

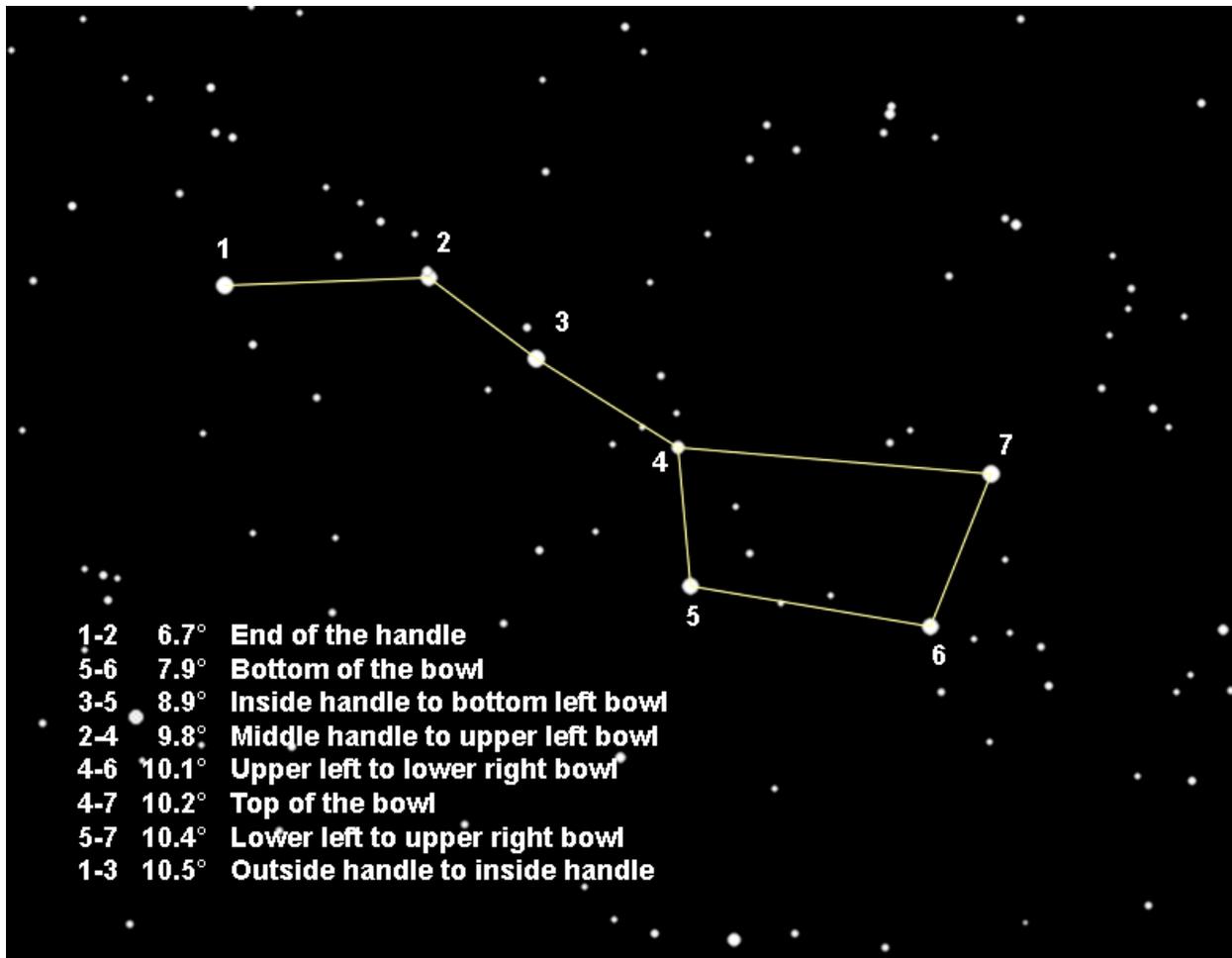
Benchmarks of Angular Distance

Estimating the angular extent of entities like meteor trails, auroral forms, and comets is a handy skill to possess. But, like any other skill, it takes practice to make quick and accurate estimates in the field.

One group of prominent stars that is usually high up enough in the sky to utilize is the seven stars of the Big Dipper. Let's number these stars 1 through 7 with 1 being the end star of the handle and 7 being the pointer star in the bowl closest to Polaris.

1	Alkaid	End star of the handle
2	Mizar & Alcor	Middle star of the handle
3	Alioth	Handle star closest to the bowl
4	Megrez	Bowl star where the handle attaches
5	Phad	Lower left bowl star
6	Merak	Lower right bowl star
7	Dubhe	Upper right bowl star, nearest Polaris

Stars	Angular Separation	Description
2-3	4.4°	
4-5	4.5°	
6-7	5.4°	
3-4	5.4°	
1-2	6.7°	End of the handle
5-6	7.9°	Bottom of the bowl
3-5	8.9°	Inside handle to bottom left bowl
2-4	9.8°	Middle handle to upper left bowl
4-6	10.1°	Upper left to lower right bowl
4-7	10.2°	Top of the bowl
5-7	10.4°	Lower left to upper right bowl
1-3	10.5°	Outside handle to inside handle
2-5	13.1°	
3-7	15.2°	
3-6	15.5°	
1-4	15.7°	



Stars	Angular Separation	Description (continued)
1-5	18.1°	
2-7	19.3°	
2-6	19.9°	
1-6	25.6°	
1-7	25.7°	

It is generally stated that the width of your fist at arm's length subtends an angle of 10° on the sky. In the Big Dipper we have 21 handy (sorry, couldn't resist) pairs of bright stars covering a wide range of angles, including eight having a separation of 6.7° to 10.5°—perfect to use for measuring your fist size. Try each one in turn until you have the best fit for your fist. You now have a calibrated precision sky measuring tool!

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