

THE BIG YEAR IN OTHER WORLD

Two Eclipses Visible in the United States in 1909—Halley's Comet in Sight—Astronomers Expect Most Fruitful Year.

By FREDERIC J. HASKIN.
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Washington, Jan. 1.—The coming year promises to be full of events of interest to the astronomer. There are four eclipses scheduled to take place, two of the sun and two of the moon. Saturn is beginning to spread his rings; the sunspots on the face of old Sol will reach their lowest ebb in importance and numbers; Halley's comet will again return to mortal vision; and other lesser events in the solar system will occur. Before next December's sun is set, the star gazers of the world may have many things to add to the book of human knowledge. The government is studying the heat of the sun, the Carnegie Institution is measuring the heat of a star, and is also installing in its Mount Wilson observatory the largest telescope in the world, one that will penetrate even further than the astronomer has gone toward the vast confines of the universe.

The first eclipse of the sun will occur June 17, and will be visible in the United States north of a line drawn from San Francisco to the mouth of the Rio Grande River. The second eclipse of the sun will be only a partial one, and will be visible in the United States. The only land from which it will be visible is the southern part of eastern Australia. Both the lunar eclipses will be in totality, and will be visible in the United States; the one occurring June 3 will be visible only in the eastern and central time belts, while the other will be seen throughout the United States. The eclipse of the sun will not be so full of interest as some others have been, and the second one, occurring in December, will go unobserved, at least so far as American astronomers are concerned.

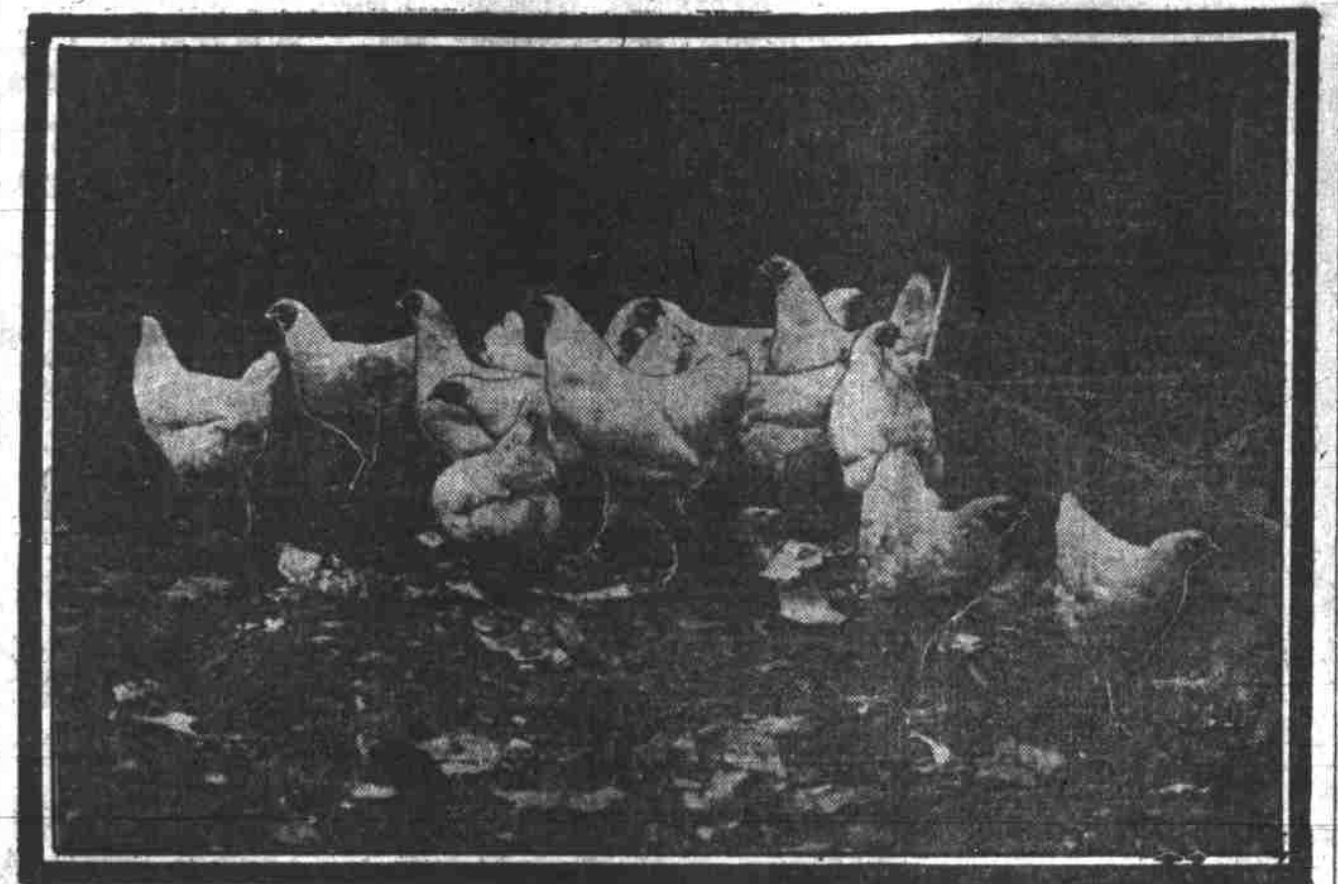
Halley's Comet Scheduled.
The coming of Halley's comet will be the astronomical event of the heavens of 1909. For thirty-eight years it has been traveling toward us at the rate of 2,246,000 miles every day, and is now about 400,000,000 miles away from the middle of May, 1910, it is expected to reach its perihelion—the nearest point it will reach—which will be about 65,000 miles away. Then it will turn back and travel out beyond the confines of the solar system, to reverse its course only after 800,000,000 miles of wandering. It comes once every 75 years, but loses some of its brightness. Unquestionably, it will be the most interesting comet to see since the one which first predicted its return upon it. The Astronomical and Astrophysical Society of America has appointed a committee of four astronomers to outline a way and means for studying this celestial visitor. The comet bears the name of Halley because he was the first to predict its return, stating that he would be dead when it came, but that he wanted posterity to remember his prediction.

Shooting Star Incidents.
The coming of this comet will bring heavy meteoric showers with it, and the world may expect to see some brilliant displays of shooting stars. It is said that there are 100,000 meteors hurled in our direction every year, and that if it were not for the atmospheric cushion which destroys them by the friction of the atmosphere, the earth would be a mass of molten lava. In the New York Museum of Natural History there is a meteor which "penetrated the earth's armor," as it were, and fell in Greenland. It weighed nearly 40 tons.

Saturn's Rings Grow Wiser.
The rings of Saturn begin to grow wider this year, and will continue to expand until 1915, when contraction will again set in. For years it was thought that these rings were clouds of vapor around the planet, but recent spectroscopic tests show that they are made up of minute particles traveling in definite orbits. As stated before there will be few sun spots to be watched, as this is an off season for them.

Study of Sun's Heat.
One of the most interesting undertakings in the astronomical world today is the study being made by the astronomical observatory of the Smithsonian Institution looking to solving the questions of the sun's heat. All life, all energy, depends upon the sun. Decrease its temperature a few degrees and the world would become enshrouded in darkness. A thousand interesting and valuable things depend on what we learn about the sun's heat. At the observatory they have made all sorts of traps to catch sunbeams, and once caught they can never escape until they have added their mite to the sum of human knowledge about the great source of our light and life.

ANNUAL POULTRY SHOW WILL BE RECORD BREAKER



Flock of Prize Winning White Wyandottes to Be Exhibited at Coming Poultry Show.



George H. Northrup.

Arrangements are nearly completed for the fourteenth annual poultry show, which is to be held in this city during the week of January 13-19, under the auspices of the Oregon State Poultry Association. It is expected that not less than 1250 birds will be entered. In addition to \$150 in cash prizes, about \$1500 will be awarded in special premiums.

It is desired that as many competitors as can arrange enter their birds. Premium lists may be had by addressing J. A. Windle, secretary of the association, at Lents, Or.

One thing it will do is to study the sun from the standpoint of a star. Another will be to learn something new about the stars themselves. Each discovery teaches some new lesson, and makes the next one plainer than the one before. Every proposition in astronomy is proved with great conclusiveness before it gets general acceptance. As the spider spins his web about the fly and securely holds him, astronomy weaves its web of hypotheses around the secrets of the universe and makes them its own.

Astronomy's Mathematics.
A single illustration will suffice: In determining the distance of the sun they calculated it on the basis of the mass of the earth and got approximately 93,000,000 miles. Then they worked it out by the parallax method, entirely different in every particular, and got practically the same result. Then they approached the solution through the velocity of light, and the result was the same. At last they figured it out from known facts about the motion of the moon—with again the same result.

Previous discoveries, reached through the same painstaking and proof positive methods, had made these operations possible. For instance, it was considered up to 1617 that light flashed instantaneously. Then Roger figured that the light did not take place at the exact moment anticipated because Jupiter was farther away from the earth at some times than at others, and that the light did not get here so promptly when it had to travel so far. This was the beginning of investigations which show the velocity of light to be 186,000 miles a second.

Measuring a Star's Heat.
To show how astronomers tax the very limit of human ingenuity to study the heavens, the little instrument made for measuring star heat at the Mount Wilson observatory serves admirably. First, there is a plain mirror, which throws the beams of a star upon a concave mirror. This, in turn, concentrates the beam upon a platinum thread smaller than the filament of a spider's web, through which a current of electricity is communicated. The heat which this star beam communicates to the platinum thread is communicated to a little instrument which is made as follows: A little beam or balance made of a thread of spun glass, five inches long and smaller than a human hair, is fastened to a support by suspending it on a thinning of platinum crystal two feet long and a five thousandth of an inch in diameter. In the exact middle of the beam is fastened a mirror as small as a pin head, yet made so perfect that every point of the mirror side will touch when placed on a six foot globe. This mirror is attached to the beam by pasting it to a little square cut from the

The services of George H. Northrup of Raceville, N. Y., and W. C. Denny of Rochester, N. Y., who are said to be the best poultry judges ever employed by a western association, have been secured. Mr. Northrup is one of the oldest and most capable poultry judges in the country and has had experience in such shows as held in Madison Square Garden, New York. He is a breeder of wide reputation, having imported the Black Minorca into this country, and will judge the Mediterranean class.

Mr. Denny has been judging poultry on the coast for several years and is well known to breeders of fine fowl. He is to pick the winners in the weight varieties. Pigeons will be judged by Theodore Whitman of Oakland, Cal., who is one of the most noted authorities and judges of pigeons on the coast. The show is open to the world and all breeders are invited to exhibit their finest birds in competition. The American Poultry Association offers a silver medal for the best cocker in the American, Asiatic, Mediterranean and English classes, competition open to the world, and a diploma for the best male under one year old in all standard varieties. Competition open to the world.

Here are some of the other prizes: Second largest and best display—Charles H. Lidy company, one 25 pound pail Lidy's poultry food. Best display—Silverfield Fur company, one fur. Best display Oregon bred birds—Oregon state board of agriculture, cup. The 10 highest scoring birds in American class—Page & Co., Page trophy. Second best pen in show—Charles H. Lidy company, 100 pound sack Holly chick food. Highest scoring pen—Northwest Poultry Journal, cup. Highest scoring pen—Zina Disinfective company, cup. Best display white birds—The association, one solid gold necklace. Best display half colored birds—The association, one solid gold watch. Best display buff birds—Studebaker Bros. company, one set single harness.



W. C. Denny.

Best display parti-colored—The association, one clock. Best solid colored bird—The association, cup. Best parti-colored bird—The association, one set solid silver teaspoons. Best buff colored bird—The association, watch fob. Second best solid colored bird—Standard Oil company, one case extra Star oil. Second best parti-colored bird—Standard Oil company, one case extra Star oil. Second best buff colored bird—Standard Oil company, one case extra Star oil. Bantams excepted. Knockman & Hartman offer one shaving set to breeder under 18 making best display any variety. Best display one variety—B. F. Kennedy (restricted to full classes), cup.

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wing of a dragon fly, and that in turn to the beam. The mirror weighs no more than a fly's hind leg. The heat of Arcturus, perhaps the hottest star in the universe, is said to amount to only as much as the heat of a candle five miles away.

The whole solar system is said to be going toward the constellation Lyra at the rate of 1,000,000 miles a day. One who has walked through a forest and has seen the trees gradually close in behind and open up in front has a good idea of the phenomenon the astronomer sees. The southern heavens are gradually closing in and those of the north are opening up. The distances of the universe are such as to be inconceivable. Neptune is the outermost object of the solar system, swinging around its tremendous cycle nearly 3,000,000,000 miles away from the sun; yet the nearest fixed star is 914,000 times farther away from the sun than is Neptune. Though light travels at a rate that would send it around the earth seven and a half times in a single second, it would take it 3600 years to come to us from the farthest known star; if there could be an eye on some of the most distant stars which could defy space it would now be beholding the Israelites in Canaan. Who has not seen the pole star? Were there an eye upon it which could see the things on earth, that eye would now be looking at the great drama of the civil war.

HOUSES ON TRAIL OF DEMENTED MAN

(United Press Leased Wire.)
Tacoma, Wash., Jan. 1.—For two days men with bloodhounds have been searching the forests and prairie country in the southern and western portions of this county for James McCutcheon, the butcher of Roy, who disappeared from his home last Saturday.

29 YEARS ABED UNABLE TO STIR

Washington Man Used Giant Strength One Time Too Many.

(United Press Leased Wire.)
Kent, Wash., Jan. 1.—To lie 29 years in bed, unable to stir, and to bear it all without a murmur, is the fate of William Philip Stephenson, residing in the White river valley, one mile north of here.

In 1843 Stephenson left England for Victoria, B. C. He came to Seattle in 1873. By vocation he was a butcher and found lucrative employment and was employed at Seattle. On that morning he handled 80 quarters of beef. He never refused food, served three times a day, and the doctor said he would go out of business if everybody was as healthy as "Old Man Stephenson."

JAP HITS GIRL; FIGHT IS RESULT

Occupants of Hotel Dining Room Take Hand in a Kitchen Row.

(Special Dispatch to The Journal.)
Paloise, Wash., Jan. 1.—For the first time in some years Paloise last night witnessed a miniature race riot, which was, however, lacking in any serious consequences. The trouble began in the kitchen of the Hotel Northern, and promises to end in the superior court. The principal participants were Mary Carey Sullivan, a waitress, and Charlie Hachiya, the Japanese cook.

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Important Change of Time

Effective Sunday, Jan. 3, 1909—Following Schedule Will Prevail

From Portland to Gresham and Intermediate Points via Springwater Division.....	Lv. 6:55 a.m. 12:45 p.m. 6:45 p.m.	*7:45 a.m. 2:45 p.m. 7:45 p.m.	8:45 a.m. 3:45 p.m. 11:15 p.m.	9:45 a.m. 4:45 p.m.	10:45 a.m. 5:45 p.m.
From Gresham and Intermediate Points via Springwater Division.....	Lv. *5:45 a.m. 11:45 a.m. 5:45 p.m.	*6:30 a.m. 1:45 p.m. 6:45 p.m.	7:37 a.m. 2:45 p.m. 9:45 p.m.	8:45 a.m. 3:45 p.m.	9:45 a.m. 4:45 p.m.
From Portland to Cazadero and Intermediate Points via Springwater Division.....	Lv. 6:55 a.m. 4:45 p.m.	8:45 a.m. 6:45 p.m.	10:45 a.m.	12:45 p.m.	2:45 p.m.
From Cazadero to Portland and Intermediate Points via Springwater Division.....	Lv. 6:45 a.m. 4:45 p.m.	8:45 a.m. 8:45 p.m.	10:45 a.m.	12:45 p.m.	2:45 p.m.
From Portland to Troutdale and Intermediate Points on Branch.....	Lv. 6:55 a.m. 12:45 p.m. 6:45 p.m.	7:45 a.m. 2:45 p.m.	8:45 a.m. 3:45 p.m.	9:45 a.m. 4:45 p.m.	10:45 a.m. 5:45 p.m.
From Troutdale and Points on Branch to Portland.....	Lv. *6:15 a.m. 11:20 a.m. 5:20 p.m.	7:25 a.m. 1:20 p.m. 6:20 p.m.	8:15 a.m. 2:20 p.m.	9:20 a.m. 3:20 p.m.	10:20 a.m. 4:20 p.m.

* Note—Daily Except Sunday.

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Suits at \$21.00		Reg. \$11.50 \$6.25
Regular \$25-\$30	\$28 Vals. \$15.00	
Suits at \$11.50	\$18 Vals. \$12.85	

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