Pacini, Domenico.
Gli elementi della elettricità atmosferica. (Estratto dal giornale L'Elettricista, Nrl. 1918.) Roma. 1918. 37 p. 26 cm.

Salvadori, Marco.
Nozioni elementari sul clima di Pisa. Pisa. 1918. 41 p. 16½ x 22½ cm.

Schindler, Hermann.
Klimatographie von Mähren und Schlesien. (Klimatographie von Österreich. 8.) Wien. 1918. 125 p. 28 cm.

Schlein, Dr. Anton, *ed.*
Anleitung zur Ausführung und Verwertung meteorologischer Beobachtungen. Sechste . . . auflage von Jelinek's "Anleitung . . ." 1. teil. Wien. 1915. 180 p. 26 cm.

Schwartz, P. Thiemo.
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Simpson, G. C.
British Antarctic expedition. 1910–1913. Meteorology. 2 v. Calcutta. 1919. v. 1: Discussion. 326 p. 31 cm. v. 2: Weather maps. 138 p. 31 cm.

Spain. Observatorio central meteorológico.
Instrucciones para redactar los telegramas y radiogramas del servicio meteorológico. Madrid. 1920. 58 p. 24 cm.

Stacey, W. F.
Practical exercises on the weather and climate of the British Isles and northwest Europe. Cambridge. 1919. 64 p. 19 cm.

Wagner, Artur.
Beitrag zu den Temperaturverhältnissen nach fünfjährigen Registrierungen in Greenharbour. Wien. 1919. 50 p. 25 cm.

Weber, Dr. L.
Einführung in die Wetterkunde. Dritte Auflage von Wind und Wetter. Leipzig. 1918. 122 p. 18½ cm.

RECENT PAPERS BEARING ON METEOROLOGY AND SEISMOLOGY.

C. F. TALMAN, Professor in Charge of Library.

The following titles have been selected from the contents of the periodicals and serials recently received in the Library of the Weather Bureau. The titles selected are of papers and other communications bearing on meteorology and cognate branches of science. This is not a complete index of all the journals from which it has been compiled. It shows only the articles that appear to the compiler likely to be of particular interest in connection with the work of the Weather Bureau.

Aeronautics. London. v. 18. 1920.
Jones, B. Melville. Flying over clouds in relation to commercial aeronautics. p. 240–241. (Mar. 18.) [Abstr. and excerpts to be published in April REVIEW.
Sagittarius. On soaring flight and the low-powered aeroplane. p. 280–282. (Apr. 1.)

Evening Post magazine. New York. April 3, 1920.
Pearson, S. K., jr. Recent tornadoes were true signs of spring. p. 4.

National academy of sciences. Proceedings. Washington. v. 6. February, 1920.
Abbot, C[harles] G[reeley]. The larger opportunities for research on the relations of solar and terrestrial radiation. p. 82–95.

Nature. London. v. 105. March 18, 1920.
The position of the Meteorological Office. p. 87. [Resolutions adopted by Scottish Metl. Society.]

Physical review. Lancaster. v. 15. March, 1920.
Humphreys, W[illiam] J[ackson]. Difficulties in the theory of rain formation. p. 226. [Abstract.] [See MONTHLY WEATHER REVIEW, Dec., 1919, **47:** 881.]
McEwen, Geo[rge] F. A physical theory of ocean or reservoir temperature distributions regarded as effects of solar radiation, evaporation and the resulting convection. p. 226–227. [Abstract.] [See MONTHLY WEATHER REVIEW, Nov., 1919, **47:** 805.]

Popular astronomy. Northfield, Minnesota. v. 28. April, 1920.
Boss, Lewis, J. The aurora of March 22, 1920. p. 248–249.

Science. New York. v. 51. 1920.
McAdie, Alexander. The attainment of high levels in the atmosphere. p. 287–289. (Mar. 19.)
Coffin, J. G. The attainment of high levels in the atmosphere. p. 366–368. (Apr. 9.) [Criticizes announcement of altitude attained by Schroeder. Deals with subject of correcting altitude records.]
Brooks, Charles F. The West Indian hurricane of September, 1919. p. 369–371. (Apr. 9.) [Review of papers in the MONTHLY WEATHER REVIEW, Sept. and Oct., 1919, **47:** 664–673, 639–641, 717–720.]

Tyros-Rochester. Rochester. v. 10. April, 1920.
Jameson, P. R. Garden weather knowledge. p. 20.

Aérophile. Paris. 28 année. 1–15 janvier 1920.
Liurette, Henri. Le vol à voile. p. 6–16. [A detailed discussion of the principles of soaring flight: the shape and use of the wings by birds to utilize the wind in flying.]

France. Académie des sciences. Comptes rendus. Paris. Tome 170.
Bjerknes, V[ilhelm]. Sur la relation entre les mouvements et les températures des hautes couches atmosphériques. p. 604–606. (8 mars.) [See this REVIEW, p. 159.]
Besson, Louis. Sur la forme primitive de la glace atmosphérique. p. 607–609. (8 mars.)
Brazier, C. E. Sur la variation des indications des anémomètres Robinson et Richard en fonction de l'inclinaison du vent. p. 610–612. (8 mars.) [Wind tunnel experiments subjecting both types to similar conditions.]
Störmer, Carl. Sur l'absorption des rayons corpusculaires pénétrant dans l'atmosphère terrestre en suivant des trajectoires non rectilignes. p. 742–744. (22 mars.)
Reboul, G., & Dunoyer, L. Sur l'utilisation des cirrus pour la prévision du temps. p. 744–747. (22 mars.) [Abstr. in this REVIEW, p. —.]

France. Bureau central météorologique. Annales. Paris.
Angot, Alfred. Études sur le climat de la France. Régime des pluies. p. 109–235; p. 101–214. (1911, 1912.)

Radium. Paris. t. 11. Nov.–Dec. 1919.
Boutaric, A. Contribution à l'étude du pouvoir absorbant de l'atmosphère terrestre. p. 356–357. [Studies of the atmosphere with respect to transmission of radiation, moisture content, and the polarization of light.]

Annalen der Physik. Leipzig. Band 60. Heft 6. 1919.
Hölzel, Alfred. Luftelektrische Potentialgefälle und Gewittervorhersage. p. 521–547.

Annalen der Physik. Leipzig. Band 61. Heft 2. 1920.
Schirmann, Marie Anna. Versuch einer einheitlichen Erklärung der Erscheinungen der atmosphärischen Polarisation. p. 195–200.

Beiträge zur Physik der freien Atmosphäre. Leipzig. 8. Band. Heft 2. 1919.
Knopf, O. Beobachtungen des Aragoschen neutralen Punktes der atmosphärischen Polarisation. p. 57–72.
Linke, Franz. Ueber die Luftdichte. p. 73–85.
Hergesell, H[ugo]. Die mittlere Verteilung des Wasserdampfs in der Atmosphäre. p. 86–94.

Meteorologische Zeitschrift. Braunschweig. Band 36. November-Dezember, 1919.
Rempp, C., & Wagner, A. Vorläufige Mitteilung über die meteorologischen Beobachtungen am deutschen Observatorium in Spitzbergen 1911 bis 1912. p. 301–306.
Roschkett, Alfred. Zur Mechanik der Böenbildung in einem Gebirgstal. p. 306–312.
Defant, A[lbert]. F. M. v. Exner, Über die Ausbreitung kalter Luft auf der Erdoberfläche. p. 312–318.
Galbas, P. A. Vorläufige Ergebnisse militärischer aerologischer Stationen. p. 318–325. [Temperature inversions attributable to radiation at night, overflow of warm air from foehns, and air drainage are criteria for selecting aerological stations.]
Brunn, A. v. Das Phänomen der doppelten Kimm und seine Theorie. p. 325–332. [Explanation of optical effect observed at Danzig, Germany.]
Schreiber, Paul. Über die Anwendung der graphischen Verfahren bei den Formeln der Thermodynamik. p. 332–339.
Bongards, Hermann. Ein unbekanntes Wetterelement? p. 339–342. [Discusses the presence of a radioactive element in the atmosphere.]
Wigand, Albert. Eine Methode zur Messung der Sicht. p. 342–348. [Visibility as a function of thermal and mechanical disturbances of the air, wind, and humidity; and an instrument for measuring visibility.]
Ångström, Anders. Die Konvektion der Luft. p. 348.
Schreiber, P[aul]. Theorie des Gefässbarometers mit fester reduzierte Skala. p. 349–350.

Meteorologische Zeitschrift. Braunschweig. Band 36. November–Dezember, 1919—Continued.

H[ann], [Julius] v. Der Seewind im Golf von Smyrna (Imbad.). p. 353–354.

H[ann], J[ulius] v. Raoul Gautier: Jahresmittel der Temperatur und Jahressummen des Niederschlages von 93 Jahren (1826 bis 1918) zu Genf. p. 356–357.

Schmidt, Wilhelm. Eine neue Schätzung des Gesamtniederschlages auf dem Meere. p. 357–359. [Abstr. in MONTHLY WEATHER REVIEW, Jan., 1920, 48: 41.]

Petermann's Mitteilungen. Gotha. 65. Jahrgang. 1919.

Eckardt, Wilhelm R. Die Hauptsächlichsten Fundamentalsätze der paläoklimatologischen Forschung. p. 46–49. (Marz/April). [Distribution of land and water as the fundamental basis for investigations in paleoclimatology.]

Petermann's Mitteilungen. Gotha. 65. Jahrgang. 1919—Continued.

Köppen, Wladimir. Baumgrenze und Lufttemperatur. p. 201–203. (Nov./Dez.) [Shows that the northern limit of tree growth is coincident with location of 70° F. isotherm in July; also applicable to southern hemisphere.]

Physikalische Zeitschrift. Leipzig. 21. Jahrgang. 1. Januar, 1920.

Mack, K. Über Weltbeben und lange Wellen. p. 7–11.

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Eredia, F[ilippo]. La distribuzione della temperatura sulle pendici dell' Etna. p. 359–363.

Società degli spettroscopisti italiani. Memorie. Cantania. v. 8. Luglio/Agosto, 1919.

Pacini, D[omenico]. Studio spettrofotometrico della luce del cielo. p. 69–79.

SPECIAL OBSERVATIONS.

SOLAR AND SKY RADIATION MEASUREMENTS DURING MARCH, 1920.

By H. H. KIMBALL.

(These data for January to April, 1920, inclusive, will be published in the April REVIEW.)

MEASUREMENTS OF THE SOLAR CONSTANT OF RADIATION AT CALAMA, CHILE.

By C. G. ABBOT, Director.

[Astrophysical Observatory, Smithsonian Institution, Washington, Apr. 30, 1920.]

In continuation of preceding publications, I give in the following table the results obtained at Calama, Chile, in February, 1920, for the solar constant of radiation. The reader is referred to this REVIEW for February, August, and September, 1919, for statements of the arrangement and meaning of the table.

The results for February, like those of January and the latter part of December, run extremely high. Owing to unusual cloudiness, which at times even went so far as to produce rain, a most unusual circumstance at Calama, there were very few days on which it was possible to determine the solar constant of radiation by the older and fundamental method. Attention is called, however, to the determinations of February 10 and February 25 to show that the old method and the new are still in close agreement.

Date.	Solar constant.	Method.	Grade.	Transmission coefficient at 0.5 micron.	Humidity. ρ/ρ SC.	Humidity. V. P.	Humidity. Rel. hum.	Remarks.
1920.								
P. M.	*Cal.*					*Cm.*	*Per cent.*	
Feb. 6	1.978	$M_{1.01}$	U+	0.826	0.385	0.95	48	Cumuli scattered about sky.
	1.965	$M_{1.01}$						
	1.974	W. M.						
A. M.								
7	1.942	$M_{1.72}$	U+	.813	.290	.84	64	Cirro-cumuli over most of sky.
	1.954	$M_{1.02}$						
	1.946	W. M.						
8	1.954	$M_{1.11}$	S—	.823	.409	.92	56	Cumuli scattered over east, north, and south.
	1.952	$M_{1.02}$						
	1.953	W. M.						
9	1.984	M_2	S	.823	.321	.77	67	Cumuli around horizon in east, north, and south.
	1.977	$M_{1.5}$						
	1.982	W. M.						
10	2.009	E_0	VG+	.821	.276	.71	64	Cirri low in east. Cumuli forming around horizon in east.
	2.012	M_3						
	1.985	M_2						
	1.978	$M_{1.5}$						
	1.994	W. M.						
11	1.949	M_2	S—	.841	.428	.65	48	Cirro-cumuli scattered about east.
	1.975	$M_{1.26}$						
	1.958	W. M.						
1920.								
P. M.	*Cal.*					*Cm.*	*Per cent.*	
Feb. 12	1.977	$M_{1.02}$	U+	.842	.572	.79	39	Thin cirri spread over much of sky, especially in east.
13	1.975	$M_{1.03}$	U+	.825	.504	.77	37	Thin cirri scattered about sky.
	1.950	$M_{1.02}$						
	1.962	W. M.						
14	1.946	M_2	S	.822	.340	.60	38	Few streaks of thin cirri in east and west. Cumuli forming in distant east.
	1.958	$M_{1.5}$						
	1.951	W. M.						
P. M.								
15	1.951	$M_{1.02}$	S—	.827	.486	.75	39	Very thin cirri spread over much of sky. Some cumuli in east.
A. M.								
16	1.976	M_2	S	.830	.363	.58	40	Thin ciri scattered about sky, especially in west.
	1.968	$M_{1.5}$						
	1.973	W. M.						
18	1.971	$M_{1.23}$	S—	.829	.456	.66	36	Cirri scattered about sky.
19	1.996	M_3	S—	.830	.284	.57	49	Cirri low in east, west, and north.
	1.976	M_2						
	1.983	W. M.						
P. M.								
20	1.982	M_2	S—	.838	.438	.53	26	Cirri in north and east. Cumuli in north and west.
24	1.973	$M_{1.05}$	S—	.835	.481	.84	38	Scattered cirri.
	1.961	$M_{1.02}$						
	1.967	W. M.						
A. M.								
25	1.973	E_0	E—	.825	.265	.65	55	Some cirri around horizon in east, north, and west. Patch of cirro-cumuli in west.
	1.993	M_3						
	1.994	M_2						
	1.983	$M_{1.5}$						
	1.987	W. M.						
26	2.006	M_3	U+	.826	.261	.64	48	Cirri scattered about sky, especially in west, but disappearing gradually.
	1.972	M_2						
	1.983	W. M.						
27	1.963	$M_{1.5}$	S—	.836	.439	.76	43	Cirri scattered about whole sky.
	1.974	$M_{1.37}$						
	1.967	W. M.						
P. M.								
28	1.953	$M_{1.09}$	S—	.839	.504	.90	43	Thin cirri scattered about sky.