

## Re: Naked eye star splitting

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**From:** David Knisely (*ka0czc\_at\_navix.net*)

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Chris L. Peterson posted:

- > *You need to get your eyes checked. Although it is claimed that some ancient*
- > *cultures used Mizar/Alcor as a test of visual acuity, that is hard to believe.*
- > *Anyone with something approaching normal vision, at any age, should be able to*
- > *split them, and detect the nearly two magnitude difference.*

He may or may not need to get his eyes checked. There are times when a non-adapted eye can't easily see Alcor, so to just tell the poster this might be a bit premature. The ancients certainly did not have the benefit of glasses or contact lenses to correct even minor visual defects which are prevalent in a general population, so their vision would be no better than ours without glasses. Thus, it is quite within the realm of possibility that Mizar and Alcor would have been a good choice to test visual acuity (they may also have been a bit closer-spaced in the distant past). Even though the two stars are widely separated, I have never been able to pick out Alcor without my glasses in place. With my glasses, its pretty easy unless there is a lot of light nearby.

- > *I'd doubt anybody's ability to see M27 naked eye even under perfect skies, let*
- > *alone mag 3.5. Nearby M71, a globular, might be slightly more believable, but*
- > *again, not under your skies.*

M27 has been seen under excellent dark sky conditions, as it is around magnitude 7.3 (I have seen stars down to magnitude 7.8 at the site of the Nebraska Star Party). It is certainly one of the toughest "unaided-eye" Messier objects though. It sits about 24 arc minutes from the magnitude 5.7 star 14 Vulpeculae, so when visible, it forms a bit of a double with that star. I like to use an "M"-shaped asterism of 5th and 6th magnitude stars in the area to locate 14 Vul (the middle of the "M"), and I like to try for M27 at NSP, although much of the time, I fail. Under less than pristine conditions however, it would of course not be visible. M71 is magnitude 8.4, so its probably not possible with the unaided eye even under the best conditions. Clear skies to you.

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Prairie Astronomy Club: <http://www.prairieastronomyclub.org>

Hyde Memorial Observatory: <http://www.hydeobservatory.info/>

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* Attend the 11th Annual NEBRASKA STAR PARTY *  
*   July 18-23, 2004, Merritt Reservoir   *  
*   http://www.NebraskaStarParty.org   *  
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