When the crystals are placed in an atmosphere of chlorine they at once liquefy, and the liquid becomes hot. The products are carbon tetrachloride and liquid chloride of iodine, ICl, which latter gradually volatilizes away in the form of the chloride, ICl_3.

$$CI_4 + 4Cl_2 = CCl_4 + 4ICl.$$

When heated gently in dry oxygen, it becomes decomposed into iodine and carbon, which latter burns away to carbon dioxide upon slightly raising the temperature. Melted sulphur reacts with carbon tetra-iodide with considerable violence; vapour of iodine is evolved, carbon deposited, and iodide of sulphur formed. If, however, powdered sulphur is warmed with carbon tetra-iodide to 50°, iodide of sulphur and carbon bisulphide are produced. Phosphorus acts with great energy upon it, forming compounds which are still undergoing investigation. Sodium and potassium react with incandescence, an alkaline iodide and free carbon being produced. Mercury and silver likewise attack it at the ordinary temperature, and very rapidly upon warming. Warm hydrochloric and hydriodic acids attack the crystals rapidly, with formation of iodoform and liberation of vapour of iodine. A particularly interesting reaction is that with fluoride of silver. When a quantity of this salt is placed in a solution of carbon tetra-iodide in carbon tetrachloride warmed to 50°, a regular evolution of gaseous carbon tetrafluoride occurs.

$$CI_4 + 4AgF = CF_4 + 4AgI.$$

This reaction affords the readiest means yet discovered of preparing carbon tetrafluoride.

THE additions to the Zoological Society's Gardens during the past week include a Vervet Monkey (*Cercopithecus lalandii* ♀) from South Africa, presented by Mr. J. Parr; a Bonnet Monkey (*Macacus sinicus* ♂) from India, presented by the Rev. W. P. Beckett; a Black-faced Kangaroo (*Macropus melanops* ♀) from Australia, presented by Mr. P. Clark; two Red-crested Finches (*Coryphospingus cristatus*) from South America, presented by Commander W. M. Latham, R.N., F.Z.S.

OUR ASTRONOMICAL COLUMN.

THE SECULAR VARIATION OF LATITUDES.—The *American Journal of Science* for December contains a paper on secular variations of latitudes, read by Prof. George C. Comstock at the Washington meeting of the American Association for the Advancement of Science. The determinations of the latitude of Greenwich made from the time of Flamsteed (1693) to now—that is, over a period of very nearly two centuries—indicate a very appreciable progressive diminution. But as the observations were made with five different instruments, and are affected, to an uncertain extent, by various sources of error, no definite conclusion can be drawn from them. In the cases of the latitudes of Pulkowa, Königsberg, Washington, and Madison, however, Prof. Comstock thinks there is definite evidence of a change of latitude, and from an examination of numerous absolute observations, and a reduction of recorded star-places, he arrives at the data contained in the following table:—

Station.	Longitude (from Greenwich).	Annual Variation of Latitude.	Computed Annual Variation.
	°	″	″
Pulkowa ...	30·3 E.	− 0·006	− 0·007
Königsberg ...	20·5 E.	− 0·003	− 0·000
Washington	77·0 W.	+ 0·042	+ 0·044
Madison ...	89·4 W.	+ 0·043	+ 0·041

A least square solution of the observed data was made to determine the most probable direction and amount of motion of the Pole. The result was 0″·044 along the meridian 69° W. of Greenwich. The values contained in the last column of the above table were computed from these elements. For the systematic investigation of the motion of the Pole it is suggested that two stations in about the same latitude, but having longitudes about 70° W. and 110° E. respectively, should have their latitudes simultaneously determined by zenith telescope observations of the same pairs of stars. "An annual motion of the Pole of 0″·045 will alter the difference of latitude of these stations by twice this amount per year, giving a change in the difference of latitude amounting to 1″ in eleven years—a quantity which cannot possibly escape careful observation with the zenith telescope or prime vertical transit. If similar observations be made 20° east of Greenwich, they will furnish the best obtainable data for determining the direction of motion of the Pole." All sources of systematic error can be eliminated by the adoption of such a method, and our knowledge of secular variations of latitude, as important to the geologist as to the astronomer, will be of a more definite character than at present.

THE ROTATION OF VENUS.—Herr Löschardt sends us a paper on Schiaparelli's hypothesis as to the period of rotation of Venus, presented by him to the Vienna Academy of Sciences on March 12, 1891. He criticizes the conclusions drawn by Schiaparelli from observations made by others and himself, and points out that the observations made by Denning in 1881 favour the old rotation period of 23d. 21m. rather than one of 224 days. Herr Löschardt has made a number of drawings of the markings on the planet shown by his 3-inch refractor at Nákófalva, and the discussion of them gives support, on the whole, to Cassini's value of the rotation period. The chief reasons which led to this conclusion are the differences between Perrotin's observations and those made at Nákófalva at different hours in the same day, the circular form of polar patches, and the ellipsoidal distribution of the atmosphere, which is said to be the result of swift rotation.

STARS HAVING PECULIAR SPECTRA.—In a communication to *Astronomische Nachrichten*, No. 3070, Prof. Pickering records that the three stars tabulated below show bright lines in their photographic spectra, and belong to the same class as the stars discovered by Wolf and Rayet:—

Designation.	R.A. 1900.	Decl.	Galactic latitude.	Galactic longitude.
°	h. m.	° ′	° ′	° ′
D.M. + 55·2721 ...	22 15·0 ...	55 37 ...	−0 50 ..	70 29
— ...	22 23·7 ...	55 46 ...	−1 20 ...	71 38
D.M. + 56·2818 ...	22 32·9 ...	56 23 ...	−1 25 ...	73 3

It will be seen that these stars, like the 35 others of the same class, fall near the central line of the Milky Way.

THE TOWER OF BABEL AND THE CONFUSION OF TONGUES.[1]

WHO among the readers of ancient history has not pictured to himself great Babylon, with its long straight streets at right angles, its quays along the banks of the Euphrates, its royal palaces, its double walls, and last, not least, its towers in stages, dedicated to the various gods? The picture of grandeur is one of which we can form an estimate only, but it must have been magnificent beyond what was customary in those days, for had not the great Nebuchadnezzar built it? He describes at great length what he had done for the city, for its walls, for its streets, its temples, its towers, and its palaces.

But there was a time when Babylon was not the great city. At first a village settlement, it gradually arose to be the capital of a powerful State, a progress that probably occupied 4000 years, not including the pre-historical period. The story of the beginnings of this great city, which are lost in antiquity, is told in Genesis, and forms one of the most charming of the legends of the Bible. The Biblical account is given in the genealogical table just before "the generations of Shem," and seems to be an interpolation to explain the numerous languages of the world. What the source of the legend may be is uncertain, but as a whole it is unique, for though its source is possibly Babylonian, nothing like it has yet come from that country or from Assyria. The so-called Babylonian legend of the Tower of Babel seems to have nothing to do with the Biblical one—indeed, the evidence all points to its referring to something entirely different.

"As they journeyed (so the Bible narrative says) in the East, they found a plain in the land of Shinar." This land of Shinar is generally regarded as the Sumer of the Babylonian and Assyrian inscriptions. The Sumerians and Akkadians were of a different stock from the Semitic inhabitants of the country, and

[1] Abstract of a Lecture by Theo. G. Pinches, before the London Institution, December 3, 1891.