23rd, a.m., calm and light from S.E.: towards evening the wind veered to N.E., and blew with great violence till 6 a.m., 24th."

Northerly winds on the 24th.

On the 24th the winds were more generally northerly, and stronger, with a great deal of rain,* the barometer rising rapidly all day; the only reports of gales are the following:—Wells, Norfolk, 24th, p.m., "Now blowing heavily from N.N.E.

Falmouth, 24th, "Strong gale" from north, with "heavy squalls."

In London the wind was northerly and strong.

Continent.

There is nothing specially remarkable in the reports from the Continent during this period. Southerly weather was exchanged for northerly about the same time as in England: there was also a considerable rainfall, but the winds do not appear to have been violent in any case.

Weather at sea.

At sea, to the southward and westward of Ireland, for several hundred miles, ships had encountered for some time very heavy weather; a violent gale, on the 21st, from S.S.W. to west is reported, and subsequently "strong northerly winds" and thick weather.

Weather subsequent to the 24th.

After the northerly wind had fairly set in over Great Britain, it continued for about two days, the barometer being high and pretty steady everywhere. The barometer then again commenced falling, the thermometer rose, and the wind again drew round to the southward.

This change commenced in the north, taking place about a day earlier in the north of Scotland than in the south of England. In Scotland the change took place on the 25th—26th; in England on the 26th—27th. On the 28th the winds drew more westerly to N.W., the general direction being, in Scotland, from W.S.W.; in England, on the east coast, about W.N.W., on the south coast about N.W., and in Ireland, from S.W. to N.W.

Notices of shipping, &c.

With regard to the effect the storm signals, in this instance, had upon the movements, &c., of shipping, there are but few notices in the newspapers, but considering the great violence of the weather from the southward, almost everywhere, and from the northward in a few cases, the losses amongst shipping seem to have been remarkably small.

The following remarks from Shields are (as far as they go) unfavourable; but it must be remembered that Shields had experienced a northerly gale on the previous night, (21st—22nd), (the night following the day on which the "warning" was sent).

"Though the signals have been hoisted this morning (the 22nd) to indicate a probable impending storm, and ships have been cautioned not to proceed, several are preparing to leave next tide."

No dangerous weather seems to have followed.

The next report from Shields is dated the 24th, and says:—

"The large fleet which sailed yesterday had a fine stiff favourable wind all night."

The fact seems to be, that the northerly wind did not (as a rule) in this case come with such violence as there had been reason to expect.

There is this marked difference between the two principal storms in this month, that whereas the worst of the first storm was from the northward, the worst of the second was from the southward.

MARCH 1861.

Friday, 1st.

March 1st.—The weather was very unsettled, with strong westerly winds in Ireland, S.W. in England, S.S.W. in the north of Scotland, and southerly in the Shetland Isles. The barometer ranged from 29·20 to nearly 30·00, being lowest in the north, and was falling. In the night, however, it again rose, and the following morning, Saturday, the 2nd, again began to fall.

Saturday, 2nd.

Gale on thed 2nd and 3rd.

Sunday, 3rd.

The winds had now become more westerly (S.W. to N.W.) all over the kingdom, and were for the most part strong (particularly in Ireland), and increasing. Before midnight it was blowing a heavy gale. The south coast had the wind from W.S.W. to W.N.W., veering more north about noon on Sunday, the 3rd, and moderating.

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* There were considerable floods in the eastern counties, owing to the quantity of rain which fell on the 23rd and 24th.

It was accompanied with heavy squalls of rain.

On the east coast the weather was very similar, but there the gale began and ended (or moderated) a little later (two or three hours.)

On the N.E. coast it veered from W. to N.N.E. Captains arriving at Shields on this day (the 3rd) report having experienced very heavy weather during the night, and that the wind flew suddenly round from S.W. to N.E.

(In the Orkneys the weather was boisterous from the N.E., with frequent snow squalls.)

The storm was severely felt on the French* coast. At Calais it is said to have blown a "complete hurricane" throughout the night and all Sunday morning, the wind veering to the N.W. about 6 p.m., when it became moderate. Evening, Saturday 2nd, to evening, Sunday, 3rd.

The temperature does not seem to have undergone any marked change.

On the 4th the winds were north-westerly, fresh, and strong, the weather generally fine, and the barometer rising, in England. In Scotland and Ireland it had risen, but was now beginning to fall again. The next morning, the 5th, it was falling in England also; the temperature had risen, upon the whole, some 5° or 10°, and the wind was southerly. Monday, 4th. Barometer begins to fall in Scotland and Ireland. Tuesday, 5th.

(At Galway a force of 10 from west was reported.)

Before the next morning (the 6th) it was blowing a hard gale from the westward over a great part of the country. At Galway the force of the wind was 12, at Berwick 11. Weather on the 5th (Wednesday).

Many ports, however (more particularly on the south and east coasts), had at present escaped.†

The barometer was now down to about 28·80 in the north of Scotland, more than an inch lower than in London, and nearly an inch and four-tenths lower than in Jersey. On the west coast of Ireland the barometer was about 29·50, and gradually higher eastward as far as the east coast of England, where (Yarmouth) it was 29·88. Farther east still there was but little change. In Denmark it was much the same as at Yarmouth. Great difference of pressure in the North and South. Denmark.

The temperature at Copenhagen was, however, 38°, while that at Yarmouth was 45°. The wind at Copenhagen was southerly; and moderate.

Three warnings were sent on this day to the places named below ‡:— "Warnings" sent on the 6th.

1. "Show signal-drum."

2. (To Bridlington)—"Gale expected from westward, then northward and eastward."

§ 3. Show cone over drum now and again to-morrow."

The first of these warnings also appeared in the "Shipping Gazette" of the same day (the 6th).

(The third, so far as related to displaying the signals on the following day, was counter-ordered.)

The barometer continued falling (in the neighbourhood of London) till towards evening, when it began to rise rapidly, but the lowest point reached was but little below 29·80. Barometer on the 6th.

This storm, of Wednesday and Thursday (the 6th and 7th) extended from about the Channel Islands to the Orkneys. How much farther north is not known, but it does not seem to have been much felt south of the Channel Islands, nor very severely in that latitude.‖ Extent of storm of the 6th and 7th, Wednesday and Thursday.

(In the south of France and in Spain the winds on both days were light from the east and north, the barometer remaining considerably over 30·00 all the time.)

In almost every case the wind came first from the west or S.W., shifting or veering to the N.W. and north. A few examples from different parts of the coasts will suffice to show the general character of the weather.

The storm commenced first in Ireland. At Galway it was chiefly from the west, blowing hard all Tuesday (the 5th), at its height on Wednesday morning, Storm was first felt in Ireland on Tuesday, 5th.

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* On the coast of Holland, also, it blew very hard from the S.W. on Sunday.

† It was comparatively moderate, at present, at many of the ports to which "warnings" were sent on this day.

‡ To Nairn, Aberdeen, Leith, Berwick, Dover, Portsmouth, Weymouth, Plymouth, Penzance, Barrow, Ardrossan, Greenock, Portrush, Galway, Valentia, Queenstown, Kingstown, and Belfast.

§ To Nairn, Aberdeen, Berwick, Leith, Shields, Hartlepool, Scarborough, Hull, Yarmouth, Dover, Portsmouth, Weymouth, Plymouth, Penzance, Liverpool, Ardrossan, Portrush, Galway, Valentia, Queenstown, Kingstown, and Belfast.

‖ Neither does it seem to have reached the other side of the North Sea, the winds there were chiefly S.W. to W.N.W., but by no means violent. (At Bremen, on the 9th, it blew a gale from N.W. for a few hours.)

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Explanatory of the Barometric Curves on the following diagrams.

Admiral Milne invented, and with his own hands chiefly constructed a very useful self registering barometer.

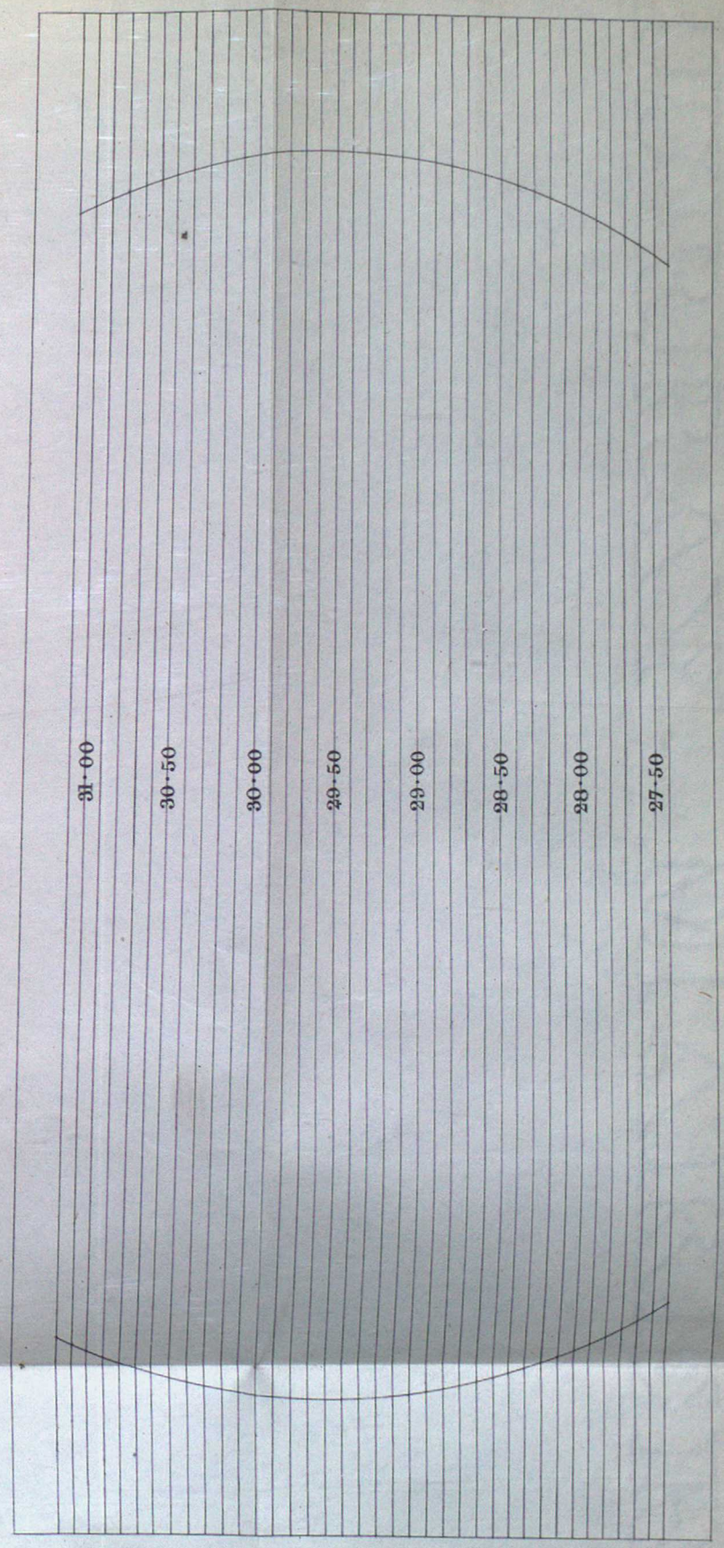
Two such instruments, somewhat improved by the aid of Opticians, but in principle similar, have been in use here and are highly approved as practically valuable.

Their indications are respectively four hourly & nearly five hourly (intended to be six.)

As the needle end, that carries a spur to mark the clock-moved paper, traverses in a curve — of course the time lines (drawn by observation of fact — not theoretically) — are curves: and the principle of the instrument requires that the spaces shewing tenths of inches, should diminish slightly both ways from the middle line.

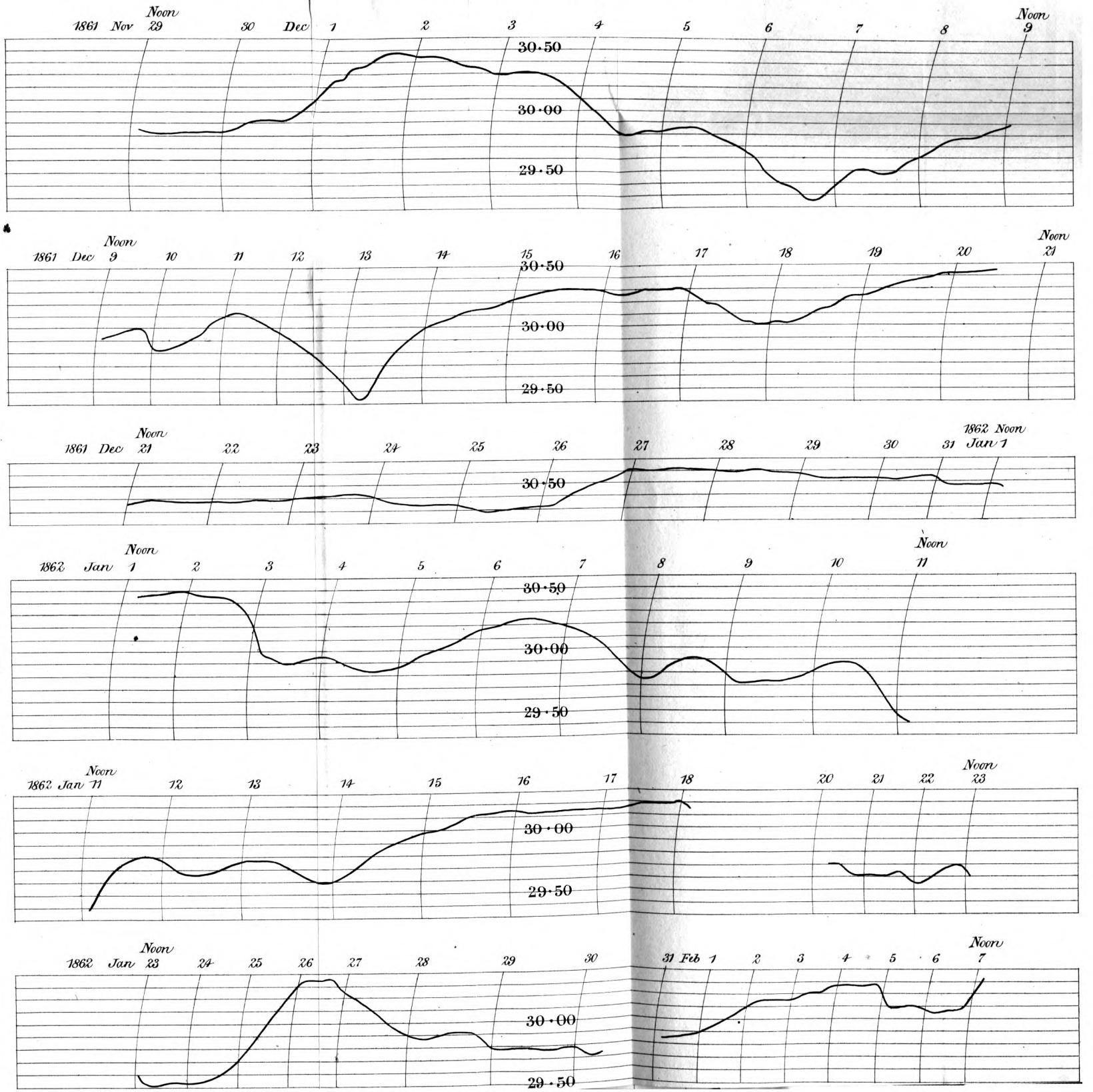
Inferior clockwork, and connecting wheels, have caused some irregularity in the actual time spaces (as seen on the diagrams) and defective centering of the needle, an error in scale, increasing towards each extreme — gradually.

The movements of this syphon tubed barometer — shewn by successive dots, about a tenth of an inch apart, on a card which may be read, or removed, and replaced, or changed, at any time, afford an insight into the chief atmospherical characteristic change — its tension (or pressure) analogous to that which an Engineer obtains respecting a Steam Engine, by examining its indicator diagram.

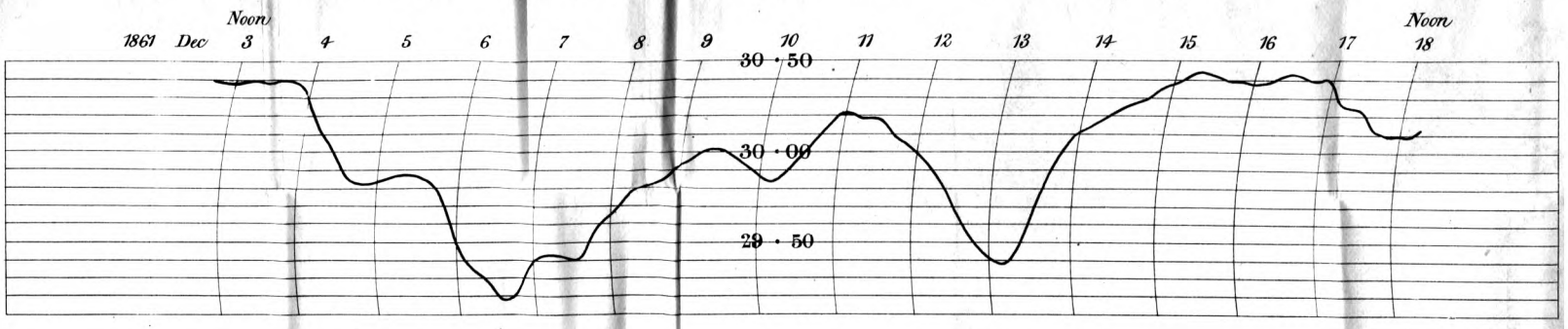


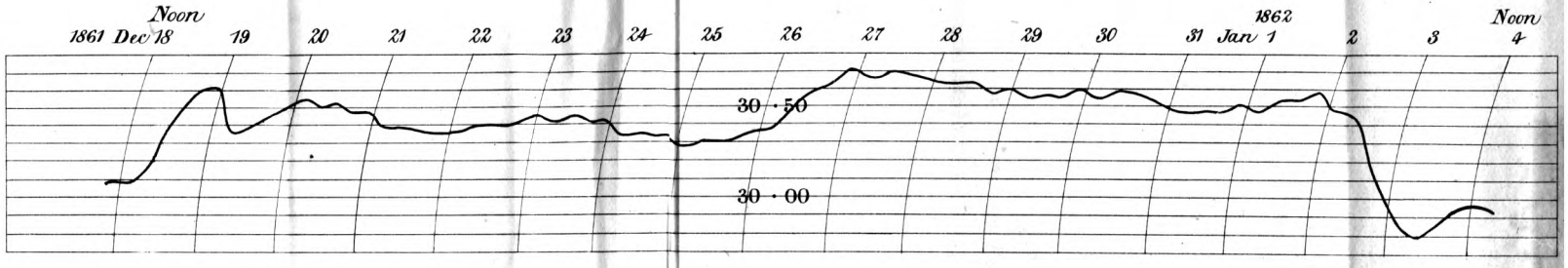
In November; December; January, and February.

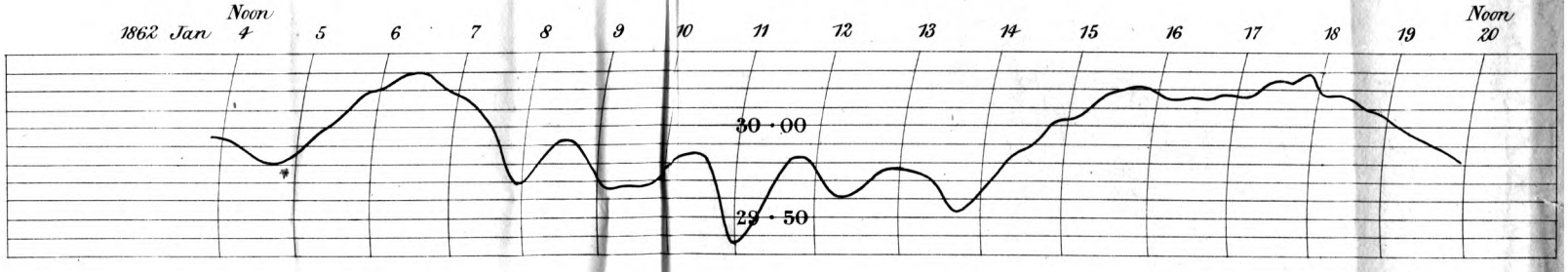
These are Curves through four hourly dots (night and day.)

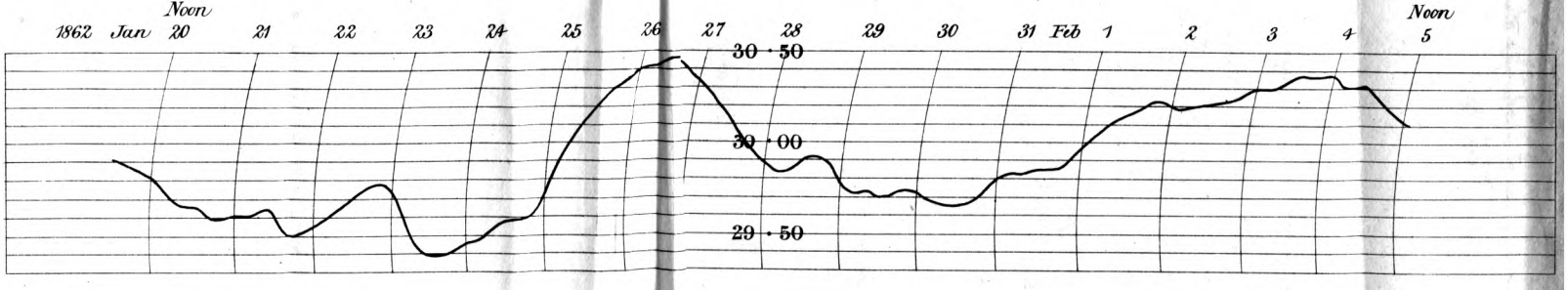


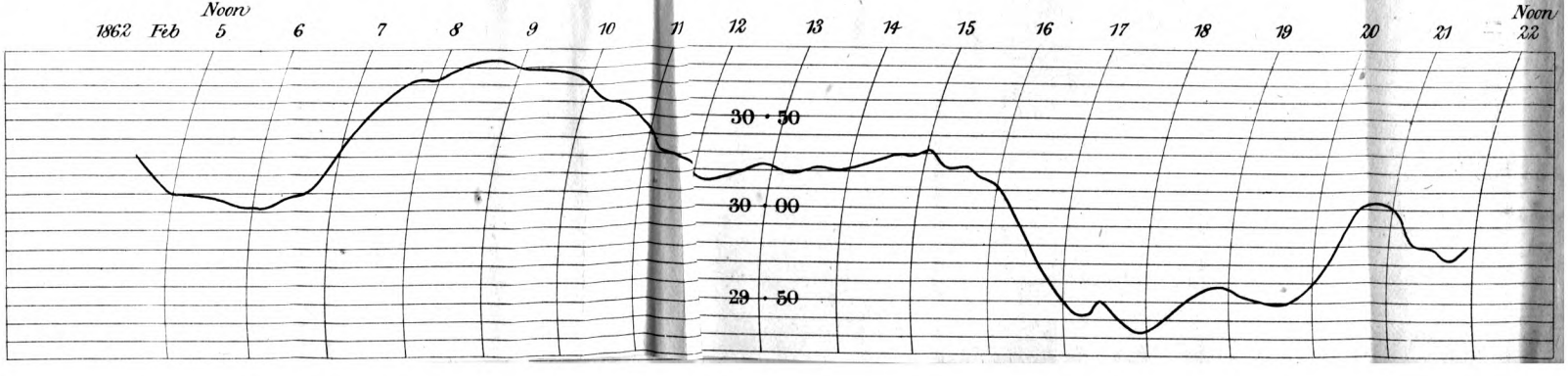
Barometric Curves
In December, January, and February.



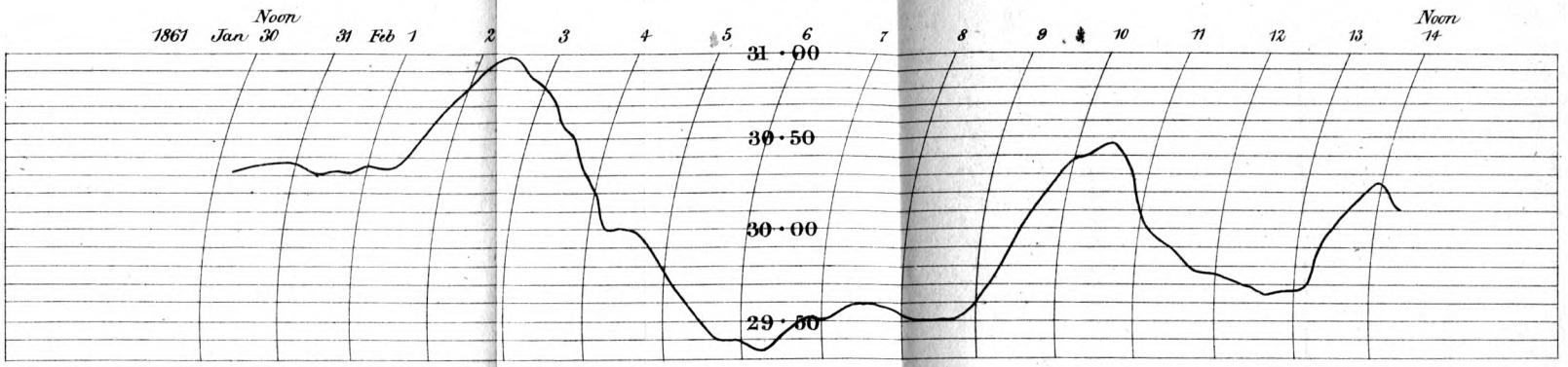


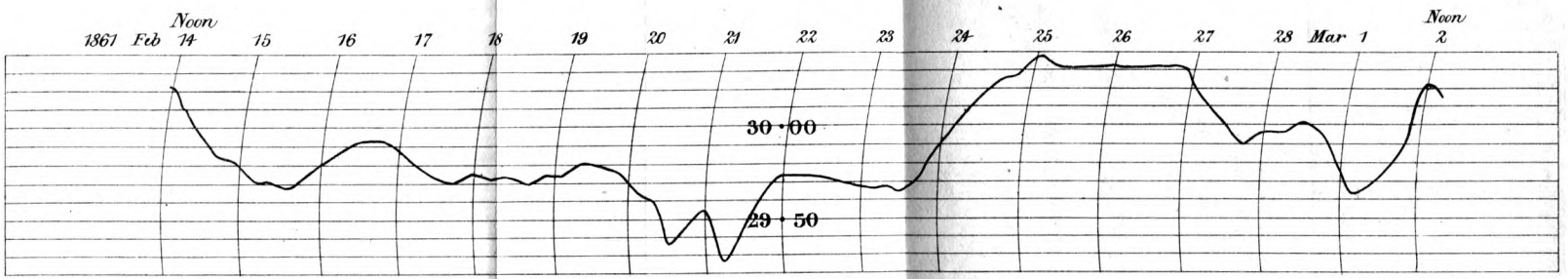


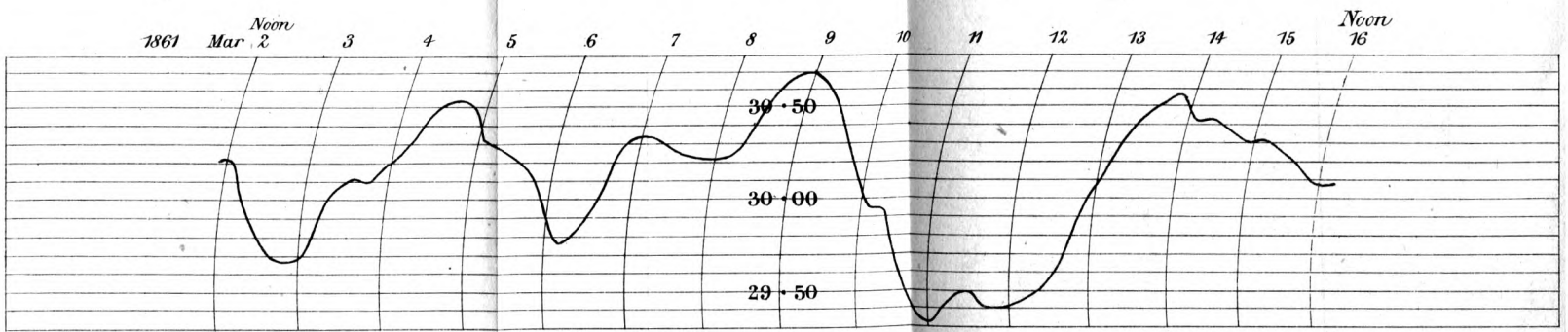


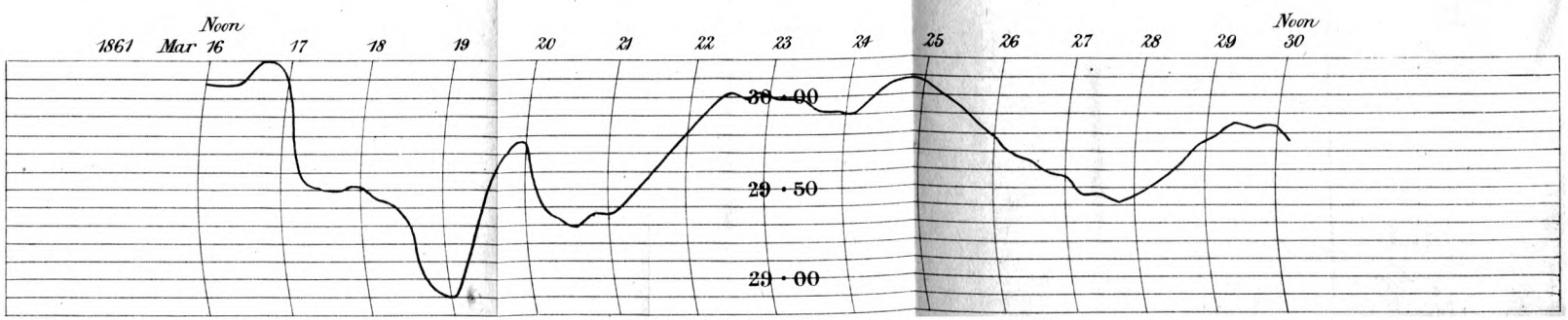


Approximate Barometric Curves,
In January, February, and March.



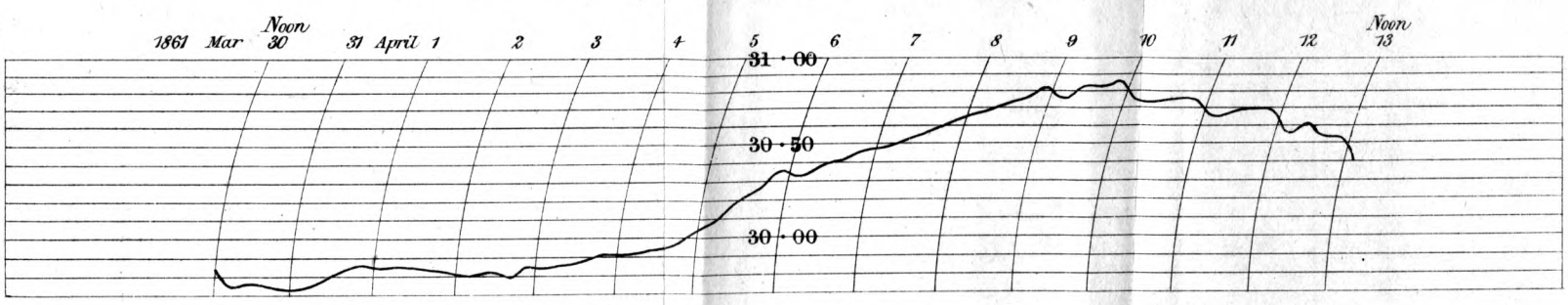


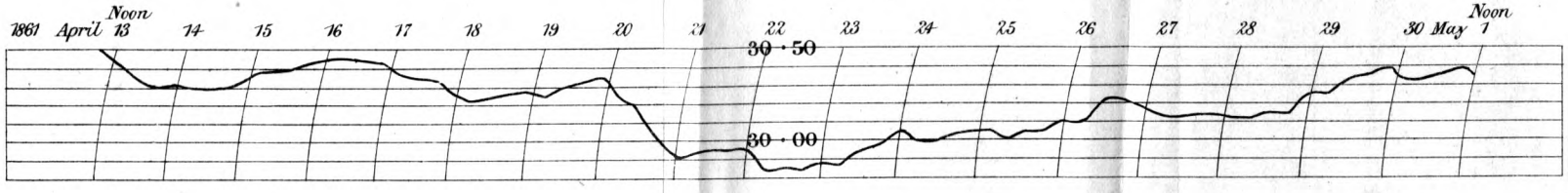


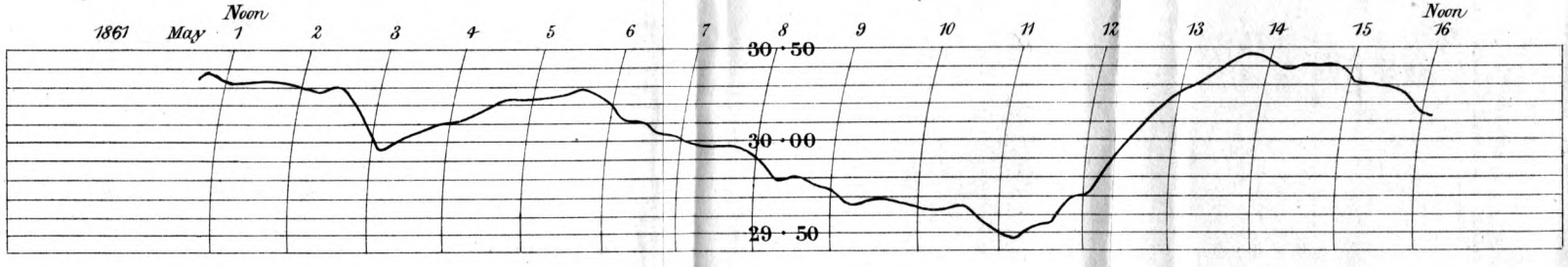


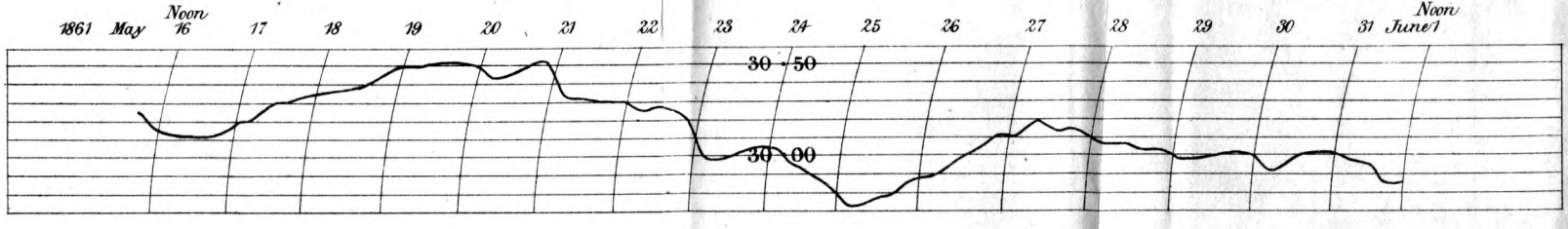
Approximate Barometric Curves.

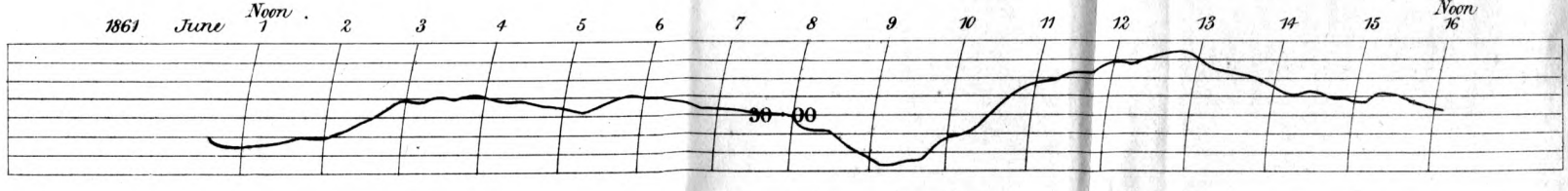
In March, April, May, June, and July.

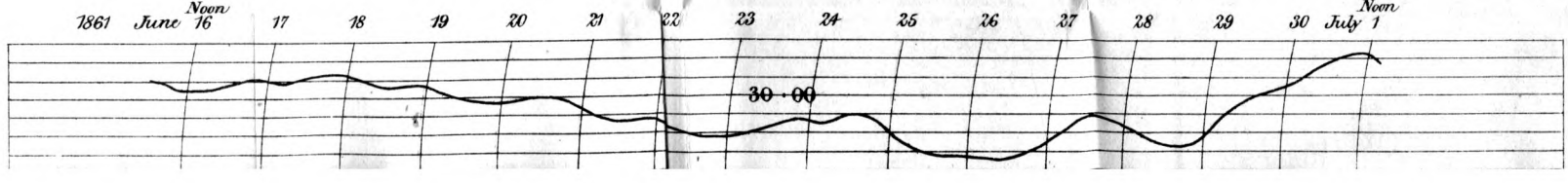












Approximate Barometric Curves,
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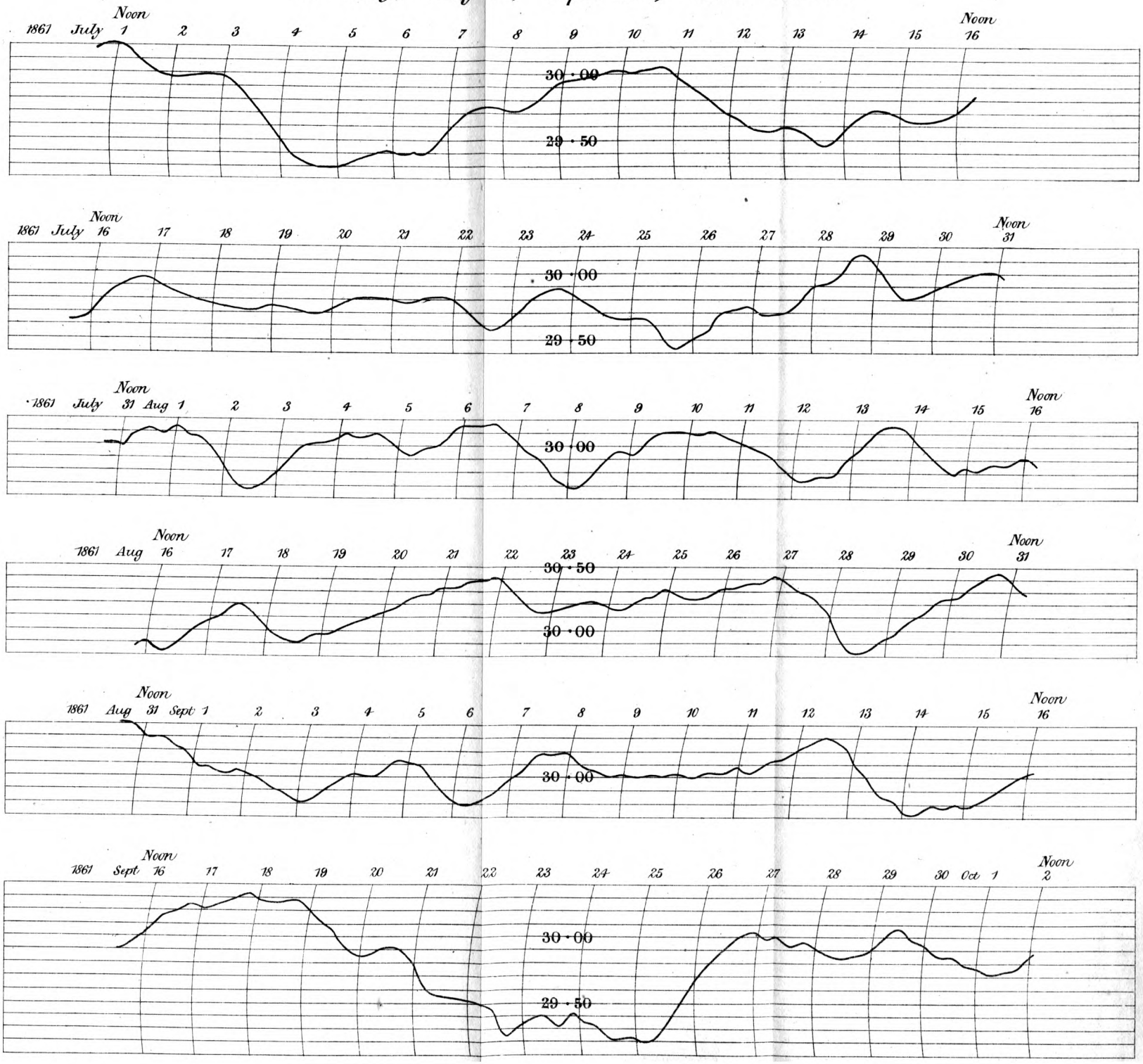
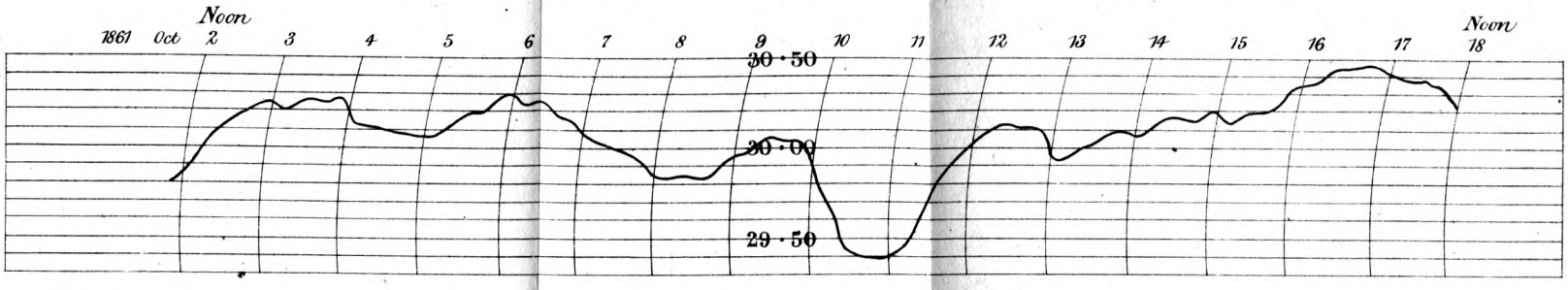
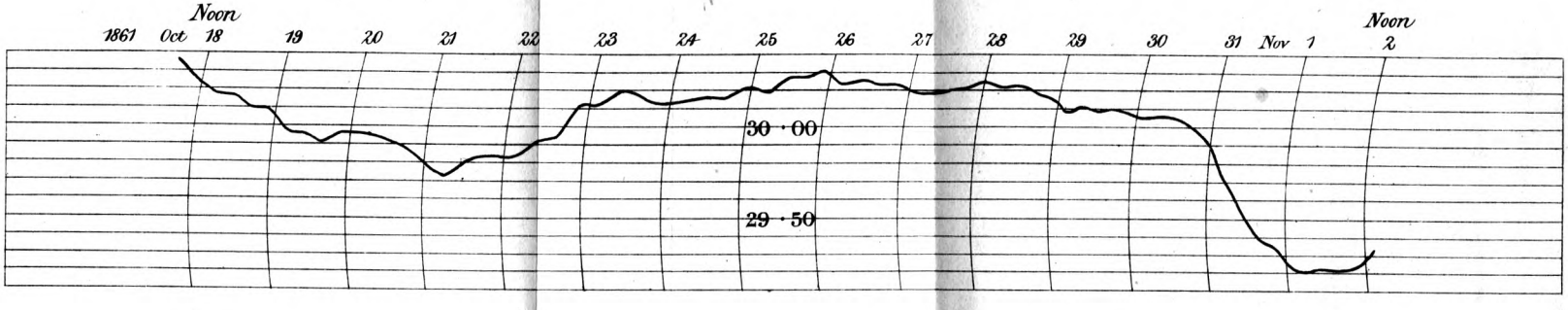
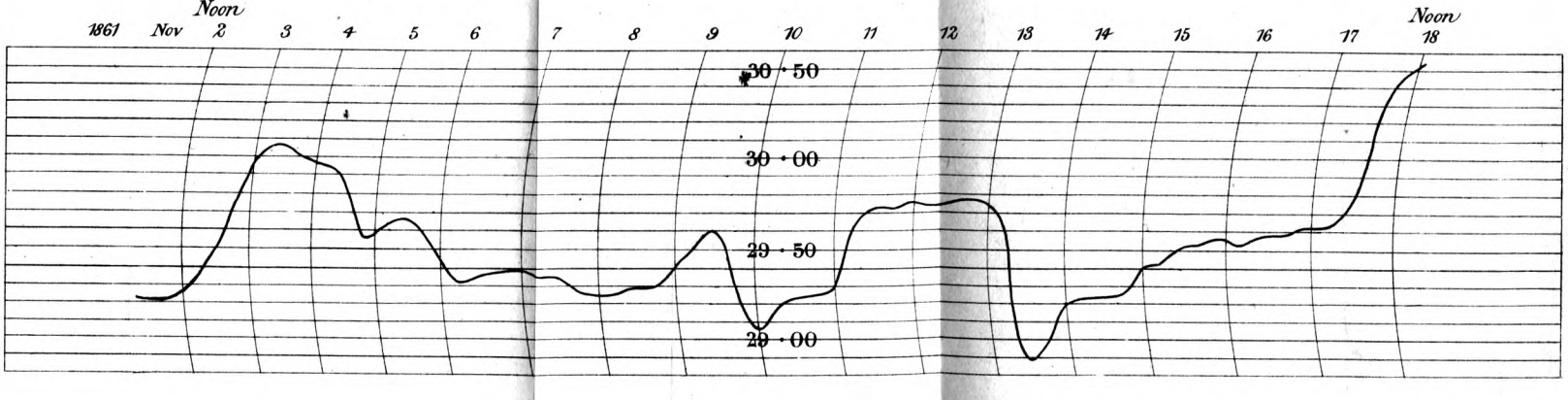
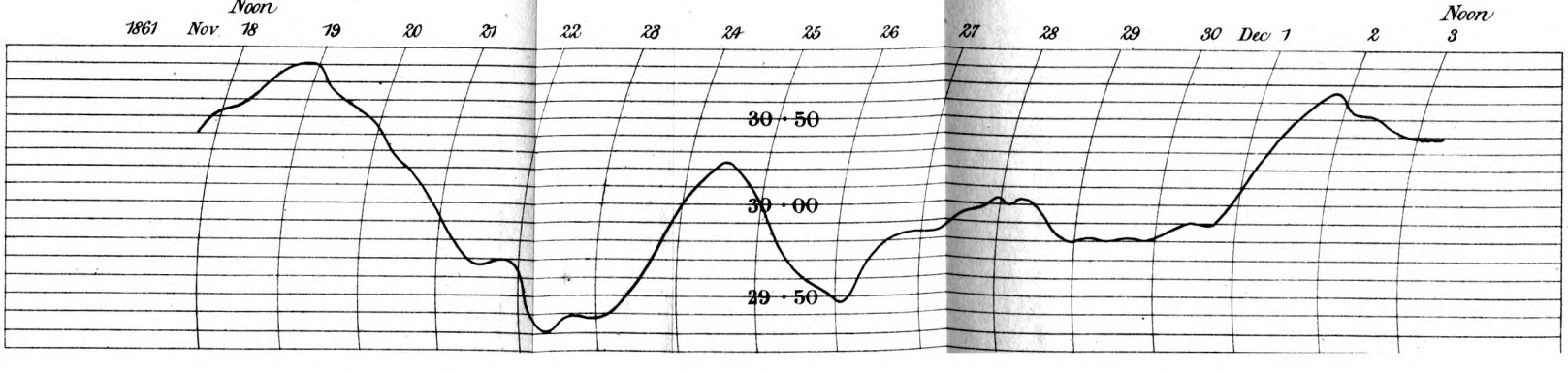


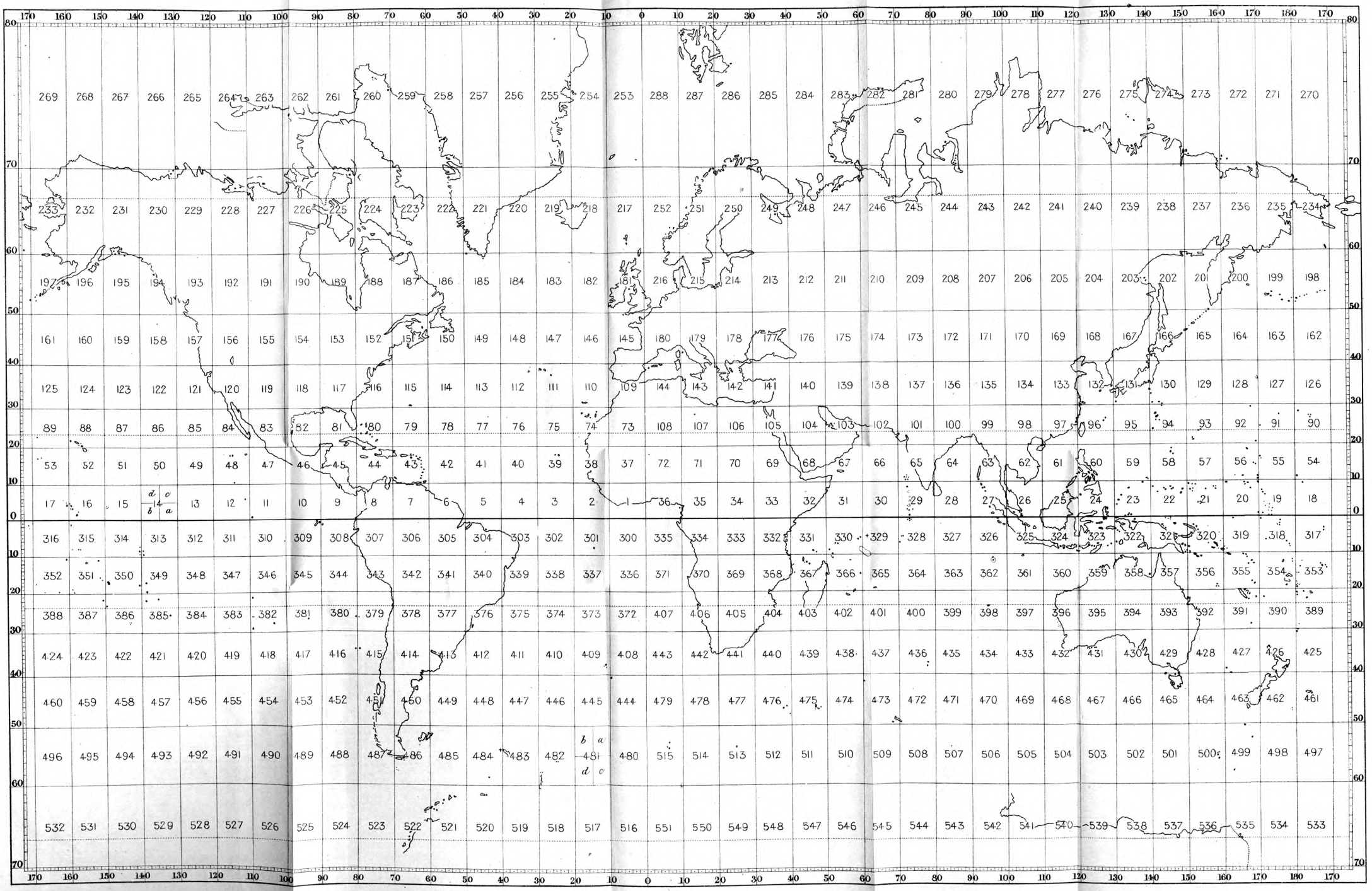
Approximate Barometric Curves,
In October, November, and December.







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