ASTRONOMY FOR ALL.

A Simple Method of Identifying the Stars and Constellations.

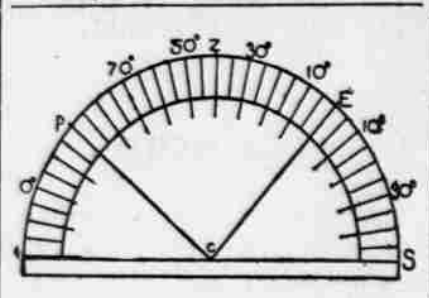### IT IS NOT SO HARD AS IT LOOKS.

Some Plain Directions That Give the Needed Information.

A POPULAR REVIEW OF THE HEAVENS

[WRITTEN FOR THE DISPATCH.]

It is the purpose of this article, and of articles to follow, to systematically go over the entire starry heavens, describing in a popular way the principal objects of interest, and furnishing to the general reader a means of easily and certainly identifying the larger stars and more important constellations. The method used will be that of identifying objects on the meridian. A person who looks at the stars only occasionally, and does not understand clearly the motion of the celestial sphere, is likely to become confused, and think the motions of the stars are erratic.

This is not so, however. The relative positions of the so-called "fixed" star vary only after long ages. By "fixed stars" is meant simply a star proper, and not a planet. When the term "fixed" was originally applied to stars, it was thought that the stars had no motion of their own. Since then it has been found by the comparison of accurate observations, separated by long intervals, that each star has a proper motion of its own; these motions, however, are inappreciable to the unassisted eye.

ALL THAT IS NECESSARY.

To understand clearly the apparent daily and annual motions of the stars, it is simply necessary for the observer to conceive all the stars set immovably on the inside of a vast hollow sphere, and himself stationed on terra firma in the middle of this sphere. Now let him imagine an axis to the sphere, passing through his position and making, for our latitude, an angle of about 40° with the horizontal, and extending north and south.

This is then the axis of the celestial sphere, about which it revolves, the individual stars always preserving the same relative positions with respect to each other. Very near the north end of this axis (the south end is, of course, below the horizon) is a star of the second magnitude, which it is important for the observer to be familiar with. This is the star Polaris, commonly called the Pole star, and, on account of its proximity to the pole, (it is only 1° 17' distant from the true north pole of the heavens) it always remains in almost the same position, and may be taken to represent the pole.

To find this star, let the observer look directly north, and about 40° above the horizon he will see a rather bright star. It is pointed to by two stars in the bowl of the dipper.

HOW THEY MOVE.

The whole explanation of the motion of the stars is, then, simply this: The entire celestial sphere revolves about an axis marked at one end by the star, and, in about 23 hours 56 minutes 4.09 seconds, or approximately in four minutes less than a day. A little watching of the motion of the stars from hour to hour on a clear night will show that they all move in concentric circles, having their centers near the pole star, that those in the far south describe but small arcs above the horizon; those rising in the east are about half way from the horizon to the zenith when due south, and that those rising in the northeast pass near the zenith and set in the northwest, while some still nearer the pole never rise nor set, but simply circle around the pole in larger or smaller circles, according to their distance from it.

The above scheme may seem a little complex, but it is really very simple, and a great help. Of course it can be done without, but it will be found very convenient. The first object to which we shall direct attention is the first magnitude star, Arcturus. The declination of this star is 20° north, and it crosses the meridian at 8:21 P. M. on June 23. As the celestial sphere completes a revolution in four minutes less than a day, June 24, it will transit four minutes earlier, or at 8:17, and thus the time of any succeeding transit of the star may be calculated.

AN INTERESTING POINT.

The head of the Serpent may be identified by the third magnitude star Beta, which transits at 9:50 on June 23, at an altitude above the horizon of about 65°, its declination being about 16° north. Just east and north of this star will be seen four others, somewhat fainter, the five forming an irregular X, about 5° high; this is the Serpent's head.

Fresh Arrival.

Just received from the Anheuser-Busch St. Louis brewery, a large supply of their celebrated Budweiser beer, in both quarts and pints. For sale at G. W. Schmidt's, Nos. 95 and 97 Fifth avenue, city.

To trace out his body we look southwest about 5°, where we see an irregular row of three stars, and still further, about 20° directly south of the star we first identified is another star; these, with a single star about 33° to the east, form the Serpent. There is some slight sense in calling such a collection of stars by the name of serpent, a great deal more than there is in calling some star groups by the names the ancients invented for them, as we shall see later on. Our first hour with stars has had to be a brief one, but a more interesting list may be promised for next time.

BERT. E. V. LUTY.

A GIANT MONEY RAISING SALE!

THE FOLLOWING TELEGRAPH. DISPATCH WILL EXPLAIN ITSELF:

A Picnic for Economical Housekeepers

1,000 yards 36-inch Glendale Muslin, 4½c a yard.
1,000 yards 36-inch Fruit of the Loom, 7½c a yard.
10,000 yards 36-inch Unbleached Muslin at 4½c, 5½c and 6½c.
1,000 yards Utica Brand, 9-4 wide, 22c; 10-4, 24c a yard.
1,000 yards Pepperel, 8-4, 17c; 9-4, 19c; 10-4, 21c per yard.
1,000 yards Lockwood, 8-4, 18c; 9-4, 20c; 10-4, 22c per yard.

Our Orders Are to "Turn All Goods Into Ready Cash Without Delay: No Matter What the Loss May Be."

Crochet Bed Spreads.

800 10-4 Crochet Bed Spreads, sale price, 59c and 69c.
600 11-4 Crochet Bed Spreads, sale price, 85c and 99c.

Higher Grades Reduced in Same Proportion.

500 extra fine 11-4 Marseilles Bed Spreads, sale price, $1 49 and $1 99.
300 very fine Imported White Marseilles Bed Spreads, sale price, $3 25 and 3 75.

Higher Grades Also Reduced in Same Ratio.

All Chenille Portieres.

200 Pairs Elegant Chenille Portieres, sale price, $6 50 and $7 99 a pair.
100 Pairs extra large Chenille Portieres, sale price, $8 96 a pair.
50 Pairs Tyeoon Curtains, 3½ yards long, sale price, 50c a pair.

Curtain Scrim Just About Half Cost.

200 pieces Curtain Scrim, sale price, 7c and 8½c a yard.
Nottingham Lace for Curtains, sale price, 9c a yard.
Nottingham Lace for Curtains, sale price, 13c a yard.

Other Grades in Same Proportion.

30 pieces Embroidered Swiss for Sash Curtains, sale price, 22c a yard.
50 pieces Embroidered Swiss for Sash Curtains, sale price, 39c a yard.

Laces and Flouncings.

One lot of 27-inch Oriental Laces, sale price, 15c a yard.
How is this: 40-inch Oriental Laces, sale price, 25c a yard.
One lot of 43-inch Oriental Laces, sale price, 45c a yard.
Narrow widths to match at correspondingly low prices.
Black Lace Flouncings and Drapery Nets at proportionately low prices.

DANZIGER & SHOENBERG

Will Assume the Management of this $139,000 Consignment Sale.

Causes which we cannot control will force the Messrs. D. M. & Co. to make this appalling sacrifice. What the loss will be is of no consequence to you, that you can buy Dry Goods, Dress Goods, Silks, Wash Goods, Lace Curtains, White Goods, Hosiery, Gloves, Muslin Underwear, Jerseys, Wraps, Millinery, Summer Underwear, Furnishing Goods, Shirts, Corsets, etc., for the next ten days at less than the cost to manufacture, is the point that should electrify the purchasing element wherever this startling offer is known.

AT 9 O'CLOCK MONDAY MORNING,

We throw our doors open and invite the public to the Biggest Bargain Sale of the season.

THE LOSS NONE OF OURS.

SPECIAL AND IMPORTANT---You'll find Every Item as Advertised.

THESE PRICES WILL ATTRACT ENORMOUS CROWDS TO OUR BIG STORES.

Black Goods Away Down in Prices.

50 pieces Black Cashmere Twill, double width, sale price, 25c a yard.
50 pieces Black Cashmere, very wide, sale price, 34c a yard.
50 pieces 47-inch Black Henrietta Guillanret dye, sale price, 59c a yard.
40 pieces First-Class Black Mohair Lustre, sale price, 25c a yard.
50 pieces Choice Black Silk Grenadine, plain and figured, sale price, 75c a yard.

Colored Dress Goods.

STARTLING VALUES.

100 pieces Colored Cashmere Twills, grays and browns only, sale price, 9c a yard.
75 pieces double width English Suiting, sale price, 15c a yard.
75 pieces Colored Henriettas, double width, popular colors, sale price, 25c a yard.
75 pieces Illuminated Silk Mixtures, new shades, sale price, 35c a yard.
150 pieces Scotch Suitings, very effective styles, sale price, 35c.
100 pieces all-wool Cashmeres, elegant colors, excellent value, sale price, 47c.
200 pieces Fine Challis, all new designs, sale price, 10c a yard.
100 pieces Fine Challis, popular styles, sale price, 5c a yard.

Wash Dress Goods.

500 pieces elegant Satines, light and dark shades, sale prices, 6½c a yard.
300 pieces choice Satines, beautiful styles, sale price, 12½c a yard.
100 pieces French Satines, Persian designs, exclusive styles, sale price, 20c a yard.
200 pieces Fancy Ginghams, 5½c a yard.
200 pieces Pure Indigo Prints, best make in the world, sale price, 6½c a yard.
500 pieces Colored Lawns, sale price, 3½c a yard.
100 pieces Blazer Striped Skirtings, sale price, 7½c a yard.

White Goods.

NOW IS YOUR TIME TO BUY.

230 pieces French Plaid Nainsook Muslin, sale price, 8½c and 12½c a yard.
51 pieces French Lace Stripes, sale price, 17c and 25c a yard.

Higher Grades at Greatly Reduced Prices.

Ladies and Misses' Jerseys.

100 Misses' Jerseys, colored and black, sale price, 49c.
100 Misses' Jerseys, colored and black, sale price, 99c.
150 Ladies' Blouses, sale price, 99c.
130 Ladies' Flannel Blouses, sale price, $1 49.
200 Ladies' French Flannel Blouses, sale price, $1 99.
180 Imported Blouses, French and English styles, sale price, $2 74.

Scotch and Irish Crash and Towels.

50 bales all Linen Scotch Crash, sale price 6c, 8c and 11c.
100 pieces checked Linen Crash, sale price, 8c a yard.
100 dozen Pure Linen Towels, sale price, 6c and 9c.

Other Grades Reduced in Proportion.

100 dozen Linen Damask Towels, large size, sale price, 20c each.

This is Everybody's Chance to Get Grand Bargains.

Lace Curtains.

Bargains that You Can't Afford to Pass By.

Nottingham Lace Curtains, 3 yards long, sale price, 69c and 75c a pair.
Nottingham Lace Curtains, 3½ yards long, sale price, $1 39 a pair.

Higher Grades Reduced in Same Proportion.

Nottingham Lace Curtains, fine confined styles, 4 yards long, sale price, $4 50.

Glassware Almost Given Away During this Giant Sale in our Basement.

Parasols Almost Given Away.

Handsome Fans that must be sacrificed, 50 cents each.

These Prices Will Create a Great Excitement in Our Dry Goods Sections.

30 pieces Heavy Gros Grain Silk, full width, sale price 45c a yard.
100 pieces Heavy Super Extra Black Gros Grain, full round cord, sale price, 56c a yd.
100 pieces Pure Silk, Colored Faille Francaise, choice styles, sale price, 85c a yd.
100 pieces Pure Silk Surahs, 45 shades, sale price, 44c.
50 pieces Cheney Bros.' well-known China Silks, all new shades, sale price, 74c.
100 pieces India Silk, all new shades, sale price, 45c a yard.

LADIES—For Millinery Bargains, Muslin Underwear Bargains, Apron Bargains, Jersey Bargains, take Elevator to Second Floor.

Ladies and Children's Underwear.

Children's Ribbed Vests, sale price, 13c and 17c.
Ladies' Swiss Ribbed Vests, sale price, 15c and 19c.
Ladies' Balbriggan Vests, 15c and 25c.
Boys' Balbriggan Shirts and Drawers, sale price, 29c.

Come and See the Startling Bargains in Men's Flannel Top Shirts.
$25,000 worth Men's Furnishing Goods at prices never quoted by any other house in Pittsburg.

Men's Underwear.

Bargains That Will Create a Big Sale.

Men's Gauze Shirts and Drawers, sale price, 19c each.
Men's Fancy Balbriggan Shirts and Drawers, sale price, 39c each.
Men's French Balbriggan Shirts and Drawers, sale price, 40c each.
Men's Summer Ribbed Shirts and Drawers, sale price, 50c each.
Other grades reduced in same proportion.

Table Linens.

100 pieces 58-inch Cream Table Damask, sale price, 35c a yard.
100 pieces 58-inch Cream Table Damask, sale price, 49c a yard.

Higher Grades Equally Reduced.

100 pieces 58-inch Bleached Table Damask, all linen, sale price, 39c and 49c a yard.

Other Grades Reduced in Same Proportion.

63 pieces 58-inch Turkey Red Damask, sale price, 35c and 45c a yard.

Chenille Table Covers.

150 4-4 Chenille Table Covers, sale price, 69c each.
180 6-4 Chenille Table Covers, sale price, $1 99 each.
2,000 Tapestry Table Covers, 4-4 for 39c; 6-4 for 75c; 8-4, elegant styles, $1 25.

Dress Trimmings and Buttons

Almost Given Away.

98 6-inch Silk Ornaments, with Pendants, all colors, sale price, 23c each.
94 7-inch Silk Ornaments, with Pendants, sale price, 50c each.
83 pieces Colored Silk Ornament Gimps, sale price 68c a yard.
50 pieces Embroidered Persian Bands, sale price, 99c, worth $3.
30 pieces Embroidered Persian Bands, sale price, $1 24, worth $3.
30 pieces Applique Trimming, sale price $2, worth $4 50.
100 Waist Sets, sale price 24c a set.
150 Waist Sets, very elegant, sale price $1 per set.
Buttons at 25 per cent on the dollar.

Ribbons! Ribbons!

Ladies Visit Our Second Floor.

50 pieces elegant Sash Ribbons, sale price, 39c a yard.
50 pieces Honiton Sash Ribbons, sale price 25 a yard.

Ten Thousand Dollars' Worth of Other Ribbons in Same Proportion.

10,000 Elegant Curtain Ends at 25c.

Hosiery

At Less Than Cost of Production.

185 dozen Ladies' Striped Hose, sale price, 9c a pair.
180 dozen Ladies' full regular-made Balbriggan Hose, sale price, 11c a pair.
100 dozen Ladies' fast-black Hose, sale price, 19c a pair.
Lot Pure Silk Hose, a grand bargain, sale price 75c a pair.
90 dozen Men's full regular-made Socks, French grays and stripes, sale price, 12½c a pair.
Lot of Men's Balbriggan and Striped Socks, sale price 19c a pair.

Ladies' Jackets.

300 all-wool Stockinette Jackets, sale price, $1 50.
250 all-wool Tailor-made, sale price, $2 99.
190 all-wool Fine Cloth, perfect fit, sale price, $3 99.

Ladies' Beaded Wraps.

180 beautifully jetted Wraps, sale price, $2 49 and $3 49.

Young Ladies' Jackets.

1,000 at Your Own Price.

Children's Reefers, all-wool, pretty colors, sailor collars, sale price, $1 49.

High Grades Reduced in Same Proportion.

Kid and Silk Gloves and Mitts.

Ladies' Black and Colored Silk Mitts, sale price, 19c a pair.
Ladies' Black and Colored Silk Mitts, sale price, 24c a pair.

Higher Grades Reduced in Same Ratio.

Children's Silk Mitts, sale price, 12c and 24c a pair.
Ladies' Plain Silk Gloves, sale price, 21c a pair.
Ladies' Sick Taffeta Gloves, sale price, 19c a pair.
Children's Silk Gloves, sale price, 25c a pair.
Ladies' Colored Kid Gloves, sale price, 47 and 59c a pair.

Ladies' see what 24 cents will do for you in Our Big Jewelry Department during this wonderful sale.

2,800 pairs of fine Imported Corsets, choice of the lot during this remarkable sale at 50 cents each.

Our Grand Housefurnishing Department in the Basement will hold out extraordinary bargains during this great sale.

DANZIGER & SHOENBERG,

THE LIVELIEST HOUSE IN TOWN,

Sixth St. and Penn Ave.

REMEMBER THIS GREAT SALE BEGINS MONDAY MORNING AT 9 O'Clock.

DANZIGER & SHOENBERG,

42, 44, 46, 48, 50, 52 SIXTH ST.,

538, 540, 542 PENN AVENUE.