

VII. Paper on Meteorology.

I. ABSTRACT OF MONTHLY METEOROLOGICAL RESULTS, compiled from the Returns of the ten Grammar School Stations for DECEMBER, 1867.

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STATION.	North Latitude α	West Longitude β	Eleva- tion γ	Barometer at temperature of 32° Fahrenheit.				Temperature of the Air.				Tension of Vapour.			
				MONTHLY MEANS.		RANGE.	LOWEST.	MONTHLY MEANS.		DAILY RANGE.	HIGHEST.	WARM- EST DAY.		COLD- EST DAY.	
				7 A.M.	9 P.M.			7 A.M.	9 P.M.	Mean Range.	Mean Minimum.	Mean Maximum.	Least.	Greatest.	Mean.
<i>Barrie</i>	44.25	79.45	59	30.79	30.72	29.0356	29.0477	29.0518	29.5929	29.5929	29.5929	29.5929	29.5929	29.5929	29.5929
<i>Belleville</i>	44.10	77.25	72	30.79	30.72	29.0356	29.0477	29.0518	29.5929	29.5929	29.5929	29.5929	29.5929	29.5929	29.5929
<i>Cornwall</i>	43.45	79.45	59	30.79	30.72	29.0356	29.0477	29.0518	29.5929	29.5929	29.5929	29.5929	29.5929	29.5929	29.5929
<i>Goderich</i>	43.12	79.50	90	30.79	30.72	29.0356	29.0477	29.0518	29.5929	29.5929	29.5929	29.5929	29.5929	29.5929	29.5929
<i>Hamilton</i>	43.12	79.50	90	30.79	30.72	29.0356	29.0477	29.0518	29.5929	29.5929	29.5929	29.5929	29.5929	29.5929	29.5929
<i>Pembroke</i>	43.12	79.50	90	30.79	30.72	29.0356	29.0477	29.0518	29.5929	29.5929	29.5929	29.5929	29.5929	29.5929	29.5929
<i>Peterborough</i>	43.12	79.50	90	30.79	30.72	29.0356	29.0477	29.0518	29.5929	29.5929	29.5929	29.5929	29.5929	29.5929	29.5929
<i>Simcoe</i>	43.12	79.50	90	30.79	30.72	29.0356	29.0477	29.0518	29.5929	29.5929	29.5929	29.5929	29.5929	29.5929	29.5929
<i>Stratford</i>	43.12	79.50	90	30.79	30.72	29.0356	29.0477	29.0518	29.5929	29.5929	29.5929	29.5929	29.5929	29.5929	29.5929
<i>Windsor</i>	43.12	79.50	90	30.79	30.72	29.0356	29.0477	29.0518	29.5929	29.5929	29.5929	29.5929	29.5929	29.5929	29.5929

α Approximation. ϵ On Lake Simcoe. $\ast$ On St. Lawrence. $\ast$ Near Lake Ontario (on Bay of Quinte). $\ast$ On Lake Huron. $\ast$ On Lake Ontario. $\ast$ On the Ottawa River. $\ast$ Close to Lake Erie. $\ast$ On the Detroit River. $\ast$ Inland Towns.

STATION.	Humidity of Air.		Winds. Number of Observations.												A U R O R A S.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
	MONTHLY MEANS			MOTION OF CLOUDS. d												ESTIMATED b VELOCITY OF WIND.						AMOUNT OF CLOUDINESS. c						RAIN.				SNOW.				Total Depth of Rain and Melted Snow.						Class I. Class II. Class III. Class IV.						Sky unfavorable obs. doubtful. Sky unfavorable obs. impossible. Sky favorable, none seen.						WHEN OBSERVED.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
	7 A.M.	1 P.M.	9 P.M.	North.	East.	South.	West.	North.	East.	South.	West.	North.	East.	South.	West.	Clear.	Impercep.	Total.	MONTHLY MEANS.			MONTHLY MEANS.			No. Rainy Days.	Duration in hrs.	Depth in inches.	No. Snowy Days.	Duration in hrs.	Depth in inches.	Total Depth of Rain and Melted Snow.	Class I.	Class II.	Class III.	Class IV.	Sky unfavorable obs. doubtful.	Sky unfavorable obs. impossible.	Sky favorable, none seen.	13th, 16th, 19th, 27th.	27th, 31st.	17th, 30th.	17th, 27th.	30th.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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Barrie	82	76	82	14	2	9	5	4	7	13	13	11	78	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...</

δ Velocity is estimated, 0 denoting calm or light air; 10 denoting very heavy hurricane.
 ϵ Where the clouds have contrary motions, the higher current is entered here.

BARRIE.—On 6th, very violent storm during night from N and NE; continuous snow from evening of 6th to evening of 8th. 18th, hail, 21st, hailstorm and violent wind at night. 27th, very heavy storm of wind for about 50 minutes at night. Snow on 3rd, 7th, 8th, 17th, 18th, 19th, 20th, 24th, 25th, 26th. Rain on 24th, 25th, 26th. Minimum temp. 12th, —16.8°; 13th, —21.6°; 14th, —7.6°; 19th, —7.1°; 31st, —10.1°.

BELLEVILLE.—On 6th, very strong gale during night from West. Storm of wind on 7th. 18th, shock of an earthquake about 3 a.m.; those who felt it report the sound as if waggons were passing rapidly through the streets; no damage done, so far as ascertained. 21st, a higher daily range of barometer than is noted in above table occurred between 9 p.m. of 21st and 1 p.m. of 22nd (Sunday), a fall of .844. 22nd, very strong gales from about 8 p.m. to about 9 a.m. 23rd, Strong winds also prevailed on 25th and 27th. Snow on 2nd, 3rd, 5th, 6th, 7th, 9th, 10th, 11th, 20th, 21st, 22nd. Rain on 6th, 22nd, 25th, 26th, 27th. Minimum temp. 9th, —3.5°; 12th, —14.4°; 13th, —14.5°; 14th, —10.2°; 19th, —10.6°.

CORNWALL.—On 18th, comparatively severe shock of an earthquake here about 8 a.m. or a few minutes after; the quake seemed to proceed from NW to NE and continued probably from 20 to 30 seconds; the noise resembled the rushing of a railway train in rapid motion, so much so that the G. T. R. employees hurried out imagining that an unexpected train had run into some of the station buildings; the trem-