

On the 27th of October 2021

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Topical white paper

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Cover Letter

Following to your announcement entitled :

Call to the Biological and Physical Sciences in Space Community for White Papers
THE NATIONAL ACADEMIES OF SCIENCES-ENGINEERING-MEDICINE

I am honoured to write you in view to publish my white paper entitled :

HOW TO LIMIT THE PROTONS IMPACTS ON THE SHUTTLES DEVICES?

In waiting for a favourable response want, to accept my best greetings.

Signed : The author :

Miss Nouara Tinakiche

HOW TO LIMIT THE PROTONS IMPACTS ON THE SHUTTLES DEVICES?

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Abstract: In this work I try to resolve the problem of ISS due to the protons coming from space and solar wind.

THE WHITE PAPER/

In this work I try to resolve the problem of ISS due to the protons coming from space and solar wind . To reach this goal we can suggest to extract the supplemental noise due to the protons from the measurements results obtained , i propose to try with a well known physical value and measure its value under the effect of the protons and we do the difference between this measure and the well known value and evaluate the rate or the spectrum of

error due to the effect of protons. It is clear that knowing this rate will allow us to get the suitable measures on ISS by extracting these errors from the results to get the correct results.

BUT THE PROBLEM IS IN THE WELL KNOWN PHYSICAL VALUE

HOW TO CHOOSE IT AND IS IT POSSIBLE TO FIND IT?

I HAVE NOT THE RESPONSE TO THIS QUESTION TILL NOW

I LET THIS TO OTHER INVESTIGATOR TO FIND THE RESPONSE FOR THIS QUESTION BUT I CAN SUGGEST THE FOLLOWING CONSTANTS AS

THE FINE STRUCTURE CONSTANT $\alpha = \frac{1}{136}$

THE CONSTANT OF STEPHAN-BOLTZMANN $\sigma = 5,670\ 400.10^{-8}\ \text{J s}^{-1}\ \text{m}^{-2}$

THE VELOCITY OF LIGHT $C = 3 \times 10^8\ \text{m/s}$
Or the PLANCK CONSTANT

I PROPOSE IN THIS WORK TO USE THE CRISTAL PROPERTIES TO DEFLECT THE PROTONS WHICH COME FROM THE SPACE AND THE SOLAR AND INTERSTELLAR WIND. THE CRISTALS CAN DEFLECT ELECTRONS, NEUTRONS

AND OTHER IONS AS PROTONS THEREFORE IT IS SUFFICIENT TO CHOSE A CRISTAL WITH AN APPROPRIATE ATOMIC DISTANCE. THIS APPROPRIATE ATOMIC DISTANCE WILL BE CHOSEN BY COMPARING ITS VALUE TO THE DIMENSION OF THE PROTON BECAUSE THE PROTON MUST BE DEFLECTED, WE DON'T WANT IT TO UNDERGO OTHER POSSIBLE INTERACTIONS AS NUCLEAR INTERACTION OR TO BE ATTRACTED BY THE ELECTRONS OF THE CRISTAL ATOMS. I THINK THAT THE CRISTAL ATOMS MUST CONTAIN MORE PROTONS THAN NEUTRONS TO PUSH THE PROTONS AWAY UNDER THE EFFECT OF THE REPULSIVE COULOMBIAN FORCE.

On the station ISS we have so to try to reduce the protons effect by installing on the body of the station such crystals to deflect these protons which could strongly induce errors in the measurements and the physical lows verification on ISS.

THE STATION ISS COULD RECEIVE ATTACKS FROM NEUTRONS ALSO WHICH COULD CREATE DANGEROUS VIBRATIONS ON THE WALLS OF ISS. THESE NEUTRONS COULD BE DEFLECTED BY APPROPRIATE CRISTALS AND AMORPH MATERIALS-

