

Oct. 13

? WHY THE WEATHER ?

Dr. Charles F. Brooks,
Secretary, American Meteorological Society,
tells of:

OLD MOON IN NEW MOON'S ARMS

While the ancient weather saw that "when the new moon holds the old moon in its arms" foul weather is at hand, may not be attacked as an astronomical absurdity as in the case of the "wet" and "dry" moon, still it is difficult to ascribe to the phenomenon any degree of reliability. In fact, the proverb is also used to portend fair weather. The saying applies when the full orb of the new moon is visible, though but dimly, excepting where the rim is brightly illuminated as a crescent. Ordinarily only the crescent is visible.

When the old moon is thus seen the atmosphere is very clear, and probably this is the chief reason. Clarity of vision results from the purity of the air in respect to water vapor and dust. Or, as sometimes happens, the usual distortions and wrinkles caused by irregularities of temperature have been wiped out by a warm wind and for that reason the air has been made clearer than usual.

One theory of the "old moon in the young moon's arms" is that it is receiving exceptional illumination from reflected light from the earth. Clouds reflect as high as 78 per cent of sunlight, while water reflects less than 50 per cent, and the ground still less, ranging down to nearly no reflection from black soil. If the new moon is receiving this reflected light in exceptional amount, it must come from the sunlit portion of the earth, that is, from the west, which would mean that great areas to the west of us are overcast with clouds and the presence of stormy weather in the direction from which storms approach. Hence, if this reflected light theory were correct, the old moon cuddled in the arms of the new moon would naturally be a harbinger of bad weather. However, it has been reckoned scientifically that such cloud-reflected light, even if the sunlit hemisphere of the earth were clouded one-tenth more than usual, would increase the moon's illumination hardly more than 2 per cent, which would not account for the greater distinctness with which we see it. The fact of a very clear atmosphere would better explain the phenomenon, and this clarity comes more often from the clear air which indicates fair weather, rather than foul, for several hours, if not for a day or two. Under certain conditions, however, when the clearness is owing to the descent of air in front of a rapidly moving intense storm the old moon in the new moon's arms is a portent of stormy weather.

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