

THE GRANDEUR OF THE UNIVERSE

Dr. Talmage's Lecture on the "Sun Moon and Stars" Last Night.

FINE STEREOPTICON VIEWS.

The Big Tabernacle Audience Greatly Delighted With What It Heard and Saw—A Subject Ever New.

Splendid indeed was the astronomical lecture delivered in the tabernacle by Dr. Talmage last night. The subject, "The Sun, Moon and Stars," is one with which the speaker is thoroughly familiar and one, too, that never grows old. The audience was large, much larger than might have been expected, considering the great number of counter-entertainments and attractions that are always found at conference time, and was a distinct tribute to the well known abilities of the lecturer. The audience listened in almost painful silence to the polished diction of the doctor and gazed intently upon the magnificent stereopticon views presented and several times found itself at the point of applauding that which it heard and saw. The lecture is one that could be delivered with untold profit in every advanced institution of learning in Utah.

MAGNIFICENT VIEWS.

The pictures exhibited by Dr. Talmage in illustration of his subject were of an order of excellence rarely surpassed. There were diagrams executed with the greatest care showing in true relation of size the sun and its family of planets, motions of the planets in space, the phases of the moon and of the inferior planets, also magnificent paintings of the solar surface and numerous photographs of the same. Some of these sun views presented on the surface of the glowing orb the appearance of frost flowers and ice crystals. But the most interesting and instructive of all the illustrations were the moving pictures, showing the brilliant moon in its monthly lunations about a sun-lighted earth, the entire family of planets and satellites revolving around the sun, the direct and retrograde apparent motion of the inferior planets, etc. By moving views also the nature of eclipses was made clear, and the dark disc of the moon was seen creeping over the sun's face, until from a mere notch in the limb of the solar luminary its face was entirely obscured.

THE LECTURE.

The lecture proper was prefaced by an interesting outline of the history of the science of the heavenly bodies, and by a sincere tribute to the studies and investigations of ancient times, which, while in themselves often erroneous, prepared the way for more reliable demonstrations of later times. Astronomy was pronounced the oldest of all human sciences dependent on observation. In striking contrast with this fact, that of the youthfulness of earth-science was presented. It was but yesterday in the history of the race that

men learned to look attentively at the stone underfoot, while far back in the time of history's dawn, men looked toward the stars and wondered and worshipped at what there they saw. Like the babe stretching its tiny hands toward the moon, man has ever been prone to reach after the distant and the unattainable, oft-times to the neglect of the near and present. So old is the science of the stars that no trustworthy account of its origin is to be found in extra-scriptural records, and almost every famous nation of antiquity claims the honor of its parentage. Chinese, Chaldeans, Hindus, and Egyptians have severally been credited with originating the science of the celestial spheres, and some of the records claimed by these nations date back nearly to the supposed time of the tower of Babel. Abraham is given the credit of having conveyed a knowledge of astronomy from Chaldea to Egypt.

Today astronomy is in a sense one of the most exact of sciences, and in another aspect it is largely speculative. No practical service to mankind is undisputed; without it our maps would be inexact and unreliable; time regulation would be faulty; calendars would be practically unknown, and navigation in its larger phases would be impossible.

The illustrated part of the lecture began with views of the sun and principal planets drawn to scale, showing the earth of which we think so much as an almost imperceptible dot compared with the sun as a disc ten feet in diameter. The sun's distance was said to be incomprehensible when expressed in miles—22,000,000. If it were possible to make the journey by team, traveling thirty miles a day, over eight thousand years would be required; or by train at the rate of thirty miles an hour without stops, 353 years would be needed for the single trip. Considerable amusement was created by a calculation of the fare for such a hypothetical solar journey, amounting, at the rate of four cents per mile, to nearly four millions of dollars. A telegraphic message would be five minutes, a ray of light eight minutes, and a cannon ball nine and a half years on the way.

By the aid of beautifully colored pictures the telescopic appearance of the sun's surface was shown, revealing rice-grain and willow-leaf aspects. Sun spots of enormous dimensions compared with which our earth would be like a child's ball at the bottom of a well were exhibited. The most striking of all the solar pictures were those showing the fiery prominences—the red flames, and the indescribably beautiful corona, the last named being visible only at the time of total eclipses, except by the help of the spectroscopic. By the aid of brilliantly colored views the operation of the spectroscopic—that invaluable adjunct to the telescope, was made plain.

The moon was shown in all its phases, and by moving pictures its revolution about the earth, and its annual journey round the sun were explained. Some recent photographs from the Lick observatory revealed the craters and mountains on the lunar surface. Think of volcanic systems 112 miles across, and remember that the largest active crater on the earth—that of Kilauea, is only about three miles in diameter. The force of gravity on the moon is so small compared with the earth's gravitation, that a man weighing here 150 pounds would tip the balance on the moon at 25 pounds. From the moon the earth must be a magnificent globe thirteen times larger than the full moon to us, with a correspondingly brilliant earthshine. The different eclipses were demonstrated—total, partial, and annular.

Turning his attention to the stars, the lecturer explained the distinction between fixed stars and planets, and then exhibited by moving views the majestic march of the planets about their central orb. Mercury with its year of 88 days, Venus with seven and a

half of our months to its year; Mars, whose year is nearly two of ours; Jupiter, which makes one revolution about the sun in twelve of our years; Saturn with its year equal to 30 of our own; Uranus, with 84 of our years to one of its own, and Neptune with a year 165 times as long as ours, were shown, each moving with true relative speed. The asteroids, revolving as a ring of fragments, between the orbits of Mars and Jupiter, were discussed, and their connection with meteoric showers was explained. An actual meteorite—possibly a fragment of a shattered world, which fell upon the earth from space, striking our planet somewhere in Arizona, was exhibited. The discovery of an asteroid of considerable size, made by Witt of Berlin in 1898, was explained as of particular importance. This tiny planetoid, Eros by name, describes an orbit which passes within that of Mars, and so may approach the earth closer than any other body except the moon. It will be favorably situated for observation in November next, and from its proximity to the earth may serve to rectify or confirm our accepted distance of the sun and other bodies from the earth.

Then, passing beyond the solar system into sidereal space, the enormous distances of the fixed stars were illustrated by an imaginary journey on a beam of light traveling at its usual velocity of over eleven millions of miles per minute. At such a rate the sun would be reached from the earth in eight minutes, the orbit of Jupiter would be crossed in one hour and a half, that of Saturn in two and a half hours, that of Neptune in three hours; the Pleiades star would be reached in forty-five years, and the Pleiades in 350 years, while the most distant bodies observable from the earth would be reached in not less than 2,000 years. And still beyond these are other systems, other heights, and other depths.

Comets, those occasional visitors from outer space, which come now and then within our system, and nebulae—the dust of which worlds are made—were described, explained, and illustrated. The lecture was a masterly effort throughout, and it was brought to a close by a grand recital of Jean Paul Richter's Dream Vision of the Infinites.

GENERAL CRONJE'S PLUCK.

General Cronje's pluck was monumental. It made you feel that the modernity of warfare has not, after all, killed its romance. These days of shrapnel and Lydlite can be as heroic and poetic, all said, as those of catapult and cross bow, of fletcher and casque. A hundred-fold more so, one may add, thinking of how shell after shell burst over the Paardeberg trenches. Lord Kitchener, as you doubtless know, refused to let Cronje have a day to bury his dead. This hardness is, in some quarters, roundly blamed here, and all the more so because of the frightful condition in which Cronje's laager was found on the surrender. General Buller, it is argued, repeatedly asked for the same sort of armistice in relation to his dead and wounded, and these requests General Joubert granted. Never a popular commander in Egypt, Lord Kitchener has thus far, in his South African campaign, done nothing to remove from his reputation the clinging epithet of "cruel." With Lord Roberts, on the other hand, it is agreeably otherwise. Mercy and kindness toward the conquered will help to make "Bobs" more cherished than ever by the English people. He rendered Cronje's position hopeless, devoting himself, with all the military science of which he is past master, to baffling every hope of the enemy's reinforcement. Yet he has refrained from reckless spilling of blood, and has secured the "lion of Africa" (as Cronje is called nowadays) to side for indefinite months at Cape Town.—Edgar Fawcett in Collier's Weekly.

EASTER CUSTOMS IN MANY PLACES.

In other days curious customs were connected with the celebration of Easter. In England all the fires were put out and relighted on Easter from consecrated flints obtained from the churches, holy fire got in this way being believed to be potent against the ravages of storms and other disasters.

Also, fall it late or early, Easter was the signal for "doing the fyre out of the hall, and the black wynter brandes and all thynges that is foule with fume and smoke shall be done awaye and where the fyre was shall be gayly arayed with fayre floures and strewed with grene ryshes all aboute."

The common people, as they still do in Ireland, rose early on Easter morning "to see the sun dance."

"Lifting" or "heaving," was an observance which is thought to have been a rude representation of the resurrection. The men lifted the women on Easter Monday, the women the men on the following day, this being accomplished by two persons joining hands across each other's wrists, the person to be heaved sitting thereon and being lifted three times, after which he was kissed by the lifters and a forfeit claimed. Sometimes a chair was used instead of the hands.

A superstition that affects the modern observance of Easter apparently held that it was untucky not to wear something new on that day. To look out of your window on Easter morning and see a lamb was thought to be lucky, especially if it had its head toward you, this probably being derived, in part at least, from the belief that to see a lamb is always more or less lucky, since that is a form that the devil can never assume. Many persons believe that it is a good plan to draw water and wash in it on Easter Day if the wind is east, as that will counteract ill effects from east winds for the rest of the year.

If it rains on Easter it will rain for seven Sundays is a widely accepted proverb. Some go further and say if it rains on Easter it will rain at least a few drops every day in the year.

In many parts of England a Pashal march was chosen to ride in pomp to church, and after service to repair with their retinue to a hall, where a celebration was held.

A good old university custom at Oxford was "chipping the block." The cook and his assistants waited for the students to come out for dinner. As each passed he took a blunt chopping ax and struck the block, following the act by dropping a fee in a pewter dish held by one of the assistants. There was a tradition that any one able to chop the block in two would have a right to lay claim to the college estates.

Easter Sunday in Rome is ushered in with the firing of cannon from the castle of St. Angelo. Soon afterward there is a great outpouring of pedestrians and equipages in the direction of St. Peter's, where the altars are decorated beautifully and the lights ablaze around St. Peter's tomb. Formerly the pope, in the splendid vestments of his office, was borne hither in the sedia gestatoria and escorted with great pomp to the papal throne. The nobles guards and many other officials were present in full uniform, and the whole pageant was strikingly impressive. At night there were civic festivities and an illumination that lighted up the Eternal City with wonderful brilliancy. In these days the cardinal arch priest

says mass in St. Peter's, the pope officiating in the consistory, within the Vatican palace. Only a favored few are present. Full dress is required for the men, and a Spanish mantilla thrown over the dress for the women.

In many of the Spanish-American countries full-dress wax figures of Christ, the Virgin Mary, and Mary Magdalene are borne in a procession by priests and are made to perform a sort of pantomime signifying the discovery of the resurrection of the Savior by the two Marys.

In the Greek churches Easter is begun with a midnight mass. The richly robed priests and the choir of men and boys are scarcely visible in the prevailing dusk, until a rocket announcing midnight, the priests and choir, who had left the church a few minutes before, begin knocking at the door, and as soon as it is opened hurry in shouting, "Christ is risen! Christ is risen!" Each bears a lighted taper, from which every one in the audience lights his candle until the church is ablaze with thousands of lights.

Most American children think the colored eggs one of the most important features of Easter celebration, but they do not know so much about the hare that lays them as their German cousins. The white hare is the delightful animal that provides the beautiful blue, red, pink purple and spotted eggs for good children, according to the nursery doctrines. Students have traced the introduction of the hare into Easter traditions from the fact that this is, in a sense, a lunar holiday, and the hare was in ancient times a symbol for the moon. Also the hare being born with its eyes open was associated with the opening of the new year at Easter.

Hot cross buns. One a penny, two a penny, One a penny, two a penny, Hot cross buns. Another: One a penny, two a penny, Hot cross buns. If you have no daughters Give them to your sons; But if you have none of these merry little elves, Then you may keep them all for yourselves.

The bun is small and spiced and bears a cross on its sugary top. Chosen for a long time had a great reputation for these buns, as many as 24,000 having been sold in a day by one house. To carry out the provisions of a will made by a woman before the great fire in London, twenty-one old women appeared every Good Friday in St. Bartholomew and in the presence of a great crowd pick up twenty-one sixpences from the floor, one who is too proud or too infirm to stoop being barred from the possession of that vast sum.

In Spain women appear in the streets in funeral garb on Good Friday and the young men of fashion don black, even to jet studs and sleeve buttons.

A Horrible Outbreak. "Of large sores on my little daughter's head developed into a case of scald head" writes C. D. Jelliff of Morganton, Tenn., but Bucklen's Arnica Salve completely cured her. It's a guaranteed cure for Eczema, Tetter, Salt Rheum, Pimples, Sores, Ulcers and Piles. Only 25 cents at Z. C. M. I. Drug Dept.

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A CORCEOUSLY BOUND

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LADIES! A BIG BARGAIN SALE IS NOW ON AT Z. C. M. I. FOR THIS WEEK. You can make money by saving money in securing fine quality, latest style goods at cut prices. Read: KID GLOVE DEPARTMENT. NOTION DEPARTMENT. NEW FANCY NECKWEAR. Ladies' Corsets. Ladies' Wash Waists. Ladies' Black Cotton Hose. Summer Underwear. Corset Sale. Embroideries. Ribbons. Laces. DRESS GOODS. Ladies' Tailor-Made Suits. Z. C. M. I. Cloak Dept. This Week 4-FOUR SPECIALS-4 IN Ladies' Tailor-Made Suits. FIRST. A Navy Blue Cloth Suit, 5y front jacket with good lining, box plait skirt with seams and good binding, a stylish Suit for only \$4.50. SECOND. A Fine Venetian Cloth Suit in four colors, castor, gray, royal blue and red. Jacket made in the new fashion, scalloped back, extra good lining. Skirt made in the latest style. A regular \$15.00 Suit for only \$9.00. THIRD. A Rich Brown Covert Cloth Suit, Eton effect, silk lined and silk facing. Skirt made with box plait, double stitched seams, splendid sewing and velvet facing, an exceptionally well made Suit for only \$11.75. FOURTH. A collection of about forty suits in blacks and navy, ranging in price from \$18.50 to \$25.00. Some of them Silk lined throughout. Your choice of \$12.50. EMBROIDERIES. IN SWISS, NAINSOOK and CAMBRIC, EDGINGS, INSERTIONS AND ALLOVERS. LACES. VENICE LACES in Galloons, Edgings and Allovers. VALENCIENNE LACES, New and dainty designs. We have a vast assortment of other articles far too numerous to attempt to enumerate here, but all interesting, good and useful, and at LOW PRICES, NOT DUPLICATED ELSEWHERE IN THE CITY. SATIN AND GROS GRAIN, all widths and colors. TAFFETA, all widths and colors. SATIN TAFFETA, in all the newest shades. FANCY RIBBONS, a beautiful line. One lot of Fine Corsets, sold regularly at \$1.50 are offered in Sale for 50c this week. Also one line of Ladies' Black Summer Corsets, regular price \$1.00, 50c this week. REDUCED PRICES PREVAIL THIS WEEK. Z. C. M. I. T. G. WEBBER, Supt.