

MAR 1 1990

Professor Johann Rafelski
Department of Physics
The University of Arizona
Tucson, AZ 85721

Dear Jan:

Thank you for your letter of February 12, 1990.

I fully agree with you as to the need to pursue theoretical research in order to elucidate the various nuclear phenomena reported by some laboratories under the general heading of cold fusion. Let me also state that we at the Division of Advanced Energy Projects consider you as a leading force in the field of cold fusion theory and would be delighted to see the University of Arizona play a major role in that field, assuming that the experimental results pertaining to cold fusion warrant such effort.

Which brings me to the main problem in planning support for your group. Should there be within the next year a surge of confirmatory cold fusion results, with an accompanying tidal wave of interest in the scientific community, the amount of \$400K/year you mention would not appear unreasonable to request. Should on the other hand the present trend continue of positive results trickling in, only to be challenged by equally credible negative results, it would be hard to justify a significant theoretical effort centered on a phenomenon of dubious authenticity. Thus, a discussion of specific levels of effort that would be appropriate for your project would have to be delayed as much as possible, so as to take into account the most current status of cold fusion experiments.

Having said that, let me share with you a serious concern. If the University of Arizona wants to aspire to become a world-class center for cold fusion theory (again, assuming that cold fusion exists!) it must demonstrate an appropriate level of corporate commitment. Thus, any future proposal from the University would have to contain specific assurances that proper working environment will be provided to members of your group. Personal observations made at the time of my recent visit led me to conclude that this is presently not the case.

Best regards.

Sincerely,

Original signed by:
Ryszard Gajewski

Ryszard Gajewski, Director
Division of Advanced Energy Projects
Office of Basic Energy Sciences, ER-16

ER-16:RGajewski:mfr:3-5995:3-1-90:c:\Gajewski\JRafelski:wp

ER-16

R.G.
Gajewski
3/1/90

cold fusion

DISCLAIMER

Portions of this document may be illegible in electronic image products. Images are produced from the best available original document.

THE UNIVERSITY OF
ARIZONA
TUCSON ARIZONA

Department of Physics
College of Arts & Sciences
University of Science

1118 E. 4th Street
Tucson, Arizona 85721
(602) 621-6820

February 12, 1990

Dr. Ryszard Gajewski, Director
Advanced Energy Projects
US-Department of Energy
GTN ER-16
Washington DC 20545

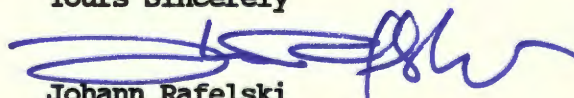
Dear Ryszard:

Over the course of the past year the primarily "hobby" program of theoretical cold fusion research has been growing within my theoretical muon catalyzed fusion group to the degree that I must today consider seriously the options arising to continue with this research. The opinions about cold fusion are very divided in the scientific community, ranging from outspoken warnings from my peers not to ruin my scientific career by further involvement, to clear encouragements. Without doubt, there will be always a flair of caution surrounding any such theoretical research program, mainly due to the inability of even the semi-informed scientific public to differentiate our effort from the Pons-Fleishmann's circus.

However, from the frequent interactions we have had I have the perception that you concur with me that it is absolutely necessary to seek explanations of the nuclear phenomena observed in various laboratories, in particular here the random fusion neutrons, the neutron bursts, the tritium-like beta-spectrum. The sporadic appearance of these phenomena may be due to either an uncontrolled ingredient ("catalyst") or due to resonance matching in the solid of certain nuclear properties and the resulting coupling of nuclear and atomic properties akin to the Mössbauer effect. Once these characteristic nuclear observables have been properly clarified, it may well be that there is space for the understanding of any heat imbalance reported since 1926 by several groups.

It is hard for me to see clearly the effort needed to succeed in this project; in general we both know that money can not buy scientific insight, but on the other hand this very strange subject requires several different lines of approach in order to hope for real progress. Therefore my intention would be to keep my group at the level of activity already reached and turn all its attention towards the understanding of cold fusion. This would imply an annual budget of about \$400,000 . The length of the project will of course depend on the actual results, but in order to be able to employ serious collaborators, at least an 18 month period, and better two years should be envisaged. I would appreciate it if you could comment to me at your earliest opportunity about the prospects for a proposal along these lines.

Yours Sincerely



Johann Rafelski
Professor of Physics