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Nucleosynthesis at magnetorotational instabilities in supernova explosion

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Synthesis of chemical elements is investigated at conditions of magnetorotational instabilities in astrophysical plasma at supernova explosion. Respective strong magnetic fields are considered as noticeable pressure component for explosion mechanism. At such fields, magnetic modification of nuclear structure is shown to shift the nuclear magic numbers in the iron region towards smaller mass numbers approaching titanium. Consequently, maximum of nucleosynthesis products is modified with an enhancement of titanium yield. The results are corroborated with an excess of 44Ti revealed from the INTEGRAL mission data for yang supernova remnants at a field strength of teratesla. Such magnetic impact on nucleosynthesis in galactic chemical evolution is discussed

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