MONTHLY NOTICES
OF THE
ROYAL ASTRONOMICAL SOCIETY.

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WILLIAM HUGGINS, Esq., F.R.S., President, in the Chair.

Major-General John Baillie, 25 Hamilton Terrace, St. John's Wood;
Thomas Brewin, Esq., 14 St. Nicholas Street, Leicester;
G. Calver, Esq., Hill House, Widford, Chelmsford;
James Campbell, Esq., F.R.G.S., Arkley House, Barnet; and
W. F. Denning, Esq., Tyndale House, Ashley Down, Bristol;

were balloted for and duly elected Fellows of the Society.

The Rev. T. Tordiffe and Mr. J. Garbutt were expelled from
the Society for non-payment of arrears of subscriptions.

Note on some of M. Stephan’s New Nebulae.

By J. L. E. Dreyer, Esq.

Among the new Nebulae, the positions of which were given
by M. Stephan in the April No. of the Monthly Notices, are
a few which already have been found before. M. Stephan has
himself suspected this in the case of No. 12 of the first list, as
he says: “Le No. 12 est peut-être identique avec 440 Lassell.”
This identity is, however, quite certain, as the Nebula in question
has been found independently by D’Arrest, whose position,
brought up to 1876, is

21° 20′ 9′′ 3
97° 32′ 13″

in perfect accordance with M. Stephan.

With respect to Nos. 1 and 2 of the second list, a comparison
with D’Arrest’s observations will likewise show that these are
identical with H. III. 441 and 442. D’Arrest (who has found
near this place several new Nebulae which seem to have escaped
M. Stephan) has the following positions for 1860:—

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while the places of M. Stephan are for 1860:—

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<th>h</th>
<th>m</th>
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<tr>
<td>1</td>
<td>20</td>
<td>18'9</td>
<td>92</td>
<td>38</td>
<td>49</td>
</tr>
<tr>
<td>1</td>
<td>20</td>
<td>37'9</td>
<td>92</td>
<td>36</td>
<td>55</td>
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The "General Catalogue" is therefore wrong with respect to these two Nebulae, while Auviers finds positions which agree better with the modern determinations.

Through the kindness of M. Stephan I have been able to insert these two lists of Nebulae in my supplement to the "General Catalogue," which was read before the Royal Irish Academy in February last, and which I hope will soon be in the hands of astronomers. The numerous cases in which Marseilles nebulae had been discovered independently by D'Arrest or Marth, have shown that M. Stephan almost always estimates the nebule far fainter than the other observers of nebule. The descriptions "eeF," "presque inobservable," &c. should therefore not deter observers from looking for these objects.

_Earl of Rosse's Observatory,_
_June 1877._

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**Note on the new Inequalities in the Moon's Longitude, pointed out by Mr. Neison.** By S. Newcomb.

The inequalities in the Moon's longitude pointed out by Mr. Neison in the April No. of the *Monthly Notices*, if real, are so important, that I may be permitted to express the desire to see his computations of them published _in extenso_. They are, properly speaking, inequalities of long period in the mean longitude and in the eccentricity and perigee of the Moon, produced by the action of Jupiter, admitting of being expressed as follows:—

\[
\delta l = -0.20 \sin (2\pi - 2J),
\]

\[
e\delta \pi = +0.58 \sin (2\pi - 2J),
\]

\[
\delta e = -0.58 \cos (2\pi - 2J),
\]

where \(\pi\) is the longitude of the Moon’s perigee, and \(J\) the mean longitude of Jupiter. The value of the varying angle is

\[
2\pi - 2J = 287° + 20'65 (t - 1800'0),
\]

\[
= 239° + 20'65 (t - 1850'0).
\]

My present object is to show how strongly the reality of these inequalities is indicated by observations. In No. 3 of Papers