

Review of Distance to Stars  
Astronomy 25

- 1) Three methods to determine stellar distances are \_\_\_\_\_ parallax, \_\_\_\_\_ parallax, and \_\_\_\_\_ stars.
- 2) The most accurate method, good out to about 160 ly, is \_\_\_\_\_.
- 3) Using this method, we can measure the very small parallax angle using an Earth base-distance of \_\_\_\_\_.
- 4) About \_\_\_\_\_ stars, measured both from Earth and the Hipparcos satellite, have had their distances calculated this way.
- 5) These stars, our most valuable catalogue, have been plotted on the \_\_\_\_\_ diagram, temperature vs. absolute magnitude or luminosity.
- 6) The stars on this diagram very often fall on a diagonal line called the \_\_\_\_\_.
- 7) For more distant stars, we must first use a photometer to measure their \_\_\_\_\_ magnitude ( $m$ ) and a spectrometer to measure its \_\_\_\_\_.
- 8) We then place this star in an appropriate place on the diagram and are able then to read its \_\_\_\_\_ ( $M$ ) to the left.
- 9) Knowing both  $M$  and  $m$  we can calculate the star's \_\_\_\_\_.
- 10) In 1912, Henrietta Leavitt paid particular attention to a group of stars whose light \_\_\_\_\_ over regular periods of time.
- 11) Comparing the periods of distant stars to similar stars whose distance was determined by another method, she concluded that their \_\_\_\_\_ magnitudes were probably the same, solving the distance puzzle.