combinations are sufficient to supply heat for *four thousand millions* of years; and if we add to that the help of the meteorites, the effect of the progressive condensation under the influence of attraction, as well as the probable, though not proven, rôle of radio-active matter, it is easy to conceive that the sun has been able to maintain the heat which it radiates around it from a time far anterior to the most distant geological epochs. We can also understand that its temperature has not sensibly decreased during the ephemeral duration of our historical period. These considerations are no less reassuring for the future. The hearth upon which the existence of our planet, or at least of its inhabitants, depends will not appreciably cool for thousands of millions of years, perhaps even not for thousands of millions of centuries. Nevertheless, if remote, we can imagine that the final catastrophe will at last arrive. A time will come when the star which lights us will only emit the infra-red radiations, but the human race will have disappeared long before that. Then the solar system, having become invisible, will continue to wander in space, until the instant when meeting an analogous system the shock of the two extinct stars will prepare a new genesis.

The Calibre of Naval Guns. ANON. (*Rev. Sci.*, xlix, 24, 760.)—It appears that in all navies there is a tendency at the present time to increase the calibre of the guns. In fact, Great Britain has adopted 13.5 inches, which equals 343 mm.; the United States, 14 inches, or 355 mm., and Japan, the same calibre for its new guns. In Germany, it is said, a calibre of 352 mm. will shortly be adopted. The object, naturally, is to increase the destructive power, which increases with the increase of the explosive charges it is possible to place in projectiles of a larger diameter. It must also be considered that heavier projectiles do not require so high a muzzle velocity, and yet have just as much force on reaching the target. The decrease in velocity lessens the erosion of the bore of the gun; and this erosion is greatly dreaded just at present. Vice-Admiral Mason, of the United States, estimates that the life of a gun does not exceed 100 to 150 rounds on account of this erosion. At the same time he states that it is scarcely necessary to increase the range of the gun more than 9 kilometres (about 5½ miles), because at that distance nearly all of the armored portion is below the horizon, even to those who sight the gun at a height of 7.5 m. (about 24½ feet) above the sea-level. At a range of 13.5 kilometres (about 8 miles), which is sometimes thought desirable, the whole hull of the ship is below the horizon, and all that can be seen is the superstructure, at which it is very difficult to aim.

Preservation of Wood. HÖNTSCH UND CO. (*Ger. Patent* 239,-697, 1910.)—Acetone oil alone may be used instead of a mixture of acetone oil and rosin for impregnating wood, especially if the wood is not subsequently to be exposed to the direct action of the sun.