

IV. EXTRACT FROM ARTICLE BY HOLGER ESS

Appearing in the issue of *Braunschweiger Zeitung*, No. 12
13th February 1966:

Neutron-matter can only be thought of as existing within certain stars where a pressure exists that exceeds by many degrees anything known to man of pressures and of any phenomena connected with pressure. The matter of an ordinary star, of our sun, for instance, consists of a hot plasma; a gas, heated to extreme degrees, which is composed of electrons and ions—atoms, in fact, that have lost their electrons entirely, or at least in part. The source of the colossal energy released by such a star is to be found in thermonuclear processes caused by the collision of high velocity electrons, particularly hydrogen-nuclei. In time the energy radiating from this type of stellar body diminishes in ratio with the amount of hydrogen that is “burnt up”. The matter of the star becomes compressed. Density of such matter can then attain very high values, up to hundreds of thousands of tons per ccm.

This can hardly be grasped by the average human intellect. Equally difficult to comprehend is the existence of yet another type of matter—apart from high density neutron-matter—which, expressed in practical terms, is not there but which, theoretically speaking, must exist. If this “anti-matter” were to become visible, it could do so only by a collision with, at least, a part of our visible matter. However, should tangible matter collide with “anti-matter”, both would dissolve into nothing under the pressure of unimaginable energies which would be produced; tangible matter and “anti-matter” would disappear—where?

The theory of an "anti-world" sounds, and is, so fantastically difficult a problem, that it took years before a group of eminent physicists, under the leadership of Dr. Leon Ledermann, decided to publish a report which they knew would excite world-wide attention. In it they claim to have succeeded in discovering the so-called "anti-world" which must exist "somewhere in the realm of our life-experience, although we cannot see or feel it". In that world, time runs backwards. If the world in which we live collided with the "anti-world" it would mean the end of everything now in existence. In later publications Dr. Ledermann added: "We must admit to the audacious supposition that this anti-world is peopled with intelligent beings that speculate about our existence in a world positive to us, in the same way as we do about creatures of the anti-world."

Who would not, on reading this, conceive the idea that perhaps the souls of the dead live in this "anti-world", but are, under normal conditions, unable to make contact with us? The simplest interpretation, according to these physicists, would be to think of "anti-matter", including man who must of necessity also have his reflection in that other world, as if, for instance, a human being had a counterpart existing in a "beyond" the existence of which could be proved but which, nevertheless, remained invisible to us unless we possessed the appropriate "mirror" to show us the "anti-world". Consequently, it might be possible to imagine the existence of this "anti-world" as the cause of our decay, our dying—as an inevitable fate—because our world and the "anti-world" are striving, so to speak, to achieve a balance or harmonisation.

Dr. Ledermann was the first to pose the question of "where" this anti-world may exist. It must be amongst us, next to us, in immediate proximity to us; but it could also cut right through our world of physical matter. On the other hand, it could just as well be located at an astronomical distance from our earth. Astronomical distance, however, would be self-contradictory to "anti-matter", as in terms of distance time runs backwards and consequently the sequence of events which, in our world, is tied to a progressive time-element, would cancel itself out.