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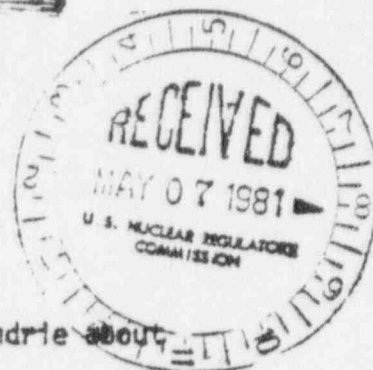
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~~SECRET (S) (C) (U)~~

MAY 4 1981

Mr. M. P. Hehl
892 E. Nichols Place
Littleton, Colorado 80122

Dear Mr. Hehl:



This is in reply to your letter of April 14, 1981, to Chairman Hendrie about antimatter.

We do not know of any prospective use of antimatter to prevent a meltdown in a nuclear reactor or as a countermeasure against nuclear weapons. The interaction of antimatter with normal matter would in itself release energy. For example, when electrons and positrons annihilate each other, energy is produced in the form of penetrating gamma rays. Such interactions also mean that antimatter cannot be stored or transmitted except by moving in electromagnetic fields in a vacuum.

Your interest in this subject is appreciated.

Sincerely,

Original Signed by

Gary G. Zech, Chief
Technical Support Branch
Planning & Program Analysis Staff
Office of Nuclear Reactor Regulation

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OFFICE	TSB:PPAS	TSB:C:PPAS				
NAME	*PFine/LLM	GGZech				
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OFFICE	-TSB:PPAS	TSB:C:PPAS							
NAME	PFine/LLM	GGZech							
DATE	4/ 28/81	4/ /81							

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		COMPL. DEADLINE		5/5/61		DATE OF DOCUMENT	
		ACKNOWLEDGMENT				4/14/61	
		INTERIM REPLY		<input checked="" type="checkbox"/>		PREPARE FOR SIGNATURE OF:	
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		FILE LOCATION				<input type="checkbox"/> EXECUTIVE DIRECTOR	
						OTHER: Denton	
DESCRIPTION <input checked="" type="checkbox"/> LETTER <input type="checkbox"/> MEMO <input type="checkbox"/> REPORT <input type="checkbox"/> OTHER				SPECIAL INSTRUCTIONS OR REMARKS			
Requests comment on newspaper article on nuclear power and antinuclear							
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☐ Public Affairs _____ ☐ Secretary _____
☐ _____ ☐ Inspector & Auditor _____
☐ _____ ☐ Policy Evaluation _____

Incoming: M.P. Hehl

From: Littleton, Colorado

To: Chairman Hendrie Date 4/14/81

Subject: Requests comment on theory about nuclear power and antimatter.

☐ Prepare reply for signature of:☐ Chairman☐ Commissioner _____☐ EDO, GC, CL, SOL, PA, SECY, IA, PE☐ Signature block omitted☐ _____☐ Return original of incoming with response

XXX For direct reply*

Suspense: April 30

☐ For appropriate action☐ For information

Remarks: _____

For the Commission: *C. Hendrie*

*Send three (3) copies of reply to Secy Correspondence and Records Branch

April 14, 1981

MR. JOSEPH HENDRIE
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Hendrie:

The attached article recently appeared in the Denver Post and has put into words a theory which I have pondered for years...even prior to the accident at Three Mile Island.

If fission, as takes places in a melt down or in the detonation of nuclear weapons, can be over-simplified and expressed as the rapid multiplication of matter by self-division, would not a safety (defense) feature, beneficial to all mankind, exist if antimatter could be harnessed and stored? When necessary, could not antimatter be then used to bombard matter thereby neutralizing the initial reaction? The premise on which I base my hypothesis, is that every action has an opposite reaction.

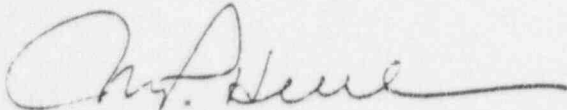
Does the possibility exist that the scientists at the European Nuclear Research Center in Geneva, Switzerland have not only developed something which may open new vistas to the understanding of the universe but perhaps save the universe from accidental or intentional annihilation?

Recognize, I am not a physicist, but rather a businessman who is very much aware of the need for the development of safe nuclear energy. If our future uses of primary nuclear energy is to approach thirty-five percent within the next few years, this "historical first" might be well worth watching.

It is not my nature to sit down and write on topics of which I admittedly know so little but I honestly thought this article might be of interest to you.

Your comments would be appreciated.

Sincerely,



M. P. HEHL
892 E. Nichols Place
Littleton, Colorado 80122

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DENVER POST 4-11-81

Antimatter Collision Test Hailed as a Historic First

GENEVA, Switzerland (UPI) — A team of nuclear scientists announced Friday the experimental collision of matter with antimatter in a "historic first" that could open new vistas to the understanding of the universe.

Antimatter is a form of matter in which the electrical charge of every particle is the reverse of that usually found.

Scientists at the European Nuclear Research Center said the experiment involved the collision of a hydrogen proton with an anti-proton. Protons are the elementary particles found in the nucleus of all atoms. Anti-protons are their antimatter equivalents with identical mass but opposite properties.

Scientists said that although the antimatter experiments still are in the

laboratory stage, they could have beneficial spinoffs. Similar experiments have produced isotopes — forms of an element with different atomic weights — used in the treatment of many illnesses, especially eye diseases.

The researchers said the collisions produced "unusual events" which now are being analyzed.

"For the first time in the history of physics, antimatter in the form of an anti-proton has been stored and made to collide with ordinary matter," the center announced.

The center said collisions between protons and anti-protons could now be used "to investigate the basic structure of matter and of the universe."

"Now it can be said that anti-protons are handled on a technical scale and not just at science-fiction level," the statement said.

Gene - Did they ever hear...
talking ?? Blotter