ally formed which impedes the solution of the gold. In this case the silver chlorid coating must be from time to time dissolved off by ammonia. The small amount of platinum in the gold solution is precipitated by sal ammoniac. When much silver is present the alloy is fused with zinc and then treated with sulfuric acid before the above process.

THE atomic weight of palladium has been several times redetermined in the past few years, but with results varying from 105.75 to 107.18. No cause has been discovered for these discrepancies. The figure accepted by Clark is 106.36, by Richards 106.5, and by the German Committee 106.0. Three new series are described by W. L Hardin in the *Journal* of the American Chemical Society, in each case the compound used being one not hitherto used for atomic weight determination. The palladium itself was most carefully purified. The results are as follows: Using diphenylpallad-diammonium chlorid, mean of seven determinations 107.006; using diphenylpallad-ammonium bromid, mean of five, 107.036; using ammonium palladium bromid, mean of four, 107.00; mean of all, 107.014. It will be seen that this figure is decidedly higher than that usually received; it is, however, in close agreement with that obtained by Keller and Smith (107.18 as a mean of nine determinations) by the use of palladdiammonium chlorid.

J. L. H.

CURRENT NOTES ON METEOROLOGY.

INTERNATIONAL METEOROLOGICAL COMMITTEE.

AT the meeting of the International Meteorological Committee held at St. Petersburg, September 2–7, 1899, it was decided that the Sub-Committee on Terrestrial Magnetism and Atmospheric Electricity should be maintained as a distinct organization, under the direction of the International Committee. The committee recommended that meteorological institutions should take part in observations of earthquake phenomena, and in the matter of Antarctic exploration expressed the opinion that it is highly desirable (1) that the results of these explorations should be completed by data from the observatories already existing in the Southern Hemisphere and by those made on board vessels traversing the southern oceans; (2) that new meteorological stations should be established in the southern part of the Antarctic regions, and especially that magnetic observations should be organized; (3) that magnetic determinations over the whole globe should be made simultaneously with those made during the expeditions. The subjects of publishing tables of diurnal range of temperature for each country in a special form, the importance of actinometric observations, the multiplication of observations with the hair hygrometer in place of the wet-bulb thermometer, the laying of a cable between Iceland and Europe, and the publication of an international periodical weather report to contain ten-days means for about 100 stations, were discussed, but no definite action was taken regarding them. It was decided that the International Committee and all the sub-committees should meet in Paris in 1900, immediately after the Meteorological Congress. *Nature* of October 19th contains a brief account of the Proceedings at the September Meeting of the International Committee.

THE TEXAS FLOODS OF JUNE 27 TO JULY 15.

A report on the flood in the Brazos river valley, Texas, at the end of June and the beginning of July last appears in the *Monthly Weather Review* for July (issued September 22d). The writer, Dr. I. M. Cline, Local Forecast Official of the Weather Bureau at Galveston, states that the heavy rains resulted from a semi-tropical storm which moved northward from the central portion of the Gulf of Mexico. The storm was first noted on the morning weather map of June 26th, and moved inland during the night, dying out as it advanced. An anticyclone moving southward from the northwest opposed the Gulf storm on June 27–28, these being the pressure conditions which prevailed during the occurrence of the rains. Two of the heaviest rains recorded during the 72 hours ending at 8 A. M., June 28th, were as follows: Alvin, 7.27 ins.; Brazoria, 7.83 ins. During the 72 hours ending at 8 A. M., June 29th, some of the heaviest rainfalls were: Columbia, 8.06 ins.; Danevang, 11.07 ins.; Rock Island, 10.15 ins., and during the 72 hours ending at 8 A. M., June 30th, Brenham had 19.99 ins.

The rain gauge at Hearne overflowed at 24 inches. The floods resulting from these extraordinary rainfalls were extremely destructive, as readers of SCIENCE will doubtless remember. Between 30 and 35 lives were lost, and crops and other interests suffered to the extent of millions of dollars.

VOLCANIC SMOKE AND THE PREVAILING WINDS.

The *Monthly Weather Review* for July contains an interesting note contributed by Curtis J. Lyons, of Honolulu, on the course taken by the smoke during the recent eruption on the island of Hawaii. This smoke rose to a height of about 30,000 ft. above sea level, and then floated off to the northeast, being carried in a horizontal direction by the anti-trades. It then sank to sea level about 600 miles from Hawaii, and was brought back by the northeast trade wind, covering the entire group of islands with heavy smoke fourteen days after the eruption. The S. S. *Mariposa*, on her voyage from San Francisco, met the cloud of smoke at the above distance from Honolulu. The smoke was overhead at first, and as the steamer proceeded it covered everything at sea level.

HURRICANE TRACKS IN THE NORTH ATLANTIC OCEAN.

The *Pilot Chart of the North Atlantic Ocean* for November gives the tracks followed by the centers of all the West Indian hurricanes which have occurred in the North Atlantic during the period 1890–1899. It appears from a tabulation of the 25 hurricanes noted during these years that the ideas which were formerly held regarding the recurvature of the storms of a particular month within certain narrow limits of latitude need some revision. The table shows that the hurricanes of September, instead of recurving between latitudes 27° and 29°, as formerly maintained, may in actual practice recurve in any latitude from 20° 20′ N., to 33° 30′ N., while those of October, instead of recurving in latitude 20°–23° N. may continue their northeasterly course until the parallel of 39° is reached.

TORNADO POWER.

As the result of studies of the amount of pressure necessary to bend the rods of certain railroad switch targets, Mr. B. F. Groat comes to the conclusion that the velocity of the wind in the New Richmond, Wis., tornado of June 12th last was 134 miles an hour. Mr. Groat's paper is published in the *Monthly Weather Review* for July.

R. DeC. WARD.

HARVARD UNIVERSITY.

REPORT OF THE PRESIDENT OF COLUMBIA UNIVERSITY.

President Low's annual report to the trustees, after paying a tribute to the memory of Cornelius Vanderbilt and expressing thanks to Professor Van Amringe, who was acting president during his absence as a delegate to the International Conference of Peace, gives a clear and interesting account of the progress and present condition of Columbia University.

The cost of the new buildings and grounds was in all $6,879,011. By the payment of President Low of $600,000, completing his great gift for the construction of the Library, the debt against the new site is reduced to about $2,975,000. There is also a debt against the College of Physicians and Surgeons amounting to about $86,500. Although Columbia University has gained greatly by its removal in many ways, including a large increase to its funds by gifts for the grounds and buildings, it is evident that the interest, even though a large part of the debt has been refunded at 3 per cent., is a serious burden, and President Low states that the growth of the University is necessarily checked until this incubus is removed. As a matter of fact the University did receive liberal gifts during the year; $73,494 for current uses and $490,417 for endowment. The increase of the library during the year was 25,404 volumes.

The growth of the University, since the beginning of Mr. Low's administration nine years ago, is indicated by the fact that in this period the officers of instruction have increased from 170 to 339. This is not due to the multiplication of subordinate officers as the number of professors and adjunct professors has increased from 41 to 84. The number of students has increased from 1,753 to 2,208 although the growth has been checked by increasing the re-