OUR ASTRONOMICAL COLUMN.

COMETS.—The object announced last week as comet 1920*a* appears to be a minor planet. It was so described by the discoverer, but through some telegraphic confusion was reported as a comet.

Two comets were discovered in December. The first, 1919*f*, was recorded on two plates taken on December 10 at Bergedorf, Hamburg, by Dr. Baade. It is probably identical with Holmes's comet, for which a search ephemeris had been calculated. If so, perihelion passage occurred about November 22.

Comet 1919*g* was discovered by Mr. J. F. Skjellerup at the Cape of Good Hope on December 18, and was also observed by Mr. Woodgate at the Cape Observatory. Dr. Halm sends the following provisional elements:

$T = 1920$ January 2·674 G.M.T.
$\omega = 276° 35'$
$\Omega = 315° 36'$
$i = 123° 10'$
$\log q = 9·47376$

The elements bear some resemblance to those of the comet of 1797, also to 1808 I.

Ephemeris for Greenwich Midnight.

		R.A.	S. Decl.	Log r	Log Δ
		h. m. s.	° ′		
Feb.	10 ...	20 31 52	4 34 N. Decl.	0·0189	0·2869
	20 ...	20 34 28	0 7	0·0934	0·3095
March	1 ...	20 36 8	4 29	0·1541	0·3245
	11 ...	20 36 42	8 43	0·2049	0·3337

The comet is now rather close to the sun, but should be visible in the morning in March.

THE MOTION OF THE MOON.—Dr. J. K. Fotheringham contributed a paper on this subject to the Royal Astronomical Society in January. He showed, as others have done, the necessity for applying an empirical term to the moon's longitude, and the impossibility of determining both that term and the value of the secular acceleration from modern observations alone. Accordingly, various periods were assumed for the empirical term, and the corresponding values of the acceleration deduced. The period 254 years is preferred, as this gives the same value 10″ for the acceleration as that deduced from ancient eclipses. Prof. Turner had found a period of about 240 years from a discussion of Chinese earthquakes and Nile floods. It was suggested that the two periods might be identical, and that the apparent oscillation in the moon's motion was really a change in the earth's period of rotation.

The observations used extend to the end of 1918, ten years later than those used by Drs. Brown and Cowell. These additional observations have considerable influence on the result.

STARS OF HIGH VELOCITY.—In most studies of stellar motions the stars with abnormally high velocities are excluded, which is doubtless a sound principle. Nevertheless, an examination of these motions is of great interest, and was undertaken by Messrs. W. S. Adams and A. H. Joy (Proc. Nat. Acad. Sci., Washington, July, 1919). The highest velocity in space found for any star is 494 km./sec. for the 9th mag. star A.G. Berlin 1366. On the average, the two components of the velocity in the galactic plane are about equal, and 2½ times the component perpendicular to the plane. Nearly a hemisphere in galactic longitude is devoid of apices, the values all lying between 131° and 322°. The centroid of the thirty-seven stars examined has a velocity exceeding 74 km./sec., almost exactly in the galactic plane. These facts seem to establish that the velocities have been generated within our own star system, and that the stars are not mere visitors from outside, as has sometimes been suggested. They are probably mostly of small mass, but this can scarcely be the case with Arcturus, the high velocity of which remains an enigma. It is noted that twenty-six out of the thirty-seven stars are of spectral types F and G.

THE ST. LOUIS MEETING OF THE AMERICAN ASSOCIATION.

THE seventy-second meeting of the American Association for the Advancement of Science was held in St. Louis, Mo., on December 29 to January 3, under the presidency of Dr. Simon Flexner, director of the Rockefeller Institute for Medical Research, New York City. The meeting was a most successful one, the attendance of scientific men reaching approximately twelve hundred. St. Louis is the fourth city of the United States in size, and is an extremely progressive centre, paying much attention to educational matters and possessing two universities, two admirable medical schools, an academy of science, the great Missouri Botanical Gardens, and an extraordinarily advanced system of institutions for secondary education. All the meetings (and there were thirty-two distinct organisations meeting at the same time, twelve of them being sections of the association) were held in the single building known as the Soldan High School. In this building there are very many large lecture-rooms with lantern and laboratory facilities, one auditorium with a seating capacity of more than two thousand, and a dining-room with about the same accommodation, and thus the necessity of meeting in distinct and sometimes widely separated buildings, as has occurred in other cities, was avoided.

The opening session was held on Monday night, December 29. Chancellor Hall, of Washington University, St. Louis, delivered an address of welcome, and the retiring president, Prof. John Merle Coulter, gave his address (published in NATURE of January 29, p. 581) on "The Evolution of Botanical Research."

On the following night a lecture, complimentary to the citizens of St. Louis, was delivered by President Simon Flexner on the general subject of the medical outlook in research. The trend of the address was optimistic, and the subjects especially mentioned were influenza, yellow fever, poliomyelitis, and cancer.

During the week addresses by chairmen of sections were delivered as follows:—Section A, "Recent Progress in Dynamics," George D. Birkhoff; Section B, "Some Aspects of Physics in War and Peace," Gordon F. Hull; Section D, "Science and Modern Engineering," Ira N. Hollis; Section E, "Geology as Taught in the United States," David White; Section H, "The Relations of Anthropology and Psychology," Ales Hrdlička; Section I, "New After-the-War Phases of Practical Pan-Americanism," John Barrett; Section K, "The Untilled Fields of Public Health," C. E. A. Winslow; Section L, "The Part Played by Heredity and Maturity as Factors Conditioning the Effects of Training," Stuart A. Courtis; and Section M, "The Organisation of Research," Henry P. Armsby.

There were also a number of symposia, which attracted much attention, as follows:—"World Standardisation" and "Education and Practical Work on the Metric Basis," under the auspices of the American Metric Association; "The Life-cycle in Insects," under the auspices of the Entomological Society of America; "The Relation of the Use of Power and Labour-saving Machinery to Agricultural Progress," under the auspices of Section M; "The Adjustment of Agricultural Teaching and Research