# Towards the automatic arrangement of music via quantum annealing

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Submitted: 22nd December 2024

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## I. INTRODUCTION

## II. THEORY

$$f(E) = \begin{cases} 1 & E \leq E_F \\ 0 & E > E_F \end{cases} \tag{1}$$

$$E_F = \frac{k_F^2}{2m_e} \,. \tag{2}$$

## III. DEGENERATE CASE

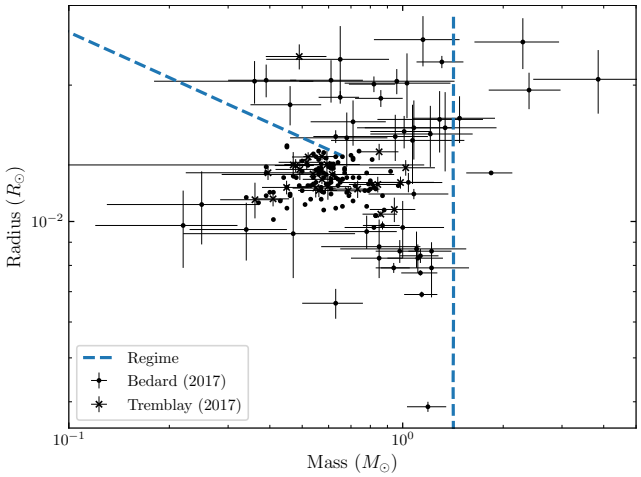


**Figure 1**

## IV. CORRECTIONS

**Table I:** Summary of frational changes to best-fit parameters due to electron energy density and electrostatic corrections.

| Correction | $\lvert\Delta A\rvert/A$ | $\lvert\Delta B\rvert/B$ | $\lvert\Delta q\rvert/q$ |
|---|---|---|---|
| $\varepsilon_{\text{elec}}$ | 0.026 | 0.0031 | 0.0442 |
| $p_c$ | 0.009 | 0.0114 | 0.0005 |

## V. NON-DEGENERATE LIMIT

$$p = \frac{\hbar c}{12\pi^2}\left(\frac{3\pi^2}{m_n c^2 \eta}\right)^{4/3}\left[\frac{1+2d(S_e)^2+\frac{7}{15}d(S_e)^4}{(1+d(S_e)^2)^{4/3}}\right]\varepsilon^{4/3} \tag{3}$$

$$= \bar{K}(S_e)\varepsilon^{4/3} \,. \tag{4}$$

## VI. CONCLUSIONS

The study of white dwarfs is very much ongoing research, with new models arising with the advancement of computational power and new satellite observations that test these models. It is incredible that an investigation such as this, through the application of fundamental statistical physics and computer modelling, can attempt to understand the nature of stellar remnants that seem so unreachable.

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## SCIENTIFIC SUMMARY FOR A GENERAL AUDIENCE

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