BULLETIN OF THE ASTRONOMICAL INSTITUTES OF THE NETHERLANDS.

1924 November 19 Volume II. No. 67.

COMMUNICATIONS FROM THE OBSERVATORY AT LEIDEN.

Observations of the occultation of Mars by the moon on November 5, 1924.

The following observations of this occultation were made at the Leiden Observatory. All times are given in Greenwich mean time.

W. H. VAN DEN BOS. 266 mm Clark-Repso'd refractor, power 100, times recorded by key on the chronograph.

First contact: 8h 3m 2s 1)
disappears: 4 6'7
reappears: 35 44 2)
separated: 36 51'8

J. SCHULT. 18 cm guiding telescope of photographic refractor, power 200, times by chronometer.

First contact: 8h 2m 57''6
disappears: 4 5'8
reappears: 35 57''0 3)
separated: 36 59''2

C. H. HINS. 67 mm finder of Clark-Repso'd refractor, times by watch.

Disappears: 8h 4m 1s
First seen: 36 4

1) The image of Mars being most unsteady, and the dark border of the moon invisible, the observed time must be several seconds late.
2) When first seen at the bright limb, the height of the visible segment of Mars was estimated to be 1/8 to 1/6 of the diameter of Mars.
3) Too late.

Mr. W. H. KRUYTBOSCH observed the occultation at his residence in Wassenaar, of which the longitude and latitude are:

0h 17m 26''6 E. of Greenwich
+52° 7' 57"

The instrument used is a 80 mm Zeiss refractor, power 66, times by watch.

First contact: 8h 3m 8s
third " : 35 46''3
fourth " : 36 21''7

Prof. H. J. HEUVELINK of Delft has communicated the following observations made at the geodetic institute of the Polytechnical University at Delft, of which the longitude and latitude are:

0h 17m 28''5 E. of Greenwich
+52° 0' 34"

The sky was very clear. The telescope used had a power of 50. The observed times are:

Ingress, interior contact 8h 3m 38''0 1)
Egress, exterior contact 36 46 2)

1) Good observation.
2) Observation uncertain, probably somewhat late.

Observations of Baade's object, by W. H. van den Bos.

The following positions of this star-like object have been determined with the 102-inch Clark-Repso'd refractor.

<table>
<thead>
<tr>
<th>Date</th>
<th>t</th>
<th>°app</th>
<th>αapp</th>
<th>Δα</th>
<th>Δδ</th>
<th>Comp.</th>
<th>R.a.l.a.</th>
<th>τ</th>
<th>s</th>
<th>mag</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nov. 5</td>
<td>11 36 26</td>
<td>22 7 58''52</td>
<td>+7 13 52''9</td>
<td>−41''32</td>
<td>+206''3</td>
<td>134, 68</td>
<td>+2''9</td>
<td>+21''3</td>
<td>+42</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>7 3 58</td>
<td>12 31''34</td>
<td>6 40 90</td>
<td>+61''76</td>
<td>+47''1</td>
<td>145, 160</td>
<td>+219</td>
<td>+21''8</td>
<td>+285</td>
<td>3</td>
</tr>
<tr>
<td>7</td>
<td>5 50 49</td>
<td>16 54''24</td>
<td>6 8 86</td>
<td>−19''12</td>
<td>−28''14</td>
<td>146, 68</td>
<td>+219</td>
<td>+217</td>
<td>+13</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>6 44 3</td>
<td>6 6 57''5</td>
<td>...</td>
<td>+73''4</td>
<td>+232</td>
<td>88</td>
<td>+222</td>
<td>+214</td>
<td>−62</td>
<td>3</td>
</tr>
<tr>
<td>8</td>
<td>7 1 34</td>
<td>17 775</td>
<td>...</td>
<td>−99''87</td>
<td>...</td>
<td>88</td>
<td>+232</td>
<td>...</td>
<td>+7</td>
<td>2</td>
</tr>
<tr>
<td>9</td>
<td>6 14 40</td>
<td>26 3''50</td>
<td>5 2 43''7</td>
<td>−343''39</td>
<td>+191''8</td>
<td>78, 49</td>
<td>+224</td>
<td>+209</td>
<td>−42</td>
<td>2</td>
</tr>
<tr>
<td>10</td>
<td>10 39 13</td>
<td>31 22''60</td>
<td>4 25 43''4</td>
<td>+302''82</td>
<td>+45''6</td>
<td>88, 49</td>
<td>+2''21</td>
<td>+207</td>
<td>+230</td>
<td>2</td>
</tr>
</tbody>
</table>

© Astronomical Institutes of The Netherlands • Provided by the NASA Astrophysics Data System
\( t \) = Greenwich mean time, \( \tau \) = mean hour angle, 
\( s \) = seeing; 1 = very bad, 5 = very good.

1 revolution of micrometer screw = 30".88. Power 164. The differences \( \Delta z \) and \( \Delta \delta \) include the correction for refraction.

Nov. 5. The close approach to the comparison star 1 could not be observed, the sky being covered. When it cleared up, the moving object had already passed the star, but was still near enough for direct comparison with the micrometer, power 238.

Nov. 6. Constantly interrupted by clouds.

Nov. 7. The symmetrical observations of \( \Delta \delta \) could not be obtained because of thick clouds. The moving object passed a 10\(^{th}\) star at a short distance; because of clouds no complete measures in angle and distance could be secured:

\[
\begin{align*}
  t & = 7^h 19^m 3^s \quad 90^\circ 4^\prime 15^\prime\prime \text{ estimated} \\
  \theta & = 21^h 17^m 20^s
\end{align*}
\]

Nov. 9. Strong moonlight, haze.

Nov. 10. Observation unreliable, especially in declination, the object being very faint through haze and strong moonlight.

Mean places of comparison stars 1924\(^{0}\)

<table>
<thead>
<tr>
<th>*</th>
<th>A. G. C.</th>
<th>A</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Lg. II 11156</td>
<td>22° 8' 37&quot;65'</td>
<td>+7° 8' 34&quot;8'</td>
</tr>
<tr>
<td>2</td>
<td>11183</td>
<td>11° 27'39&quot;</td>
<td>6° 39' 0&quot;2'</td>
</tr>
<tr>
<td>3</td>
<td>11225</td>
<td>17° 11'14&quot;</td>
<td>6° 12' 28&quot;6'</td>
</tr>
<tr>
<td>4</td>
<td>11238</td>
<td>18° 45'40&quot;</td>
<td>6° 5' 22&quot;6'</td>
</tr>
<tr>
<td>5</td>
<td>Alb. 7817</td>
<td>31° 44'65&quot;</td>
<td>4° 59' 11&quot;0'</td>
</tr>
<tr>
<td>6</td>
<td>7782</td>
<td>26° 17'57&quot;</td>
<td>4° 24' 37&quot;1'</td>
</tr>
</tbody>
</table>

The mean places of the stars were reduced to apparent places at the time of observation by applying the corrections given under the heading R. a. l. a. in the first table.

---

**Request for observations of the moon.**

A committee of the American Astronomical Society is carrying on an intensive campaign for observations of the moon during the month preceding the eclipse of January 24, 1925, and the month following. Prof. ERNEST W. BROWN accordingly desires the following request to be brought under the notice of observers.

"The American Astronomical Society, through one of its committees, requests that observations of the moon during the lunaion preceding the eclipse of 1925, January 24, and also the lunaion following be made whenever possible, especially near the new moons. It requests meridian observations, extra meridian observations, and more particularly occultations".

The object of the campaign is to obtain a more accurate idea of possible short period deviations and also the comparison of the four classes of observations; namely, the three mentioned above and the photographic method devised by the Harvard College Observatory.

---

© Astronomical Institutes of The Netherlands • Provided by the NASA Astrophysics Data System