>
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<td>17</td>
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<td>CP Cru (e chart)</td>
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<td>18</td>
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<td>CP Cru (d chart)</td>
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<td>V1141 Sco = Nova Sco 1997</td>
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<td>V1141 Sco (chart 15.33&quot;=1mm)</td>
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<td>23</td>
<td>61</td>
<td>V1141 Sco (f chart)</td>
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<td>PKS 2155-304</td>
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<td>25</td>
<td>62</td>
<td>PKS 2155-304 (e chart)</td>
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<td>26</td>
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<td>V343 Ser = AS 289</td>
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<td>V343 Ser (e chart)</td>
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<tr>
<td>28</td>
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<td>DI Cru (d chart)</td>
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<td>V4633 Sgr (d chart)</td>
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<td>V4633 Sgr (e chart)</td>
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<td>67</td>
<td>V4633 Sgr = Nova Sgr 1997</td>
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<td>67</td>
<td>V4633 Sgr (f chart)</td>
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<td>36</td>
<td>68</td>
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<td>V2487 Oph (d chart)</td>
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<td>69</td>
<td>V2487 Oph = Nova Oph 1998</td>
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<td>69</td>
<td>V2487 Oph (e chart)</td>
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<td>40</td>
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<td>V1142 Sco = Nova Sco 1998</td>
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<td>41</td>
<td>70</td>
<td>V1142 Sco (chart 27.6° = 1mm)</td>
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<td>42</td>
<td>71</td>
<td>V1142 Sco = Nova Sco 1998</td>
</tr>
<tr>
<td>43</td>
<td>71</td>
<td>V1142 Sco (e chart)</td>
</tr>
<tr>
<td>44</td>
<td>72</td>
<td>LZ Mus = Nova Mus 1998</td>
</tr>
<tr>
<td>45</td>
<td>72</td>
<td>LZ Mus (e chart)</td>
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<tr>
<td>46</td>
<td>73</td>
<td>V4444 Sgr = Nova Sgr 1999</td>
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<tr>
<td>47</td>
<td>73</td>
<td>V4444 Sgr (d chart)</td>
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<tr>
<td>48</td>
<td>74</td>
<td>V4444 Sgr = Nova Sgr 1999</td>
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<tr>
<td>49</td>
<td>74</td>
<td>V4444 Sgr (f chart)</td>
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<td>50</td>
<td>74</td>
<td>V4444 Sgr (shell flash)</td>
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<tr>
<td>51</td>
<td>75</td>
<td>V382 Vel = Nova Vel 1999</td>
</tr>
</tbody>
</table>

Chart scales: 'b' 60"=1mm; 'c' 40"=1mm; 'd' 20"=1mm; 'e' 10"=1mm; 'f' 5"=1mm.  

INDEX. VSM nos. 51 - 100.
VARIABLE
STAR
MEMORANDUM

Preliminary advice of unusual stellar
object and/or unusual activity.

No: 51
Date: 1995 March 4

Distribution List:
F.M. Bateson, A.F. Jones, P. Camilleri, P.F. Williams, G. Bryant,
N.W. Taylor

OBJECT - BASIC DATA:
Name: 052770 Nova Mensae 1995 (LMC)
Position (B1950): 5h 27.3m -70° 3' 
Type: Nova
Magnitude: 10.7V - ?
Discovered by: W. Liller
Confirmed by: W. Liller
Observations: UT March 2.11 10.7
February 25.146 12.6

CHART DETAILS:
Scale: 15.4 " = 1mm

(A) Star Positions.
Equinox: 2000
Source Catalogue: GSC

(B) Magnitudes.
System: V
Source: 
Sequence Stars:

Bill Liller found this nova on a pair of photographs taken with a
20cm Schmidt camera and Kodak TP film, during the PROBLICOM survey, in
the Large Magellanic Cloud. The star was recorded faintly at about
magnitude 12.6 on a photograph taken Feb. 25.146.

The region can be found on Morel's Visual Atlas of the LMC, chart 4.
Chart 17 of LMC SELECTED AREAS overlaps the northern half of this
VSM chart.

M. Morel
052770 NOVA MENSAE 1995 (LMC)

(1950) : 5h 27.3m -70° 3'
(2000) : 5 26.8 -70 1'
Nova. 10.7v - ?

Note: Four NGC objects labelled - NGC 1958, 69, 71, 86.

Plotted from GSC.  
Magnitudes: V  
Epoch: 2000  

(C) 1995 M. Morel. Reproduction permitted with due acknowledgement.
The information in this Memo is provisional and subject to confirmation and/or refinement. Observers should be alert to errors and inconsistencies in the VSM chart (star positions and magnitudes). Report problems to M. Morel. Report observations to the Variable Star Section, RASNZ, P.O. Box 3093, Greerton, Tauranga, New Zealand, according to instructions in handbook "Observation of Variable Stars".

**Distribution List:**
F.M. Bateson, A.F. Jones, P. Camilleri, P.F. Williams, G. Bryant, P. Nelson, T.B. Tregaskis

**Summary:** V2204 Oph (=NSV 10797) has been on the program of the VSS, RASNZ for many years. See charts 776 and 777. VSNET 151 (electronic circular) of July 26, 1995 published a V-band CCD chart of the region, as it was currently reported to be active. Preliminary V mags have been extracted from VSNET 151 (see below) for the RASNZ comparison stars. More regular monitoring is suggested.

**OBJECT – Provisional Details.**

<table>
<thead>
<tr>
<th>Name</th>
<th>182111 V2204 Oph</th>
<th>Type: Z And?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Position (B1950)</td>
<td>18h23m43s +11°55.3'</td>
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</tr>
<tr>
<td>Position (J2000)</td>
<td>18 26 03 +11 55.0</td>
<td></td>
</tr>
<tr>
<td>Magnitude</td>
<td>14 - 16p</td>
<td></td>
</tr>
<tr>
<td>Discovered by</td>
<td></td>
<td></td>
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<tr>
<td>Observations</td>
<td>July 25, 61075</td>
<td>14.69V</td>
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</table>

**CHART DETAILS:**

| Scale | 10" = 1mm |

**<<Star Positions>>**

<table>
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<tr>
<th>Equinox</th>
<th>J2000</th>
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<tbody>
<tr>
<td>Source Catalogue: GSC + CCD frame</td>
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**<<Magnitudes>>**

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<tr>
<th>System</th>
<th>V</th>
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<td>Source</td>
<td>T. Kato, Ouda Station, Kyoto University</td>
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<table>
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<tr>
<th>Sequence Stars:</th>
<th>a 12.5 V</th>
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<tbody>
<tr>
<td></td>
<td>b 13.4</td>
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<tr>
<td></td>
<td>c 13.9</td>
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<tr>
<td></td>
<td>d 14.8</td>
</tr>
<tr>
<td></td>
<td>e 14.7</td>
</tr>
<tr>
<td></td>
<td>f 15.0</td>
</tr>
</tbody>
</table>

M. Morel
182111 V2204 Ophiuchi
(1950) 18h23m43s +11°53.3'
(2000) 18 26 03 +11 55.0
Z And?  14-16p  Sp. ?

Scale: 10'' = 1 mm

Plotted from GSC and CCD frame

Mags. V

Equinox: J2000

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VARIABLE STAR MEMORANDUM

Preliminary advice of unusual stellar object and/or unusual activity.

No: 53
Date: 1996 Feb. 7

The information in this Memo. is provisional and subject to confirmation and/or refinement. Observers should be alert to errors and inconsistencies in the VSM chart (star positions and magnitudes).

Report problems to M. Morel. Report observations to the Variable Star Section, RASNZ, P.O. Box 3093, Greerton, Tauranga, New Zealand, according to instructions in handbook "Observation of Variable Stars".

Distribution List:
F.M.Bateson, A.F.Jones, P.F.Williams, G.Bryant, P.Nelson, T.B. Tregaskis
A.Gilmore, W.Liller, F.Farrell, B.Sumner, N.W.Taylor, AAQ

Summary: NSV 2186 has long been known as a probable variable of the Orion type, in the vicinity of M42 in Orion. It has hitherto been recorded as a faint star, of small range. A recent e-mail circular (VSNET 524) reports a CCD observation by Josef Schaefer showing the variable at 10th mag, unusually bright. Additional observations are required to confirm this.

OBJECT - Provisional Details.

Name: NSV 2186

Position (B1950): 5h31m47.5s -5°48'45"

Position (J2000): 5 34 14.5 -5 46 47

Magnitude: 13.7 - 14.4 V

Discovered by: J. Schaefer, Dertingen, Germany

Re-Discovered by: J. Schaefer, Dertingen

Confirmed by: J. Schaefer, Dertingen

Observations: 10.3v 1996 Feb. 7.95 UT

CHART DETAILS:

Scale: 10" = 1mm

<<Star Positions>>

Equinox: J2000

Source Catalogue: GSC

<<Magnitudes>>

System: V

Source: Chart 780, Series 17.

Charts for Southern Variables.

Sequence Stars: Use V mags.

Note: VSS, RASNZ chart 780 shows NSV 2186 (unlabelled). It is in the bottom right hand corner, about 27mm west of '105' and about 7mm S.

M. Morel
052905 NSV 2186

(1950): 05h31m47.5s -5°48'45"
(2000): 05 34 14.5 -5 46 47
Type: IN Range: 13.7 - 144 V Spect: M4

Reported bright, at 10.3v. Scale: 10" = 1 mm
See also chart 780. Many other variables in this region. See Series 17, Charts for Southern Variables.

Plotted, from GSC. Equinox 2000
Magnitudes: V

Note: V1118 Ori = NSV 2229

MM 1996 Feb. 7
VARIABLE STAR MEMORANDUM

The information in this Memo is provisional and subject to confirmation and/or refinement. Observers should be alert to errors and inconsistencies in the VSM chart (star positions and magnitudes).

Report problems to M. Morel. Report observations to the Variable Star Section, RASNZ, P.O. Box 3093, Greerton, Tauranga, New Zealand, according to instructions in handbook "Observation of Variable Stars".

Distribution List:
F.M.Bateson, A.F.Jones, P.F.Williams, G.Bryant, P.Nelson, T.B. Tregaskis
A.Gilmore, W.Liller, F.Farrell, B.Sumner, N.W.Taylor, AAQ

Summary:
Yukio Sakurai has detected a possible "slow" nova. The photograph taken on Feb. 20, 206 UT shows the star as red in colour and of mag. 11.4. The star can be seen on films beginning 1995 January, at mag. 12.5. An ESO spectrogram reveals that the spectrum is consistent with a reddened early G-type star of high luminosity. No emission lines are seen, unusual one year after brightening.

OBJECT - Provisional Details.
Name: 17/617 ... Sgr  Type: Nova? Symbiotic Nova?
Position (B1950): 17h49m37.7s -17°40'29"
Position (J2000): 17 52 32.7 -17 41 08
Magnitude: 11.4V -21J
Discovered by: Y. Sakurai
Confirmed by :
Observations:
1996 Feb. 20, 206 UT 11.4
1996 Feb. 23.3 12.8V B-V 40.6 (ESO)
References: IAUC 6322 and 6323.

CHART DETAILS:
Scale: 10" = 1mm

<<Star Positions>>
Equinox: J2000
Source Catalogue: GSC

<<Magnitudes>>
System: V
Source:
Sequence Stars: Lettered Stars, Prelim.
GSC mags. a 9.5 h 12.3
b 10.6 k 13.1
c 11.3
d 11.9
e 12.3
f 12.4
g 12.5

M. Morel
174617 --- Sgr

(1950): 17h 49m 37.7s -17° 40' 29"
(2000): 17 52 32.7 -17 41 08
Type: ? Range: 11.4 - 21: V Spect: G

Has experienced a slow rise since 1995 January. Is possibly either a symbiotic nova or a "slow" nova?

Scale: 10" = 1mm

Plotted from GSC. Magnitude: V

Equinox 2000

MM 1996 Feb. 2
VARIABLE STAR MEMORANDUM

Preliminary advice of unusual stellar object and/or unusual activity.

No: 55  
Date: 1996 April 4

Page 1: Data sheet. Page 2: Chart

The information in this Memo. is provisional and subject to confirmation and/or refinement. Observers should alert to errors and inconsistencies in the VSM chart (star positions and magnitudes).

Report problems to M. Morel. Report observations to the Variable Star Section, RASNZ, P.O. Box 3093, Greerton, Tauranga, New Zealand, according to instructions in handbook "Observation of Variable Stars".

Distribution List:
F.M.Bateson, A.F.Jones, P.F.Williams, G.Bryant, P.Nelson, T.B. Tregaskis
A.Gilmore, W.Liller, F.Farrell, B.Sumner, N.W.Taylor, AAQ

Summary: Sakurai's novalike variable in Sagittarius (cf VSM 54; IAUC 6322, 6323, 6325) is now considered to be a member of a class of variable stars that is rarely observed - a shell flash object. Sakurai's object is the central star of a limb-brightened planetary nebula (dim, at least 45" N-S). Optical observations are important as dust ejection episodes may cause optical variations similar to those observed in CNO stars (cf IAUC 6328).

OBJECT - Provisional Details.

Name : 174617 --- Sgr ( Sgr )  
Type : Shell Flash

Position (B1950) : 17h49m37.7s -17°40'29"
Position (J2000) : 17 52 32.7 -17 41 08

Magnitude : 11.4 - 21

Discovered by : Y. Sakurai  
Confirmed by : 

Observations :

CHART DETAILS:

Scale : 5" = 1mm. Traced from chart courtesy B. Sumner.

<<Star Positions>>  
Equinox : 
Source Catalogue: COSMOS/UKST  
Southern Sky Catalogue

<<Magnitudes>>
System : V (CCD, transfer from VM42 Oph field).
Source : Nogami, Kyoto University, 1996.
Sequence Stars: 

M. Morel

VSM.WK1
174617 --- Sgr

(1950): 17h49m37.7s -17°40'29"
(2000): 17 52 32.7 -17 41 08
Type: ? Range: 11.4-21: V Spect: G

Has experienced a slow rise since 1995 January.

Traced from B. Sumner chart (plot of COSMOC/UKST Southern Sky Catalogue)

Magnitudes: V, by Nogami, Kyoto University, 1996.
The information in this Memo is provisional and subject to confirmation and/or refinement. Observers should be alert to errors and inconsistencies in the VSM chart (star positions and magnitudes). Report problems to M. Morel. Report observations to the Variable Star Section, RASNZ, P.O. Box 3093, Greerton, Tauranga, New Zealand, according to instructions in handbook "Observation of Variable Stars".

**Distribution List:**
F.M. Bateson, A.F. Jones, P.F. Williams, G. Bryant, P. Nelson, T.B. Tregaskis
A. Gilmore, W. Liller, F. Farrell, B. Sumner, N.W. Taylor, AAQ

**Summary:** VSNET-Alert 461 reports that Kesao Takamizawa has found a new large-amplitude variable star in Pegasus. It coincides with a 13.0 mag GSC star, GSC 573.00974, which is missing in the Vehrenberg photographic atlas. The observations (somewhat scattered) suggest a Mira-type variable with a period of about 7 months. The proximity of a good published p.e. sequence facilitates calibration of a sequence for this star. The AAVSO is producing a chart and sequence.

**OBJECT – Provisional Details.**

<table>
<thead>
<tr>
<th>Name</th>
<th>222605 Peg</th>
<th>Type</th>
<th>Mira?</th>
</tr>
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<tr>
<td>Position (B1950)</td>
<td>22h28m43.74s +6°7'23.1&quot;</td>
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<tr>
<td>Position (J2000)</td>
<td>22 31 14.66 +6 22 49.0</td>
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<td></td>
</tr>
<tr>
<td>Magnitude</td>
<td>11.5 – &lt;15.5p</td>
<td>Confirmed by</td>
<td>K. Takamizawa</td>
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<td>Observations</td>
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**CHART DETAILS:**

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<tr>
<td>&lt;&lt;Magnitudes&gt;&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equinox</td>
<td>J2000</td>
<td>System : V</td>
</tr>
<tr>
<td>Source Catalogue: GSC</td>
<td></td>
<td>Source : GSPC, sequence P580.</td>
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**Sequence Stars:**

M. Morel
222605 ----Peg

(1950): 22h28m43.7s +06°07’23"
(2000): 22 31 14.7 +06 22 49
Type: M?  Range: 11.5 - <15.5p  Spect.: ?

Is of large amplitude, period of order ~ 7 months. Is probably Mira type.

Scale: 20" = 1mm

Plotted from GSC.

Mags: V

VARIABLE STAR MEMORANDUM

Preliminary advice of unusual stellar object and/or unusual activity.

No: 57
Date: 1996 August 7

Page 1: Data sheet. Page 2: Chart

The information in this Memo is provisional and subject to confirmation and/or refinement. Observers should be alert to errors and inconsistencies in the VSM chart (star positions and magnitudes).

Report problems to M. Morel. Report observations to the Variable Star Section, RASNZ, P.O. Box 3093, Greerton, Tauranga, New Zealand, according to instructions in handbook "Observation of Variable Stars".

Distribution List:
F.M. Bateson, A.F. Jones, P.F. Williams, G. Bryant, P. Nelson, T.B. Tregaskis
A. Gilmore, W. Liller, F. Farrell, B. Sumner, N.W. Taylor, AAQ

Summary:
IAUC 6443 conveys a report from S. Nakano, Sumoto, Japan, that Yukio Sakurai has discovered an apparent nova in Sagittarius. Spectroscopic observations at Arizona, and photometry at Mt John University Observatory, New Zealand, confirm the nova classification.

The observations are indicative of a relatively slow nova in its early decline phase.

OBJECT – Provisional Details
Name: 1817–18 Nova Sgr 1996
Position (B1950): 18h20m47.0s -18°08'52"
Position (J2000): 18 23 42.5 -18 07 15
Magnitude: 10p – ?
Discovered by: Y. Sakurai
Confirmed by: T. Kojima
Observations: 1996 July 11.6 UT m=10
12.6 10
13.498 10.59V (Mt John Obs.)

CHART DETAILS:
Scale: 10" = 1mm

<<Star Positions>>
Equinox: J2000
Source Catalogue: GSC

<<Magnitudes>>
System: V + CCD (V)
Source: GCPD + Mt John Univ. Ob + Baba, Ouda Station
Sequence Stars: Kyoto University

Copy of IAUC 6443 received courtesy of B. Sumner, Melbourne.

M. Morel
181718 Nova Sgr 1996

(1950): 18h20m47.0s -18°08'52"
(2000): 18 23 42.5 -18 07 15
Type: Nova  Range: 10 p - ?  Spect.: ?

Plotted from GSC.
Mags: V

Drawn by MM.
The information in this Memo is provisional and subject to confirmation and/or refinement. Observers should be alert to errors and inconsistencies in the VSM chart (star positions and magnitudes). Report problems to M. Morel. Report observations to the Variable Star Section, RASNZ, P.O. Box 3093, Greerton, Tauranga, New Zealand, according to instructions in handbook “Observation of Variable Stars”.

**Distribution List:**
F.M. Bateson, A.F. Jones, P.F. Williams, G. Bryant, P. Nelson, T.B. Tregaskis
A. Gilmore, W. Liller, F. Farrell, B. Sumner, N.W. Taylor, AAQ

**Summary:** W. Liller, Vina del Mar, Chile, reports his discovery of a probable nova in Crux. The discovery photo was taken on UT Aug. 26.04 (no magnitude reported). It was measured by CCD on Aug. 26.98 at 9.25V. At the time of writing, the very limited number of visual observations indicate that it has faded by more than one magnitude.

**OBJECT – Provisional Details.**

<table>
<thead>
<tr>
<th>Name</th>
<th>Position (B1950)</th>
<th>Position (J2000)</th>
<th>Magnitude</th>
<th>Discovered by</th>
<th>Observations</th>
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<tr>
<td>Nova Cr 1996</td>
<td>12h07m52s -61°29'37&quot;</td>
<td>12 10 31 -61 45 18</td>
<td>9.25V - ?</td>
<td>W. Liller</td>
<td>Aug. 7.0 (11.5V Liller 26.98 9.25V )</td>
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**Sequence Stars:**

<table>
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<th>Star</th>
<th>Magnitude</th>
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<tbody>
<tr>
<td>a</td>
<td>10.7 (GSC)</td>
</tr>
<tr>
<td>b</td>
<td>10.6</td>
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<td>c</td>
<td>10.9</td>
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<tr>
<td>d</td>
<td>11.4</td>
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<tr>
<td>e</td>
<td>11.7</td>
</tr>
<tr>
<td>f</td>
<td>12.1</td>
</tr>
<tr>
<td>g</td>
<td>12.5</td>
</tr>
<tr>
<td>h</td>
<td>12.8</td>
</tr>
</tbody>
</table>

M. Morel
120561 Nova Cru 1996

(1950): 12h07m52s -61°28'37"
(2000): 12 10 31 -61 45 18

Type: Nova  Range: 9.25V - ?  Spec?: ?

Scale: 10" = 1mm

Plotted from GSC.
Mags: V

Drawn by MM.
VARIABLE STAR MEMORANDUM

Preliminary advice of unusual stellar object and/or unusual activity.

No: 59
Date: 1996 October 1

The information in this Memo is provisional and subject to confirmation and/or refinement. Observers should be alert to errors and inconsistencies in the VSM chart (star positions and magnitudes).

Report problems to M. Morel. Report observations to the Variable Star Section, RASNZ, P.O. Box 3093, Greerton, Tauranga, New Zealand, according to instructions in handbook "Observation of Variable Stars".

Distribution List:
F.M. Bateson, A.F. Jones, P.F. Williams, G. Bryant, P. Nelson, T.B. Tregaskis
A. Gilmore, W. Liller, F. Farrell, B. Sumner, N.W. Taylor, AAQ

Summary: Nova Crucis 1996 may have faded by now, but I think it worthwhile to issue a 'd' scale chart, which shows the 1°x1° field around the nova. Other variables are plotted, but are generally rather faint. The two brightest, AD and AZ Cru, are both about 11th mag. The prominent cluster in the top right hand corner is NGC 4103.

OBJECT - Provisional Details. (CP Cru)

Name: 120561 Nova Cru 1996
Type: Nova

Position (B1950): 12h07m52s -61°28'37"
Position (J2000): 12.10 31 -61 45 18
Magnitude: 9.25V - ?
Discovered by: W. Liller
Confirmed by:
Observations:

CHART DETAILS:
Scale: 20" = 1mm

<<Star Positions>>
Equinox: 1875
Source Catalogue: CPD + photos

<<Magnitudes>>
System: V
Source: Gen. Cat. of Photometric Data (GCPD), Geneva Obs.

Sequence Stars:

M. Morel
120561 Nova Cru 1996

(1950) :12h07m52s -61°28'37"
(2000) :12 10 31 -61 45 18
Type: Nova    Range: 9.25V    Spect.: ?

Plotted from CPD + photos.

Epoch: 1875

Mags: V

Drawn by MM.
The information in this Memo is provisional and subject to confirmation and/or refinement. Observers should be alert to errors and inconsistencies in the VSM chart (star positions and magnitudes).

Report chart problems to M. Morel. Report observations to the Variable Star Section, RASNZ, P.O. Box 3093, Greerton, Tauranga, New Zealand, according to instructions in handbook "Observation of Variable Stars".

Summary:

IAUC 6675 conveys a report from W. Liller, Vina del Mar, Chile, that a possible nova has been discovered in Scorpius, by the Probicomm search technique. CCD observations appear to confirm the discovery.

OBJECT

1747–30 Nova Sco 1997 (Provisional Name).

(B1950) = 17h51.0m -30°01.5'
(J2000) = 17h54.2m -30°02'
Magnitude = 8.5p
Discoverer = W. Liller
Observations: June 2.09, <11.5; June 5.085, 8.5, June 5.087, 8.5; June 6.120, 9.0.

CHART DETAILS:

Scale = 15.33" = 1mm

<<Star Positions>>
Equinox = J2000
Source Cat. = GSC

<<Sequence Data>>
Mags. = v
Source = NASA ADC CD ROMS.
Other Stars = as lettered, mags. to be determined.
GSC mags.:
- a 10.0  g 11.8
- b 10.3  h 11.9
- c 10.8  l 12.3
- d 11.0  m 12.4
- e 11.2  n 12.5
- f 11.5  o 12.7

M. Morel
174730 Nova Sco 1997

(1950): 17h51m0s -30°01.5'
(2000): 17 54 12 -30 02
Type: Nova  Range: 8.5p - ?  Spect: ?

Scale: 15.33' = 1mm

Plotted from GSC.
Mags: V
Equinox: J2000
Compiled by MM.
The information in this Memo is provisional and subject to confirmation and/or refinement. Observers should be alert to errors and inconsistencies in the VSM chart (star positions and magnitudes). Report chart problems to M. Morel. Report observations to the Variable Star Section, RASNZ, P.O. Box 3093, Greerton, Tauranga, New Zealand, according to instructions in handbook "Observation of Variable Stars".

Summary:
IAUC 6678 provides accurate positions for the Nova discovered in Scorpius by Liller (see VSM 60). The new position places the nova nearly one minute of arc to the south of the place marked in the VSM 60 chart. The coordinates quoted below are rounded off from the positions published in IAUC 6678 by M. Cavagna and G. Garradd. No reliable V mags. are available for comparison stars.

**OBJECT**

1747-30 Nova Sco 1997 (Provisional Name).

(B1950) 17h50m58.9s -30°02'21"
(J2000) 17h54m11.2s -30°02'53"

**Magnitude**

8.5p

**Discoverer**

W. Liller

**Observations**

June 2.09, <11.5; June 5.085, 8.5; June 5.087, 8.5; June 6.120, 9.0.

**CHART DETAILS:**

Scale: 5" = 1mm

**<<Star Positions>>**

<table>
<thead>
<tr>
<th>Equinox</th>
<th>Source Cat.</th>
</tr>
</thead>
<tbody>
<tr>
<td>J2000</td>
<td>GSC</td>
</tr>
</tbody>
</table>

**<<Sequence Data>>**

<table>
<thead>
<tr>
<th>Mags.</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Other Stars: as lettered, mags. to be determined.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GSC mags.</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a 10.0</td>
<td>g 11.8</td>
</tr>
<tr>
<td>b 10.3</td>
<td>h 11.9</td>
</tr>
<tr>
<td>c 10.8</td>
<td>l 12.3</td>
</tr>
<tr>
<td>d 11.0</td>
<td>m 12.4</td>
</tr>
<tr>
<td>e 11.2</td>
<td>n 12.5</td>
</tr>
<tr>
<td>f 11.5</td>
<td>o 12.7</td>
</tr>
</tbody>
</table>

M. Morel
174730 Nova Sco 1997

(1950): 17h50m58.9s -30°02'21"
(2000): 17 54 11.2 -30 02 53
Type: Nova Range: 8.5 p-? Spect: ?

Plotted from GSC.
Mags: V

Equinox: J2000

Compiled by MM,
**Summary:**

According to IAUC 6774, the BL Lac object PKS 2155-304 has undergone a gamma ray outburst for the period Nov. 11-17. Optical monitoring has been requested, to look for activity in this part of the spectrum.

[Note: BL Lac objects are compact quasi-stellar objects with almost continuous spectra, and have comparatively fast irregular light changes with amplitudes up to 3 mag (V) or more. Strong emitters of X-rays and radio waves.]

<table>
<thead>
<tr>
<th>OBJECT</th>
<th>2153-30 PKS 2155-304</th>
<th>(Provisional Name).</th>
</tr>
</thead>
<tbody>
<tr>
<td>(B1950)</td>
<td>21h55m58.4s -30°27'55&quot;</td>
<td></td>
</tr>
<tr>
<td>(J2000)</td>
<td>21h58m52.1s -30°13'33&quot;</td>
<td></td>
</tr>
<tr>
<td>Magnitude</td>
<td>13.1V (at quiescence).</td>
<td></td>
</tr>
<tr>
<td>Discoverer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observations</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**CHART DETAILS:**

- **Scale:** 10" = 1mm

- **Equinox:** J2000
- **Source Cat.:** GSC
- **Mags.:** V


GSC mags.: 

M. Morel
215330  PKS 2155-304

(1950): 21h55m58.4s  -30°27'55"
(2000): 21 58 52.1  -30 13 33

Type: BL Lac  Range: 13.1 - ?  Spect.: ?

Scale: 10" = 1mm

Plotted from GSC.

Mags: V

Drawn by MM,

Equinox: J2000
The information in this Memo is provisional and subject to confirmation and/or refinement. Observers should be alert to errors and inconsistencies in the VSM chart (star positions and magnitudes).

The information in this Memo is provisional and subject to confirmation and/or refinement. Observers should be alert to errors and inconsistencies in the VSM chart (star positions and magnitudes). Report chart problems to M. Morel. Report observations to the Variable Star Section, RASNZ, P.O. Box 3093, Greerton, Tauranga, New Zealand, according to instructions in handbook "Observation of Variable Stars".

Summary:
Vsnet-alert 1382 reports an outburst by the symbiotic star AS 289. Films by Takamizawa show that the star had a major outburst in 1995 and 1996, consisting of two maxima separated by a minimum about 1996 April. It peaked at about 11.8p, but although it has faded its current brightness is still above its brightness at quiescence (14.9p).

**OBJECT**

* (B1950) : 18h09m34.6s -11°40'55"
* (J2000) : 18h12m22.2s -11°40'07"
* Magnitude : 11.8 - 14.9p
* Discoverer : K.Takamizawa, Nagano, Japan

**CHART DETAILS:**

* Scale : 10" = 1mm

<<Star Positions>>

Equinox : J2000

Source Cat. : GSC

<<Sequence Data>>

Source

GSC mags. : a 11.7 g 14.6
b 12.2 h 14.9
c 12.7 k 15.1
d 13.5 e 13.8
f 14.4

M. Morel
180611 AS 289 Ser

(1950): 18h09m34.6s -11°40'55"
(2000): 18 12 22.2 -11 40 07
Type: Z And?  Range: 11.8 - 14.3 p  Spect.: ?

Scale: 10" = 1 mm

Plotted from GSC.

Equinox: J2000

Mags: V

Compiled by MM,
Summary:
V6net 1291 notes the recently named variable Di Cru = HD 104994 as being a possible southern counter-part of the peculiar cataclysmic variable V Sge. HD 104994 has long been classed as a Wolf-Rayet star. V Sge is known to be a short-period eclipsing variable; mean brightness outside of eclipse varies, with flares (up to 3m) and other small range variations. Is Di Cru a southern analogue? Observations will tell.

OBJECT

1200-61 DI Cru

(B1950) 12h02m42.8s -61°46'26"
(J2000) 12h05m18.7s -62°03'10"
Magnitude 10.62 - 10.94 V
Discoverer
Observations

CHART DETAILS:
Scale 20" = 1mm

<<Star Positions>>
Equinox 1875
Source Cat. CPD + GSC

<<Sequence Data>>
Mags. v
Source
GSC mags.

Note: Part of this chart overlaps VSM Chart 62 (1996 Oct. 1) for Nova CP Cru.
The nova lies just outside the left-hand border, just down from the top left-hand corner.

M. Morel
1200-61 DI Cru

(1950): 12h02m42.8s  -61°46'26"
(2000): 12 05 18.7  -62 03 10
Type: V Sge?  Range: 10.62-10.94V  Spect.: WR

Scale: 20" = 1mm

Plotted from CPD.  Equinox: 1875
Mags: V
Compiled by MM.
**VARIABLE STAR MEMORANDUM**

No. 65  1998 March 25

Preiliminary advice of unusual stellar activity.

Page 1: Data sheet.  Page 2: Chart

Distribution List:
F.M. Bateson, A.F. Jones, P.F. Williams, P. Nelson, A. Gilmore, W. Liller, F. Farrell,
B. Sumner, N.W. Taylor, AAQ.

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The information in this Memo is provisional and subject to confirmation and/or refinement. Observers
should be alert to errors and inconsistencies in the VSM chart (star positions and magnitudes).
Report chart problems to M. Morel. Report observations to the Variable Star Section, RASNZ, P.O. Box 3093,
Greerton, Tauranga, New Zealand, according to instructions in handbook "Observation of Variable Stars".

---

Summary:
In IAUC 6846 W. Liller, Vina del Mar, Chile, reports his discovery and observations of a probable nova in
Sagittarius. Low resolution spectrum from Mar. 23 showed H-alpha in emission, which is characteristic of
a nova. IAUC 6847 reports astrometry by S. Nakano and G.J. Garradd from CCD exposures by Y. Kushida,
M. Aoki and Garradd.

---

**OBJECT**

1815-27 Nova Sagittarii 1998

(B1950) 18h18m32.04s -27°33'5.8"

(J2000) 18h21m40.47s -27°31'38.0"

Magnitude 7.8 - ?

Discoverer W. Liller, using 85mm lens, orange filter, Tech. Pan film.

Observations Mar. 18 <11.5 W. Liller

<table>
<thead>
<tr>
<th>Date</th>
<th>Magnitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>22.363</td>
<td>7.8</td>
</tr>
<tr>
<td>23.316</td>
<td>7.74V</td>
</tr>
<tr>
<td>23.686</td>
<td>7.4V</td>
</tr>
</tbody>
</table>

**CHART DETAILS:**

Scale 20" = 1mm

<<Star Positions>>

Equinox --

Source Cat. (adapted from VSS chart 673).

<<Sequence Data>>

Mags. v from Hipparcos/Tycho

---

This nova lies within the boundaries of VSS, RASNZ chart 673, which was drawn for
WW Sgr (Mira type). No V magnitudes appear to be available for lettered comparison stars.
Fortunately a good range of V mags is available from the Hipparcos and Tycho catalogues.
These can be used for observing the nova.

---

M. Morel
181527 Nova Sgr 1998

(1950): 18h18m32.04s -27°33'5.8"
(2000): 18 21 40.47 -27 31 38.0
Type: Nova  Range: 7.8 - ?  Spect.: ?

Scale: 20" = 1mm

Adapted from chart 673, Charts for Southern Variables, Ser. 15.

Mags: V
Drawn by MM.
VARIABLE STAR MEMORANDUM

Preliminary advice of unusual stellar activity.

No. 66 1998 March 31
Page 1: Data sheet. Page 2: Chart

Distribution List:
F.M. Bateson, A.F. Jones, P.F. Williams, P. Nelson, A. Gilmore, W. Liller, F. Farrell,
B. Sumner, N.W. Taylor, AAQ.

The information in this Memo is provisional and subject to confirmation and/or refinement. Observers
should be alert to errors and inconsistencies in the VSM chart (star positions and magnitudes).
Report chart problems to M. Morel. Report observations to the Variable Star Section, RASNZ, P.O. Box 3093,
Greerton, Tauranga, New Zealand, according to instructions in handbook "Observation of Variable Stars".

Summary:
Nova Sgr 1998 has been under observation for more one week. It appears to be of the slow or at
least moderately slow type. At the time of writing it is still relatively bright, around magnitude 9.
This is not to say that a sudden sharp decline is not imminent. Close monitoring is strongly
encouraged to follow its behaviour. Approximate GSC magnitudes are given below for comparison stars.

OBJECT : 1815-27 Nova Sagittarii 1998 = V4633 Sgr

(B1950) : 18h18m32.04s -27°33'5.8"
(J2000) : 18h21m40.47s -27°31'38.0"
Magnitude : 7.8 - ?
Observations : Mar. 18 <11.5 W. Liller
: 22.363 7.8 W. Liller
: 23.316 7.74V W. Liller
: 23.6868 7.4v A.F. Jones

CHART DETAILS:
Scale : 10" = 1mm

<<Star Positions>>

Jet-2000
Source Cat. : GSC

<<Sequence Data>>

Mags. V from Hipparcos/Tycho

Comp. Stars: (GSC mags.)

| a | 10.9 | h | 13.5 |
| b | 11.5 | k | 13.8 |
| c | 11.7 |
| d | 12.1 |
| e | 12.5 |
| f | 12.8 |
| g | 13.2 |

M. Morel
181527 Nova Sgr 1998 = V4633 Sgr

(1950): 18h18m32.04s -27°33'5.8"
(2000): 18 21 40.47 -27 31 38.0

Type: Nova Range: 7.8 - ? Spect: ?

Scale: 10° = 1mm

Plotted from GSC
Mags: V
Epoch: 2000

Drawn by MM,
The information in this Memo is provisional and subject to confirmation and/or refinement. Observers should be alert to errors and inconsistencies in the VSM chart (star positions and magnitudes). Report chart problems to M. Morel. Report observations to the Variable Star Section, RASNZ, P.O. Box 3093, Greerton, Tauranga, New Zealand, according to instructions in handbook "Observation of Variable Stars".

Summary:
Nova Sagittarii 1998 is still visible, though fading. Fainter comparison stars are now required, and Ame Henden of the US Naval Observatory has kindly measured a range of stars on a CCD frame. His preliminary values are shown on the new chart, scale 5"=1mm. The limit of this chart is about 16.0mag in the central region around the nova.

OBJECT: 1815-27 Nova Sagittarii 1998 = V4633 Sgr

(B1950) 18h18m32.04s -27°33'56.8"
(J2000) 18h21m40.47s -27°31'38.0"
Magnitude: 7.8 - ?
Observations: Mar. 18 <11.5 W.Liller
22.363 7.8 W.Liller
23.316 7.74V W.Liller
23.6868 7.4v A.F.Jones

CHART DETAILS:
Scale: 5" = 1mm

<<Star Positions>>
Equinox: J2000
Source Cat.: GSC+CCD chart

<<Sequence Data>>
Mags. CCD - V (A. Henden, USNO).
Comp. Stars:
New sequence of fainter comparison. Preliminary values A. Henden. Resent by B. Sumner.

M. Morel
181527  Nova Sgr 1998 = V4633 Sgr

(1950): 18h18m32.04s -27°33'5.8"
(2000): 18 21 40.47 -27 31 38.0
Type: Nova  Range: 7.8 - ?  Spect: ?

Plotted from GSC + CCD chart
Epoch: 2000
Mags: V, by A. Henden USNO.
Drawn by MM,
No. 68 Date: 1998 June 18

The information in this Memo is provisional and subject to confirmation and/or refinement. Observers should be alert to errors and inconsistencies in the VSM chart (star positions and magnitudes). Report chart problems to M. Morel. Report observations to the Variable Star Section, RASNZ, P.O. Box 3093, Greerton, Tauranga, New Zealand, according to instructions in handbook "Observation of Variable Stars".

Summary:

According to IAUC 6941, Kesao Takamizawa has discovered a possible nova in Oph. An accurate position has been measured by R. and Y. Kushida. T Kato points out that the object lies within the error circle of the ROSAT source 1RXS 173200.0-191349. Observations of all kinds are strongly urged.

OBJECT

Nova Oph 1998 (Provisional Name).

(B1950) 17h29m03.00s -19o11'48.5"

(J2000) 17h31m59.82s -19o13'57.0"

Magnitude 9.5 - ?

Discoverer K. Takamizawa

Observations UT June 15.561 9.5

CHART DETAILS:

Scale 20" = 1mm

<<Star Positions>>

Equinox J2000

Source Cat GSC

<<Sequence Data>>

Magnitudes V

Source Hipparcos/Tycho

M. Morel
172619 Nova Oph 1998

(1950): 17h29m03.00s -19°11'48.5"
(2000): 17 31 59.82 -19 13 57.0
Type: Nova  Range: 9.5 - ? Sp. ?

Scale 20" = 1mm

Plotted from GSC  Epoch: 2000

Mags: V, by VSHnet
Drawn by MM.
The information in this Memo is provisional and subject to confirmation and/or refinement. Observers should be alert to errors and inconsistencies in the VSM chart (star positions and magnitudes).

Report chart problems to M. Morel. Report observations to the Variable Star Section, RASNZ, P.O. Box 3093, Greerton, Tauranga, New Zealand, according to instructions in handbook "Observation of Variable Stars".

Summary:

A sequence of faint V mags. is provided for observation of this nova at faint limits.
At the beginning of July the nova had dropped to below 13.0V, and is apparently a fast nova.

<table>
<thead>
<tr>
<th>OBJECT</th>
<th>1726–19 Nova Oph 1998 (Provisional Name).</th>
</tr>
</thead>
<tbody>
<tr>
<td>(B1950)</td>
<td>17h29m02.97s -19°11'47.5&quot;</td>
</tr>
<tr>
<td>(J2000)</td>
<td>17h31m59.79s -19o13'56.0&quot;</td>
</tr>
<tr>
<td>Magnitude</td>
<td>9.5p - ?</td>
</tr>
<tr>
<td>Discoverer</td>
<td>K. Takamizawa</td>
</tr>
<tr>
<td>Observations</td>
<td>UT June 15.561 9.5</td>
</tr>
</tbody>
</table>

CHART DETAILS:

Scale : 10" = 1mm

<<Star Positions>>

Equinox : J2000
Source Cat. : GSC + CCD chart

<<Sequence Data>>

Magnitudes : V
Source : A. Henden, USNO
172619 Nova Oph 1998

(1950): 17h29m02.97s -19°11'47.5"
(2000): 17 31 59.79 -19 13 56.0

Type: Nova  Range: 9.5 - ?  Sp.?  Scale 10" = 1mm

Plotted from GSC + CCD chart  Epoch: 2000

Mags: V, by A. Henden, USNO
Drawn by MM.
The information in this Memo. is provisional and subject to confirmation and/or refinement. Observers should be alert to errors and inconsistencies in the VSM chart (star positions and magnitudes). Report chart problems to M. Morel. Report observations to the Variable Star Section, RASNZ, P.O. Box 3093, Greerton, Tauranga, New Zealand, according to instructions in handbook "Observation of Variable Stars".

Summary:
According to IAUC 7034 (conveyed via VSNet) Bill Liller has spotted a nova in Scorpius. It appears to have peaked sharply at 6.9, then gone into decline rather sharply.

<table>
<thead>
<tr>
<th>OBJECT</th>
<th>1748-31 Nova Sco 1998 (Provisional Name).</th>
</tr>
</thead>
<tbody>
<tr>
<td>(B1950)</td>
<td>17h52m11.1 s -31°01'14.4&quot;</td>
</tr>
<tr>
<td>(J2000)</td>
<td>17h55m24.99s -31°01'41.5&quot;</td>
</tr>
<tr>
<td>Magnitude</td>
<td>6.9 - ?</td>
</tr>
<tr>
<td>Discoverer</td>
<td>W. Liller</td>
</tr>
<tr>
<td>Observations</td>
<td>UT Oct. 17 &lt;11.5 (W.Liller)</td>
</tr>
<tr>
<td></td>
<td>Oct 22.409 7.4C (G. Garradd, CCD unfiltered)</td>
</tr>
<tr>
<td></td>
<td>Oct 22.43 8.4v (A. Jones)</td>
</tr>
</tbody>
</table>

CHART DETAILS:
Scale: 27.6" = 1mm

<<Star Positions>>&nbsp;&nbsp;&nbsp;&nbsp;<<Sequence Data>>
Equinox: J2000 &nbsp;&nbsp;Magnitudes: v
Source Cat.: GSC &nbsp;&nbsp;Source:

Note: Liller's Nova Sco 1990 lies about 18.5' NW of the present nova. It does not appear to have received a final name, hence cannot be found in the GCVS. Refer to VSM No. 8, 1990 April 27.

M. Morel
174831 Nova Sco 1998

(1950): 17h 52m 11.1s -31° 01' 14.4"
(2000): 17 55 25.0 -31 01 41.5
Type: Nova  Range: 6.9 - ?  Spect: ?

Scale: 27.6" = 1 mm

Plotted from GSC.  Equinox: J2000
Mags: V
Drawn by MM.
The information in this Memo is provisional and subject to confirmation and/or refinement. Observers should be alert to errors and inconsistencies in the VSM chart (star positions and magnitudes). Report chart problems to M. Morel. Report observations to the Variable Star Section, RASNZ, P.O. Box 3093, Greerton, Tauranga, New Zealand, according to instructions in handbook "Observation of Variable Stars".

Summary:
W. Liller’s nova in Scorpius has been confirmed spectroscopically as a genuine nova. The maximum observed magnitude has been revised, from 6.9 to 7.7. It is still observable, at ninth magnitude. This new chart permits identification when it fades to 13.0 and below.

OBJECT

1748-31 Nova Sco 1998 = $\sqrt{1142}$ Sco
(Provisional Name).

(B1950) : 17h52m11.1 s -31°01'14.4"
(J2000) : 17h55m24.99s -31°01'41.5"
Magnitude : 7.7 - ?
Discoverer : W. Liller
Observations : UT Oct. 17 <11.5 (W.Liller)
: Oct 22.409 7.4c (G. Garradd, CCD unfiltered)
: Oct 22.43 8.4v (A. Jones)

CHART DETAILS:
Scale : 10" = 1mm

<<Star Positions>>
Equinox : J2000
Source Cat. : GSC

Lettered comp. stars (GSC mags). [GSC mags to be treated with caution],
a = 10.4 e = 12.0 k = 13.5 x = ***
b = 11.2 f = 12.4 l = 13.9 y = 9.9 (GSC)
c = 11.5 g = 12.7 z = 10.0V (H/T)
d = 11.8 h = 13.1

*** Note: Star x is red, and whilst a V mag is available from Tycho it may be somewhat in error. These factors make it unsuitable for use as a comparison star.

M. Morel
174831 Nova Sco 1998 = V1142 Sco

(1950): 17h52m11.1s -31°01'14.4"
(2000): 17 55 25.0 -31 01 41.5
Type: Nova  Range: 7.7-?  Spect: ?

Plotting from GSC.

Mags: V

Drawn by MM.
The information in this Memo is provisional and subject to confirmation and/or refinement. Observers should be alert to errors and inconsistencies in the VSM chart (star positions and magnitudes). Report chart problems to M. Morel. Report observations to the Variable Star Section, RASNZ, P.O. Box 3093, Greerton, Tauranga, New Zealand, according to instructions in handbook "Observation of Variable Stars".

Summary:
W. Liller has discovered a nova in Musca, which has been confirmed spectroscopically (IAUC 7079). The discovery magnitude of 8.5 is a red magnitude on the CCD system. A subsequent V mag. was determined as 9.45.

**OBJECT**

<table>
<thead>
<tr>
<th>1151-65 Nova Muscae 1998 (Provisional Name).</th>
</tr>
</thead>
</table>

**Observations**

- 1998 12 29.308 (UT) 8.5r (W.Liller)
- 1998 12 30.148 (UT) 9.45V (W.Liller)
- 1998 12 30.800 (UT) 10.0V (A.Pearce)
- 1998 12 31.175 (UT) 9.55V (W.Liller)

**CHART DETAILS:**

Scale : 10" = 1mm

<table>
<thead>
<tr>
<th>Star Positions.</th>
<th>Sequence Data.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equinox</td>
<td>Magnitudes : V</td>
</tr>
</tbody>
</table>

Region of UU Mus

M. Morel
115165 Nova Muscae 1998

(1950): 11h53m38.4s -65°17'39"
(2000): 11 56 08.9 -65 34 20.6
Type: Nova  Range: 8.5r - ?  Spect.: ?

Scale : 10° = 1mm

Plotted from GSC.
Mags: V

Equinox : J2000

Drawn by MM,
The information in this Memo is provisional and subject to confirmation and/or refinement. Observers should be alert to errors and inconsistencies in the VSM chart (star positions and magnitudes).

Report chart problems to M. Morel. Report observations to the Variable Star Section, RASNZ, P.O. Box 3093, Greerton, Tauranga, New Zealand, according to instructions in handbook "Observation of Variable Stars".

**Summary:**
IAUC 7153 reports the discovery of a nova in Sagittarius by Minoru Yamamoto, Okazaki, Aichi, Japan. It was found on two photos from April 25.731 at magnitude 8.6, using TMax-400 film and 200mm f/4 camera lens (+PO-0 filter). No star is visible at this location on 23 previous films taken by Yamamoto dating back to 1997 Feb. 19, the most recent from 1999 April 11 (lim. mag. 10.6). Spectroscopic observations have confirmed it as a nova near maximum light (IAUC 7154).

**OBJECT**

| (B1950) | 18h04m28.0s -27°20'40" |
| (J2000) | 18h07m36.22s -27°20'13.5" |

Magnitude: 8.6

Discoverer: M. Yamamoto

Observations:
- Apr. 25.731 8.6 (Yamamoto)
- Apr. 26.778 7.8 (Kushida)
- Apr. 27.18 7.95V (W. Liller, IAUC 7154).

**CHART DETAILS:**
Scale: 20"/mm

<<Star Positions>>
Equinox: J2000
Source Cat.: GSC/Guide 7

<<Sequence Data>>
Magnitudes: v
Source: Hipp./Tycho; GCPD
Other Stars:

M. Morel
180127 Nova Sagittarii 1999

(1950): 18h04m28.0s -27°20'40"

Type: Nova  Range: 7.8 - ?  Spect.: ?
The information in this Memo. is provisional and subject to confirmation and/or refinement. Observers should be alert to errors and inconsistencies in the VSM chart (star positions and magnitudes).

Report chart problems to M. Morel. Report observations to the Variable Star Section, RASNZ, P.O. Box 3093, Greerton, Tauranga, New Zealand, according to instructions in handbook 'Observation of Variable Stars'.

Summary:
At the time of writing, Nova Sgr 1999 (now officially designated V4444 Sgr) appears to be fading steadily. It may have dropped below 10.0 by the time this VSM is published. No reliable magnitudes exist for the lettered comparison stars. The corresponding GSC mags are given below, but they should be treated with caution, as they are only indicative. This "f" chart has been adapted from the Digitized Sky Survey.

OBJECT:

(B1950) : 18h04m28.0s -27°20'40"
(J2000) : 18h07m36.22s -27°20'13.5"

Magnitude : 8.6
Discoverer : M. Yamamoto
Observations:
Apr. 25.731 8.6 (Yamamoto)
Apr. 26.778 7.8 (Kushida)
Apr. 27.18 7.95V (W. Liller, IAUC 7154).

CHART DETAILS:
Scale : 5"/mm

<<Star Positions>>
Equinox : J2000
Source Cat. : DSS

<<Sequence Data>>
Magnitudes : V
Source : Hipp./Tycho.
Other Stars : (GSC mags.)
a : 10.4 f : 11.8
b : 10.8 g : 12.1
c : 11.1 h : 12.5
d : 11.4 k : 12.9
e : 11.5 l : 13.5
m : 14.0

Morel
180127 V4444 Sgr = Nova Sgr 1999

(1950): 18h04m28.0s -27°20'40"
Type: Nova  Range: 7.8-?  Spect.: ?

Scale: 5" = 1mm

Plotted from DSS  
Mags: V  
Drawn by MM,
# COMPARISON STAR SEQUENCE FOR NOVA V4444 SGR.

Extracted from A. Henden's dat. file by B. Sumner. Final revised sequence. Refer to VSM 74 (May 5) for lettered comparison stars.

<table>
<thead>
<tr>
<th>SEQUENCE STAR</th>
<th>Sumner</th>
<th>VSM 74</th>
<th>V</th>
<th>B-V</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>a</td>
<td>11.07</td>
<td>0.48</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>b</td>
<td>11.30</td>
<td>1.23</td>
<td></td>
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<td>3</td>
<td>c</td>
<td>11.61</td>
<td>0.76</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>e</td>
<td>12.15</td>
<td>0.49</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>d</td>
<td>12.40</td>
<td>1.84</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>g</td>
<td>12.82</td>
<td>0.78</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>f</td>
<td>12.90</td>
<td>1.35</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>h</td>
<td>13.02</td>
<td>0.57</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>k</td>
<td>13.64</td>
<td>1.02</td>
<td></td>
</tr>
</tbody>
</table>

MM, 1999 May 28
The information in this Memo is provisional and subject to confirmation and/or refinement. Observers should be alert to errors and inconsistencies in the VSM chart (star positions and magnitudes).

Report chart problems to M. Morel. Report observations to the Variable Star Section, RASNZ, P.O. Box 3093, Greerton, Tauranga, New Zealand, according to instructions in handbook "Observation of Variable Stars".

Summary:
The brightest nova in decades was discovered on May 22 by Peter Williams of Heathcote, NSW. Magnitude was 3.1, but has risen further since, approaching 2.5v by some estimates.

It is easily found, a few degrees south of Mu Velorum. Enjoy it!

**OBJECT:** 1040-51 Nova Velorum 1999.

(B1950) : 10h42m42.9s -52°9'44"
(J2000) : 10h44m48.4s -52°25'31" (G. Garradd)

Magnitude : 3.1

**Discoverer** : P. Williams

**Observations** : UT May 22.4 3.1v (P. Williams)

**CHART DETAILS:**

- **Scale** : 1° = 20mm

<<Sequence Data>>

Equinox : 1950

Source Cat. : Atlas Eclipticalis

Other Stars :

Note: Many variables in this region, but no attempt is made to plot them, to avoid clutter. The central meridian shows the declination scale for 1950.

M. Morel
104051 Nova Velorum 1999

(1950): 10h42m42.9s -52°9'44"
(2000): 10 44 48.4 -52 25 31
Type: Nova  Range: 2.5 - 16.4p  Spect?: ?

Scale: 1° = 20mm

Traced from Atlas Ecliptica & CoD

Equinox: 1950
Mags: V

Drawn by MM,
Preliminary advice of unusual stellar activity.

The information in this Memo is provisional and subject to confirmation and/or refinement. Observers should be alert to errors and inconsistencies in the VSM chart (star positions and magnitudes).

Report chart problems to M. Morel. Report observations to the Variable Star Section, RASNZ, P.O. Box 3093, Greerton, Tauranga, New Zealand, according to instructions in handbook "Observation of Variable Stars".

Summary:
Nova Velorum 1999 has been officially designated as V382 Velorum. It is fading, but is still within the range of even small telescopes or binoculars. This new chart, scale 20"/mm, provides comparison stars down to 11.9 from the Hipparcos/Tycho catalogue. The prenova has been identified as a star of magnitude 16.4.

OBJECT

Magnitude
Discoverer
Observations

(B1950) 10h42m42.9s -52°9'44"
(J2000) 10h44m48.4s -52°25'31" (G. Garradd)

Magnitude: 3.1
Discoverer: P. Williams
Observations: UT May 22.4 3.1v (P. Williams)

CHART DETAILS:
Scale: 20" = 1mm

<<Sequence Data>>
Magnitudes: v
Source: Hipp./Tycho.

Other Stars:

M. Morel
104051 V382 Vel = Nova Vel 1999

(1950): 10h42m42.9s -52°9'44"
(2000): 10 44 48.4 -52 25 31

Type: Nova  Range: 2.5 - 16.4p  Spect.: ?

Scale : 20° = 1mm

Plotted from GSC  Equinox: 2000
Mags: V
Drawn by MM,
The information in this Memo is provisional and subject to confirmation and/or refinement. Observers should alert to errors and inconsistencies in the VSM chart (star positions and magnitudes).

Report chart problems to M. Morel. Report observations to the Variable Star Section, RASNZ, P.O. Box 3093, Greerton, Tauranga, New Zealand, according to instructions in handbook "Observation of Variable Stars".

Summary:
Nova Velorum 1999 = V382 Velorum continues to fade slowly. This new chart shows the immediate region of the nova down to about magnitude 16.5. Faint comparison stars have been selected by Fraser Farrell of the Astro. Society of South Australia. He notes that star 'g' could not be seen on June 11.5 UT. Variable? Fraser's sequence has been kept intact, except that my labelling uses lower case letters.

OBJECT
(B1950) : 10h42m42.9s -52°9'44"
(J2000) : 10h44m48.4s -52°25'31" (G. Garradd)
Magnitude : 3.1
Discoverer : P. Williams
Observations : UT May 22.4 3.1v (P. Williams)

CHART DETAILS:
Scale : 5" = 1mm

<<Sequence Data>>
Magnitudes : V
Source : Hipp./Tycho.
Other Stars : Provisional V mags from USNO A1.0 cat.
a : 12.4 p : 16.2
c : 13.4 r : 15.5
d : 14.1 s : 16.0
f : 14.6 t : 15.7
n : 14.9 g : 14.2 Variable?

M. Morel
104051 V382 Vel = Nova Vel 1999

(1950): 10h42m42.9s -52°9′44″
(2000): 10 44 48.4 -52 25 31
Type: Nova  Range: 2.5 - 16.4p  Spect.: ?

Scale: 5′′ = 1mm

Plotted from GSC  
Mags: V  
Equinox: 2000 
Drawn by MM,
Preliminary advice of unusual stellar activity.

Date: 1999 July 16

Summary:
IAUC 7223 conveys a report from S. Nakano, Sumoto, Japan, that Akihiko Tago, Tsuyama, has discovered an apparent nova in Aquila. Spectroscopic observations at Bisei Astronomical Observatory, and CCD images by A. Nakamura, Kuma Kogen, confirm the nova.

Discovery images were found on July 13.558, 13.560, 13.565 and 13.567 (TMax-400 film; 55mm f/3 lens).

**OBJECT**
190212 Nova Aquilae 1999 = V1493 Aql

(B1950) : 19h05m17.4s +12°26'40"
(J2000) : 19 07 36.9 +12 31 26
Magnitude : 8.8
Discoverer : A. Tago
Observations : July 13.56 8.8 A. Tago
: July 14.96 9.7 R.Pickard

**CHART DETAILS:**
Scale : 9.4" = 1mm

<<Star Positions>>
Equinox : J2000
Source Cat. : GSC

<<Sequence Data>>
Magnitudes : v
Source : Hippe./Tycho
Other Stars : as lettered, mags. to be determined.
GSC mags. :
a : 10.9
b : 11.0
c : 11.2

M. Morel
The information in this Memo is provisional and subject to confirmation and/or refinement. Observers should alert to errors and inconsistencies in the VSM chart (star positions and magnitudes).

Report chart problems to M. Morel. Report observations to the Variable Star Section, RASNZ, P.O. Box 3093, Greerton, Tauranga, New Zealand, according to instructions in handbook "Observation of Variable Stars".

Summary:

W. Liller, of Vina del Mar, Chile, has found another nova, this one in Circinus, south of the two pointers to the Southern Cross. Numerous visual observers, including the writer, have confirmed the discovery, which was made on photos taken using Kodak Tech Pan film and orange filter.

OBJECT

(B1950) : 14h19m09.1s -68°55'07.3"
(J2000) : 14h23m23.6s -69°08'45.1"
Magnitude : 7.7
Discoverer : W. Liller
Observations : UT July 15.993 <11
: UT Aug. 23.0125 7.7

CHART DETAILS:

Scale : 20" = 1mm

<<Star Positions>>
Equinox : J2000
Source Cat. : GSC

<<Sequence Data>>
Mags. : V
Source : Hipp./Tycho
Other Stars :
GSC mags. :

M. Morel
141568 Nova Circini 1999

(1950): 14h19m09.1s -68°55'07"
(2000): 14 23 23.6 -69 08 45
Type: Nova  Range: 7.7 - ?  Spect.: ?

Scale: 20" = 1mm

Plotted from GSC
Equinox: 2000
Mags: V
Drawn by MM,
The information in this Memo is provisional and subject to confirmation and/or refinement. Observers should be alert to errors and inconsistencies in the VSM chart (star positions and magnitudes). Report chart problems to M. Morel. Report observations to the Variable Star Section, RASNZ, P.O. Box 3093, Greerton, Tauranga, New Zealand, according to instructions in handbook "Observation of Variable Stars".

Summary:
The nova in Circinus (Liller's nova) is under close observation as it fades slowly. It has dropped below mag. 10.0, according to some estimates. This new, more detailed chart will permit positive identification as it fades. The pre-nova has yet to be found.

OBJECT:
1415-68 Nova Circini 1999

(B1950) 14h19m09.1s -68°55'07.3"
(J2000) 14h23m23.6s -69°08'45.1"
Magnitude  7.7
Discoverer  W. Liller
Observations  UT July 15.993 <11
              UT Aug. 23.0125  7.7

CHART DETAILS:
Scale  5" = 1mm

<<Sequence Data>>
Mags. V
Source : Hipp./Tycho
Other :
GSC mags. a 11.6
        b 12.1
c 12.4
d 12.7
e 12.9
f 13.6

M. Morel

VSM-R.WK1
141568 Nova Circini 1999 = DD Cir

(1950): 14h19m09.1s -68°55'07"
(2000): 14 23 23.6 -69 08 45
Type: Nova Range: 7.7 - ? Spect.: ?

Scale: 5" = 1mm

Plotted from GSC + USNO-A2.0
Equinox: 2000
Mags: V
Drawn by MM,
VARIABLE STAR MEMORANDUM
No. 81 2000 February 12

The information in this Memo is provisional and subject to confirmation and/or refinement. Observers should be alert to errors and inconsistencies in the VSM chart (star positions and magnitudes).

Report chart problems to M. Morel. Report observations to the Variable Star Section, RASNZ, P.O. Box 3293, Greerton, Tauranga, New Zealand, according to instructions in handbook, "Observation of Variable Stars".

Summary:

IAUC 7362 conveys a report from S. Nakano, Sumoto, Japan, that Yukio Sakurai has discovered an apparent nova in Sagittarius. Spectroscopic observations at Arizona confirm the nova. The nova appears to have faded sharply.

OBJECT: 1749-19 Nova Sgr 2000

(B1950) 17h52m12.1s -19°43'33"
(J2000) 17h55m5.8s -19°46'01"
Magnitude: 10.5p - ?
Discoverer: Y. Sakurai
Feb. 4.863: 10.5
Feb. 6.812: 10.4 CCD (R. Kushida)

CHART DETAILS:
Scale: 20" = 1mm

<<Star Positions>>
Equinox: J2000
Source Cat.: GSC
Mags.: v
Source: Hipparcos/ Tycho
Other Stars:

Note: The nova appeared SW of the well-known star cluster M23 = NGC 6494, in the midst of an obscured part of the milky way. A certain amount of reddening is to be expected in this region.

M. Morel
174919 Nova Sagittarii 2000

(1950): 17h52m12.1s -19°45'33"
(2000): 17 55 09.8 -19 46 01

Type: Nova  Range: 10.5 - ?  Spect.: ?

Scale: 20" = 1mm

Plotted from GSC  
Mags: V  
Equinox: 2000  
Drawn by MM,
**VARIABLE STAR MEMORANDUM**

No. 82 2000 February 23

Preliminary advice of unusual stellar activity.

<table>
<thead>
<tr>
<th>Page 1: Data sheet</th>
<th>Page 2: Chart</th>
</tr>
</thead>
</table>

**Distribution List:**


The information in this Memo is provisional and subject to confirmation and/or refinement. Observers should be alert to errors and inconsistencies in the VSM chart (star positions and magnitudes).

Report chart problems to M. Morel. Report observations to the Variable Star Section, RASNZ, P.O. Box 3093, Greerton, Tauranga, New Zealand, according to instructions in handbook "Observation of Variable Stars".

**Summary:**

Nova Sagittarii 2000 continues to be easily visible. An early fading has been followed by a recovery. Observers are urged to follow the nova at this time, during fluctuations in brightness. An "F" scale chart is provided with additional comparison stars.

**OBJECT:**

1749-19 Nova Sgr 2000

(B1950) 17h52m12.1s -19°45'33"

(J2000) 17h55m9.8s -19°46'01"

Magnitude: 10.5p – ?

**Discoverer:** Y. Sakurai

**Observations:**

2000 Jan. 25.863 UT : 11.5
Feb. 4.863 : 10.5
Feb. 6.812 : 10.4 CCD (R. Kushida)

**CHART DETAILS:**

Scale: 5" = 1mm

<table>
<thead>
<tr>
<th>&lt;&lt;Star Positions&gt;&gt;</th>
<th>&lt;&lt;Sequence Data&gt;&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equinox: J2000</td>
<td>Mags. : V</td>
</tr>
<tr>
<td>Source Cat.: GSC+USNO-A2</td>
<td>Source : Hipparcos/ Tycho</td>
</tr>
</tbody>
</table>

Other Stars:

- a 11.2 GSC
- b 11.8 GSC
- c 12.0 GSC
- d 12.5 GSC
- e 12.8 GSC
- f 13.2 GSC
- h 13.8 GSC

M. Morel
174919 Nova Sagittarii 2000

(1950): 17h52m12.1s -19°45'33"
(2000): 17 55 09.8 -19 46 01
Type: Nova Range: 10.5 - ? Spect.: ?

Scale: 5" = 1mm

Plotted from GSC + USNO-A2.0
Mags: V
Equinox: 2000

Drawn by MM,
The information in this Memo is provisional and subject to confirmation and/or refinement. Observers should be alert to errors and inconsistencies in the VSM chart (star positions and magnitudes).

Report chart problems to M. Morel. Report observations to the Variable Star Section, RASNZ, P.O. Box 3083, Greerton, Tauranga, New Zealand, according to instructions in handbook "Observation of Variable Stars".

Summary:
This nova was discovered late in the observing season (too late for southern hemisphere observers).
A chart is now issued, so we can at least follow the decline.
An "e" scale chart is provided.

OBJECT

1918+04 Nova Aql No. 2 1999 = V1494 Aql

(B1950) 19h20m37.0s +04°51'29"
(J2000) 19h23m05.4s +04°57'20"
Magnitude 6.0p – ?
Discoverer A. Pereira
Observations 1999 Dec 1.785 UT : 6.0

CHART DETAILS:
Scale 10" = 1mm

<<Star Positions>>
Equinox J2000
Source Cat. GSC

<<Sequence Data>>
Mags. V
Source : Hipparcos/ Tycho
Other Stars :

M. Morel
191804 V1494 Aquilae = Nova Aql No. 2 1999

(1950): 19h20m37.0s +04°51'29"
(2000): 19 23 05.4 +04 57 20
Type: Nova  Range: 6.0 -  ?  Spect.: ?

Scale: 10'' = 1 mm

Plotted from GSC
Mags: V
Equinox: 2000
Drawn by MM,
MOREL ASTROGRAPHICS, 6 Blakewell Rd, Thornton, NSW 2322 AUSTRALIA
Tel./Fax (int.) 61 (02) 49662078 (H) E-mail: morel@ozemail.com.au

VARIABLE STAR MEMORANDUM
No. 84 2000 March 7
Preliminary advice of unusual stellar activity.

Distribution List:
A. Pearce, N. Brown

The information in this Memo. is provisional and subject to confirmation and/or refinement. Observers should be alert to errors and inconsistencies in the VSM chart (star positions and magnitudes).
Report chart problems to M. Morel. Report observations to the Variable Star Section, RASNZ, P.O. Box 3093, Greerton, Tauranga, New Zealand, according to instructions in handbook "Observation of Variable Stars".

Summary:
A new "f" chart for nova V382 Vel is issued, complete with reliable sequence of V mags. This chart replaces the chart issued with VSM 77 (1999 July 13) which had only lettered faint comparison stars. The old sequence and new V sequence have no stars in common. There is a wide gap in the new sequence, between 12.6 and 14.0. The two bright stars (99 and 104) are from Hipparcos/Tycho.

OBJECT: 1040-51 V382 Velorum = Nova Velorum 1999

(B1950) : 10h42m42.9s -52°09'44"
(J2000) : 10h44m48.4s -52°25'31"
Magnitude: 2.5 - 16.4V
Discoverer: P. Williams
Observations:

CHART DETAILS:
Scale: 5" = 1mm

<<Star Positions>>
Equinox: J2000
Source Cat.: GSC+USNO-A2

<<Sequence Data>>
Mags.: V
Source: Platais et al, PASP 112,224
(c/o Brian Skiff, Lowell Obs.
(vsnet-chat 2666).

M. Morel
104051  V382 Velorum = Nova Vel 1999

(1950): 10h42m42.9s -52°9'44"
(2000): 10 44.48.4 -52 25 31
Type: Nova  Range: 2.5 - 16.4V  Spect.: 

Scale: 5° = 1mm

Plotted from GSC + USNO-A2.0  
Equinox: 2000

Mags: V

Drawn by MM,
VARIABLE STAR MEMORANDUM

No. 85  2000 March 19

Preliminary advice of unusual stellar activity.

Distribution List:
N.J. Brown, A. Pearce.

The information in this Memo is provisional and subject to confirmation and/or refinement. Observers should be alert to errors and inconsistencies in the VSM chart (star positions and magnitudes).

Distribution Chart problems to M. Morel. Report observations to the Variable Star Section, RASNZ, P.O. Box 3093, Greerton, Tauranga, New Zealand, according to instructions in handbook "Observation of Variable Stars".

Summary:
Katsumi Haseda, Toyohashi, Aichi, Japan, has discovered a nova (mpg 10.6) on Mar. 5.81 UT (10cm F4.0 twin patrol cameras. Confirmed by photo taken by the discoverer on Mar. 13.819 UT at mpg 11.6; and unfiltered CCD images taken by M. Uemuia and T. Kato on Mar. 14.9 (mag 11.24). Examination of patrol films shows that the nova was bright in early February, and its classification as a nova had to await examination of its spectrum (M. Fujii, Mar. 16.81). The nova is now in decline.

OBJECT: 1828-14 Nova Scuti 2000

(B1950) : 18 31 12.0 -14 47 33
(J2000) : 18 34 3.2 -14 45 11
Magnitude : 10.6p
Discoverer : K. Haseda

Observations:
Feb. 06.844 12.0p (Haseda)  Mar. 02.797 9.9p (T)
Feb. 09.840 12.2p (Takamizawa)  Mar. 05.810 10.6p (F)
Feb. 11.844 12.0p (Takamizawa)  Mar. 08.780 12.0p (T)
Feb. 16.833 11.8p (Takamizawa)  Mar. 13.816 11.6p (F)

CHART DETAILS:
Scale : 20"=1mm

<<Star Positions>>
Equinox : J2000
Source Cat. : GSC

<<Sequence Data>>
Magnitudes : v
Source : Tycho-2

GSC mags. :

M. Morel
182814 Nova Scuti 2000

(1950): 18h31m12.0s -14°47'34"
(2000): 18 34 03.2 -14 4511
Type: Nova   Range: 3.9p - ?   Spect.: ?

Scale: 20" = 1mm

Plotted from GSC
Mags: V
Drawn by MM,
The information in this Memo is provisional and subject to confirmation and/or refinement. Observers should be alert to errors and inconsistencies in the VSM chart (star positions and magnitudes).

Report chart problems to M. Morel. Report observations to the Variable Star Section, RASNZ, P.O. Box 3093, Greerton, Tauranga, New Zealand, according to instructions in handbook "Observation of Variable Stars".

Summary:
The old nova CI Aquilae (Nova Aql 1917) has been discovered again in outburst. Discoverer of the new outburst is Keisao Takamizawa, with an independent discovery by M. Yamamoto. Spectroscopic observations confirm it as a nova, and accurate astrometry confirms it as CI Aquilae. CI Aql is also known as an eclipsing binary. Refer IAUC 7409.

OBJECT : 1846-01 CI Aquilae

(J2000) : 18:52:03.55 -01:28:38.9
Magnitude : 9.3p
Discoverer : K. Takamizawa
Observations : 2000 Apr. 28.706 10.1 K.Kanatsu
               28.720 9.9 "
               29.708 10.0 K.Hirosawa
               29.731 9.3 H. Maehara

CHART DETAILS:
Scale : 10" = 1mm

<<Star Positions>>
Equinox : J2000
Source Cat. : GSC

<<Sequence Data>>
Magitudes : V
Source : Tycho-2
Other Stars : as lettered, mags. to be verified
Tycho-2 mags:
a 10.42 e 11.86
b 10.58 f 11.97
c 10.79 g 12.02
d 11.21

M. Morel
184601 C I Aquilae

(1950): 18h49m28.1s -01°32'19"
(2000): 18 52 03.55 -01 28 38.9

Type: Nr  Range: 9.3-16.5  Spect.: ?

Scale: 10° = 1 mm

Plotted from GSC
Mags: V (Tycho-2)
Drawn by MM.
VARIABLE STAR MEMORANDUM | No. 87 2000 May 23


Distribution List:

The information in this Memo is provisional and subject to confirmation and/or refinement. Observers should be alert to errors and inconsistencies in the VSM chart. Report chart problems to M. Morel. Report observations to the Variable Star Section, RASNZ, PO Box 3093, Greerton, Tauranga, New Zealand, according to instructions in handbook "Observations of Variable Stars".

Summary:
The recurrent nova CI Aquilae continues to be easily observable in small to moderate instruments. In preparation for its eventual fade into faint magnitudes, an "f" chart is presented here.

OBJECT: 184601 CI Aquilae

(J2000) 18:52:03.6 -01:28:38.9
Magnitude 9.3 - 16.5p
Discoverer K. Takamizawa
Observations 2000 Apr. 28.706 10.1
28.720 9.9
29.708 10.0
29.731 9.3

CHART DETAILS.
Scale: 5" = 1mm  Equinox: J2000  Source Catalogue(s): GSC + USNO-A2.0

Sequence Data:
Magnitudes: V  Source 1: Tycho-2  Source 2: A. Henden, USNO

Note: Magnitudes 109 to 129 are taken from Henden's DAT file (ftp file). Stars 134 and fainter are also in .is DAT file, but were first published in PASP 107,324 (1995). The positions of these faint stars are given as offsets, not from CI Aql as stated but instead from star "f" = GSC 5114.00149.

M. Morel
**184601 CI Aquilae**

(1950): 18h49m28.1s -01°32'19"
(2000): 18 52 03.6 -01 28 39

Type: Nr Range 9.3 -16.5p Spect?

Scale: 5" = 1mm

Plotted from GSC & USNO-A2.0

Mags: V

Equinox: 2000
VARIABLE STAR MEMORANDUM 88. 2000 July 15


Distribution List:

The information in this Memo, is provisional and subject to confirmation and/or refinement. Observers should be alert to errors and inconsistencies in the VSM chart. Report chart problems to M. Morel. Report observations to the Variable Star Section, RASNZ, PO Box 3093, Greerton, Tauranga, New Zealand, according to instructions in handbook "Observation of Variable Stars".

Summary:
W. Liller, Vina del Mar, Chile, reports his discovery of an apparent nova in the Large Magellanic Cloud, on two unfiltered Kodak Technical Pan films using a 0.2m Schmidt camera on July 12.4 UT. The object was not present on a film he had taken of the region on 1999 Mar. 3.

OBJECT

| (B1950) | 05:25:31.9 -70:16:49 |
| (J2000) | 05:25:01.6 -70:14:17 |
| Magnitude | 11.2 - ? |
| Discoverer | W. Liller |
| Observations | 2000 July 12.4098 11.2p (Liller) |
| | 12.4129 11.2p (Liller) |
| | 12.98 11.45V (Liller) |
| | 13.469 11.8v (R. Stubbings) |

CHART DETAILS.

Scale : 20" = 1mm  Equinox : J2000  Source Catalogue(s): GSC via Guide 7

Sequence Data:
Magnitudes : V  Source 1 : GCPD  Source 2 : Gochermann et al 1993ff
(A & A Suppl. 99, 591 1993),
(A & A Suppl. 121, 247 1997)

Note: At the 11.0 level Tycho-1 mags may be too bright, by 0.2 mag. The V magnitudes on the chart should be used in preference to Tycho magnitudes. The chart was created using Guide7, with some LMC clusters shown as dotted circles. The clusters are not always plotted at their correct positions, as Guide7 does not always have the best data for LMC objects.

M. Morel
052670 LMC Nova 2000

(1950) : 5h25m31.9s -70°16'49"
(2000) : 5 25 1.6 -70 14 17
Type: N Range 11.2p - ? Spect ?

Scale: 20" = 1mm

Plotted from GSC
Mags: V

Equinox: 2000
VARIABLE STAR MEMORANDUM 89. 2000 Dec 31

V 445 Pup

073325 Nova Puppis 2000

Type: Nova
Position: (1950) 7h35m54s -25°50'00"
(2000) 7 37 58 -25 56 51

(Lies 50" NE of GSC 6543.2322, V=10.40)

Range: 8.6p - ?

Koziyoshi Kanatsu (Matsue, Shimane, Japan) reports the discovery of a probable nova, on the basis of absence of counterparts on previous image, DSS and 2MASS. Two exposures show the nova at 8.7 and 8.6, on 2000 12 22.73 UT. The object has been confirmed by Akira Takao (Kitakyushu City, Japan) on 2000 12 30.585 UT, at 8.8C.

Kesao Takamizawa (Nagano, Japan) reports that the object was not recorded on 22 films, limiting mag. 14, between 1994 Mar. 14 and 1999 Dec. 3.

There is a close companion of 14.5 at (2000) 7h37m58.43s -25°56'46.8" (USNO-A2.0 cat), which on small scale films is barely resolved from the nova. Kanatsu reports that prior to the outburst the companion star was never seen brighter than 14.

Selected comparison stars from Hipparcos/Tycho.

<table>
<thead>
<tr>
<th>TYC2 Number</th>
<th>Pos. 2000</th>
<th>V</th>
<th>B-V</th>
</tr>
</thead>
<tbody>
<tr>
<td>TYC2-6547.2624.1</td>
<td>073839.6 -261859</td>
<td>7.13 -0.09</td>
<td></td>
</tr>
<tr>
<td>TYC2-6543.473.1</td>
<td>073532.5 -260913</td>
<td>7.73 -0.05</td>
<td></td>
</tr>
<tr>
<td>TYC2-6543.1948.1</td>
<td>073912.1 -252642</td>
<td>8.26 -0.06</td>
<td></td>
</tr>
<tr>
<td>TYC2-6543.2917.1</td>
<td>073755.8 -255937</td>
<td>8.74 0.30</td>
<td></td>
</tr>
<tr>
<td>TYC2-6543.3212.1</td>
<td>073702.5 -255113</td>
<td>8.78 0.11</td>
<td></td>
</tr>
<tr>
<td>TYC2-6543.2220.1</td>
<td>073706.4 -255557</td>
<td>9.18 0.20</td>
<td></td>
</tr>
<tr>
<td>TYC2-6543.2924.1</td>
<td>073802.7 -260046</td>
<td>9.88 -0.04</td>
<td></td>
</tr>
<tr>
<td>TYC2-6543.2322.1</td>
<td>073758.8 -255747</td>
<td>10.40 0.06</td>
<td></td>
</tr>
</tbody>
</table>

The GSC number of each star can be easily retrieved from the TYC2 number. For example, TYC2-6543.2322.1 = GSC 6543.2322.

M. Morel

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This VSM was prepared by MM. from information gleaned from internet sources, such as VSNet.

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073325 Nova Puppis 2000

(1950): 7h35m54s -25°50'00"
(2000): 7 37 58 -25 56 51

Type: Nova  Range: 8.6 - ?  Spect.: ?

Scale: 20" = 1 mm

Plotted from GSC

Mags: V

Guide7 plot. MM.
VARIABLE STAR MEMORANDUM 90.  2001 Jan. 15


Type: Nova
Position: (1950) 7h35m52.9s -25°50'08"
           (2000)  7 37  56.9  -25 56 59
Range : 8.6p - ?

The nova discovered by Kanatsu in Puppis (cf VSM 89) has been confirmed as a genuine, albeit one of somewhat unusual type. It has in fact been hovering near maximum brightness since late November 2000, based on prediscovery images. At the time of writing it is still bright at ninth magnitude.

The "close companion" of 14.5mag mentioned in VSM 89, turns out in fact to be the precursor or progenitor. Very precise astrometry has shown that the two objects are identical. A very precise position is given in IAUC 7556, as (J2000) 7h37m56.882s -25°56'58.88".
A position measured by A. Henden is essentially the same. Other observers have reported very similar results.

The apparent range, of only 5.5mag, is very small for a nova. Most novae have a range of at least 10 to 12 magnitudes, or more.

Please note that an official name has now been given to this object. It is now to be called V445 Puppis.

New chart for V445 Puppis. An "e" scale chart has been prepared (enclosed). Note that the position of the nova is now correctly plotted. The position in VSM 89 was a little off, due to the very preliminary nature of the first reported positions. "87", the nova, and "97" all lie on a straight line running nearly due north.

The V sequence is by B. Sumner (Melbourne), based on CCD data secured by A. Henden, USNO.

M. Morel
073325  V445 Pup (Nova 2000)

(1950): 7h35m52.9s -25°50'08"
(2000): 7 37 56.9 -25 56 59
Type: N  Range 8.6p -14p  Spect?

Scale: 10" = 1mm

Plotted from GSC & USNO-A2.0  Equinox: 2000
Mags: V
Plotted from Guide7. MM.


Type: Nova
Position: (1950) 17h51m33.8s -26°13'45"
(2000) 17 54 40.4 -26 14 15

Range: 7.7p - ?

A probable nova has been discovered in Sagittarius by W. Liller, on Feb. 24.3687 UT and Feb. 24.3709 UT. Equipment used was an 85mm camera with orange filter. Nothing brighter than 11.0 was seen at this position on Feb. 14.

B. Skiff (Lowell Obs.) notes that the object could be somewhat fainter visually due to the strong red bias imparted by the orange filter used by Liller.

There appears to be a star, end figures (2000) 40.413s, 15.38" mb 17.4, mr 15.8, in the USNO-A2.0 catalogue, whose close proximity to the nova's position makes it a likely candidate as the precursor.

M. Morel

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This VSM was prepared by MM, from information gleaned from internet sources, such as VSNet.

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**174826 Nova Sgr 2001**

(1950) : 17h51m33.8s  -26°13'45"
(2000) : 17 54 40.4  -26 14 15
Type: N  Range 7.7p - ? Spect ?

Scale: 20'' = 1mm

---

Plotted from GSC

Mags: V

Equinox : 2000

Plotted from Guide7. MM.


Type: Nova
Position: (1950) 17h51m33.8s -26°13'45"
               (2000) 17 54 40.4 -26 14 15
Range: 7.7p - ?

A nova has been discovered in Sagittarius by W. Liller, on Feb. 24.3687 UT and Feb. 24.3709 UT. Equipment used was an 85mm camera with orange filter. Nothing brighter than 11.0 was seen at this position on Feb. 14.

There appears to be a star, end figures (2000) 40.413s, 15.38", mb 17.4, mr 15.8, in the USNO-A2.0 catalogue, whose close proximity to the nova's position makes it a likely candidate as the precursor.

As of March 5, the nova appears to be in decline. The chart has V magnitudes determined by A. Henden, USNO Flagstaff, Arizona. The sequence stars have been selected by Bruce Sumner.

M. Morel

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174826  V4643 Sgr = Nova Sgr 2001

(1950) : 17h51m33.8s  -26°13'45"
(2000) : 17 54 40.4  -26 14 15
Type: N  Range 7.7p - ?  Spect ?

Scale: 10" = 1mm

Plotted from GSC & USNO-A2.0
Mags: V
Equinox: 2000
Plotted from Guide7.  MM.
VARIABLE STAR MEMORANDUM 93. 2001 May 23


Type: Nova
Position: (1950) 19h05m08.0s +11°40'00"
          (2000) 19 07 28.4 +11 44 46

Range: 10.9p - 19.6B

A nova has been discovered in Aquila by M. Collins (BAA), on May 11.988UT at 10.9p. The nova lies right in the Aquila rift (dust lane) and so is heavily reddened.

A. Henden (USNO) has imaged the field, and his data for the night of May 22 yield the following photometric results for the nova:

V = 13.337
B-V = 1.765

My "e" chart has V magnitudes determined by A. Henden, USNO Flagstaff, Arizona. The sequence stars have been selected by Bruce Sumner. Bruce has deliberately selected comparison stars which all have similar colour, close to B-V +1.0, so as to minimize any colour term which may arise in the observation of this reddened nova.


Scale: 10"/mm
Equinox: J2000
Source of plot: GSC + USNO-A2.0 cats. (Guide7)
Magnitudes: V (A. Henden, USNO).

The information in this Memo. is provisional and may be subject to confirmation and/or refinement. Please be alert to errors or omissions in the VSM chart. Report chart problems to MM. Report observations to VSS, RASNZ, PO Box 3093, Greerton, Tauranga, New Zealand, according to instructions in handbook "The Observation of Variable Stars".

This VSM was prepared by MM, from information gleaned from internet sources, such as VSNet.
V 1548 Aql

190211 Nova Aquilae 2001

(1950): 19h05m08.0s +11°40'00"
(2000): 19 07 28.4 +11 44 46
Type: N Range 10.9p - ? Spect ?

Scale: 10" = 1mm

Plotted from GSC & USNO-A2.0

Equinox: 2000

Mags: V

Plotted from Guide7. MM.

V1178 Sco

Type: Nova
Position: (1950) 17h53m50.9s -32°22'45"
(2000) 17 57 7.0 -32 23 05

Range: 10.2 - 20p

A nova has been discovered in Scorpii by K. Haseda (Japan) on 200106 15.661 UT at 10.4p. The nova lies close to the Sco-Sgr border and is substantially reddened (Liller).

Takamizawa has confirmed it on his films, at 10.2p on 2001 05 12.643, and it appears to be a slow nova.

W. Liller has measured it at V = 10.68 +/-0.03 on June 21.150 UT, and confirmed its nova status, spectroscopically.

"e" chart for Nova Sco 2001.

Scale: 10"/mm
Equinox: J2000
Source of plot: GSC (Guide7)
Magnitudes: V (H/T mission).

Lettered comparison stars with approximate visual magnitudes:

a 10.6 (Tycho)
b 11.0
c 11.3
d 12.0
e 12.5
f 12.7
g 13.0
h 13.1
k 13.4

These are GSC mags, adjusted about 0.5 mag on the basis of Tycho mags V scale.

M. Morel

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**175032 Nova Scorpii 2001**

(1950): 17h53m50.9s -32°22'45"
(2000): 17 57 07.0 -32 23 05
Type: N  Range 10.2 - 20p  Spect ?

Scale: 10" = 1mm

Plotted from GSC

Equinox: 2000
Mags: V

Plotted from Guide7. MM.

104958 ....Carinae [Prov. name V2]
Possible new eruptive variable near WX Car.

Position: (2000) 10h54m2.0s -58°32'19"
Range: 13 - 18p

History: The Harvard variable HV 805 was first announced by Leavitt (Harv. Circ. 79) and given the provisional designation 1904.0129 in Astron. Nachrichten (Pickering 1904). Its position was given as (1875) 10h48.9m -57°51', with range 12.6 - 14.9p. No other details were published, but in due course it was named WX Carinae. No definitive finder chart has been published, and the rough position is ambiguous in this crowded milky way field.

In Union Obs. Circ. 46 (1919), W.M. Worssell reports briefly on photographic observations of, among other stars, WX Carinae. He examined 25 plates, and found a range of 13- <17p and a rough period of 390 days for a variable at or near the position of WX Car. Th published ranges in the Harvard and Union Obs. results differ somewhat, leading one to suspect that two different stars may have been observed.

GCVS data for WX Car: The current electronic edition of the GCVS lists the following data:
Position: (2000) 10h53m58.7s -58°31'28"
Type: Mira
Range: 13 - <17p
Period: ~390d

This position matches a star in the USNO-A2.0 catalogue; visually it is mag. 14 on photos, but a study of DSS images, and other prints, does not show significant variations in brightness, as would be expected of a Mira variable. As a working name for this star, whether variable or not, I call it V1.

V2: A study of archival prints of the region has revealed a large amplitude variable just 44 arcsec south of V1. Its position is seen on a Stranson photo (early 1960s) and confirmed on plate 14a of "A spectral survey of the Southern Milky Way III", (Loden et al 1976, Astron. Astrophys. Suppl. 23, 283-392). I call this star V2. On both of these photos V2 appears at magnitude 13B. At least four DSS images have been examined and V2 is always faint, at 18th magnitude at best. V2 lies in the midst of a dark obscuring lane, about 30" wide trending E-W. The few faint stars here appear to be heavily obscured on the DSS red image. V2 is seen near minimum at about 18mag, superimposed on the dark lane. A cursory study of deep images from the USNO pixel server suggest that V2 is not really red - it looks slightly brighter on the blue plate. The range found for V2 is consistent with that of so-called WX Car reported in UOC 46. However, there is doubt that it is a Mira variable. It may be significant that the images I have accessed show V2 either bright (13m) or very faint (18m). None of the images studied show V2 at an intermediate magnitude. This perhaps suggests a rapid rise and/or fall, while being of a cyclical nature.

It could be an eruptive variable or cataclysmic variable. Monitoring of V1 and V2 is recommended.

Chart: Adapted from USNO-2.0 plot + DSS image.
Scale: 5" = 1mm. Sequence: Provisional letters.

M. Morel

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104958 .... Carinae (V2)

(1950): 10h51m59.6s -58°16'19"
(2000): 10 54 02.0 -58 32 19
Type: ? Range 13 - 18p Period: (~390d?)

Also shown: WX Car (M)

Scale: 5" = 1mm

Plotted from USNO-A2.0 + DSS
Equinox: 2000
Mags: V. Lettered stars have approximate visual mags.

Plotted from Guide7. MM.

175032  V1178 Scorpii = Nova Sco 2001

Type: Nova
Position: (1950) 17h53m50.9s -32°22'45"
         (2000) 17 57 7.0 -32 23 05
Range: 10.2 - 20p

This nova has received the official name V1178 Scorpii. No reliable V sequence has yet been determined for the comparison stars, so observers are advised to record the full comparison using the lettered comparison stars.

A more detailed chart has been prepared for use as the nova fades.

"f" chart for V1178 Sco (Nova Sco 2001).

Scale: 5"/mm
Equinox: J2000
Source of plot: GSC + USNO-A2.0
Magnitudes: V

Lettered comparison stars with approximate visual magnitudes:
a 10.6 (Tycho)
c 11.3
d 12.0
e 12.5
f 12.7
g 13.0
h 13.1
k 13.4

These are GSC mags, adjusted about 0.5 mag on the basis of Tycho mags V scale.

M. Morel

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This VSM was prepared by MM, from information gleaned from internet sources, such as VSNet.

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175032 V1178 Sco = Nova Sco 2001

(1950): 17h53m50.9s  -32°22'45"
(2000): 17 57 07.0  -32 23 05
Type: N  Range 10.2 - 20p  Spect?

Scale: 5" = 1mm

Plotted from GSC + USNO-A2.0  
Mags: V  
Equinox: 2000  
Plotted from Guide7.  MM.

V4739 Sgr

181830 Nova Sagittarii 2001 No. 2

Type: Nova
Position: (1950) 18h21m33.9s -30°2'22"
           (2000) 18 24 46.0 -30 0 41

Range: 7.6v - ?
Discovered by A. Pereira of Portugal on Aug. 26.866 UT (IAUC 7692).
Discovered visually. The field is north of the variable AZ Sagittarii (RV Tau-type,
11.4-12.2p shown on VSS, RASNZ chart 678) but is just off the northern edge of that chart.

Pereira uses 14x100 binoculars in his nova search. He previously discovered Nova Aquilae 1999 no.2 = V1494 Aql.

"d" chart for Nova Sgr 2001 No. 2.

Scale: 20"/mm
Equinox: J2000
Source of plot: GSC + USNO-A2.0
Magnitudes: V - Tycho-2 and standard sequence near globular cluster NGC 6624.

M. Morel
181830 Nova Sagittarii No. 2
(1950): 18h21m33.9s -30°2'22"
(2000): 18 24 46.0 -30 0 41
Type: N  Range: 7-6-? Spect. ?

Plotted from GSC & USNO-A2.0
Mags: V
Guide 7.0 plot. MM

Equinox: 2000

180530 Nova Sagittarii 2001 No. 3

Type: Nova
Pos. : (1950) 18h08m32.9s -30°31'35"
       (2000) 18 11 46.0 -30 30 51
Range : 7.0v - ?

Discovered by A. Pereira of Portugal and W. Liller, independently Lies SW of the variable VZ Sagittarii (RCB 10.8-15.0) shown on VSS, RASNZ chart 614. Some of the brighter sequence stars for VZ Sgr may be useful in observing the nova.

              Sept 6.039 UT 7.27 CCDV
Ref. IAUC 7706.

Pereira uses 14x100 binoculars in his nova search. He previously discovered Nova Aquilae 1999 no.2 = V1494 Aql., and also Nova Sgr 2001 no.2 = V4739 Sgr just 10 days ago.

"c" chart for Nova Sgr 2001 No. 3.

Scale : 40"/mm
Equinox : J2000
Source of plot : GSC
Magnitudes: V - Tycho-2 and V sequence near VZ Sgr (Pub. VSS, RASNZ 11 (C83), p29.

M. Morel
180530 Nova Sagittarii No. 3

(1950): 18h08m32.9s -30°31'35"
(2000): 18 11 46.0 -30 30 51

Type: N  Range: 7.0v - ? Spect. ?

Scale: 40" =1mm

Plotted from GSC

Mags: V

Guide 7.0 plot. MM


134863 Nova Centauri 2001

Type: Nova?
Pos.: (1950) 13h51m57s -64°01' 
      (2000) 13 55 36 -64 16

Range: 8.6v - ?
Discovered by W. Liller, Vina del Mar, Chile.

          Oct 1.0107 UT 8.6

Confirmed by A. Jones, Oct. 2.3333 UT 9.2v
Also by Andrew Pearce, WA at 9.5v.


Scale: 20"/mm
Equinox: J2000
Source of plot: GSC
Magnitudes: V - Tycho-2 and V sequence
           (9.07 - 12.89V) by L. Loden, Astron.

M. Morel

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Email: morel@ozemail.com.au  Website: http://www.ozemail.com.au/~morel  Tel: 61 2 49662078
134863 Nova Centauri 2001
(1950): 13h51m57s -64°01'"
(2000): 13 55 36 -64 16
Type: N?  Range: 8.6v - ?  Spect. ?

Scale: 20" =1mm

Plotted from GSC
Mags: V
Guide 7.0 plot. MM

Equinox:2000
134863 Nova Centauri 2001

Type: Nova
Pos.: (1950) 13h52m1.8s -64°01'16"
      (2000) 13 55 41.3 -64 15 58

Range: 8.6v - ?
Discovered by W. Liller, Vina del Mar, Chile.

          Oct 1.0107 UT  8.6

Confirmed by A. Jones, Oct. 2.3333 UT  9.2v
Also by Andrew Pearce, WA at 9.5v.

Now fading.

"e" chart for Nova Cen 2001.

Scale: 10"/mm
Equinox: J2000
Source of plot: GSC + USNO-A2.0
Magnitudes: V - Tycho-2. Fainter comp. stars lettered. Approximate visual mags are given below, pending reliable photometry.

b 11.3  (B-V = 0.34 acc. to Tycho2)
c 11.5  (B-V = 0.29 acc. to Tycho2)
d 11.8  (B-V = 1.08 acc to Tycho2)
e 12.4  (GSC)
f 13.0  (GSC)

The prenova appears to be identified in the USNO-A2.0 catalogue, at r = 17.6, b = 20.8.
134863 Nova Centauri 2001

(1950) : 13h52m1.8s  -64°01'16"
(2000) : 13 55 41.3  -64 15 58
Type : N?  Range : 8.6v - ?  Spect. ?

Scale : 10" = 1mm

Plotted from GSC & USNO-A2.0

Mags: V

Guide 7.0 plot. MM