1. Title: Asymptotic behavior of the Schrödinger equation

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3. Abstract: The time-independent Schrödinger equation for the motion of an electron of mass $\mu$ and charge $-e$ ($e > 0$) in the field of two fixed Coulomb centers with charges $Z_1e$ and $Z_2e$ takes the form:

$$
\left( -\frac{\hbar^2}{2\mu} \Delta - \frac{Z_1 e^2}{r_1} - \frac{Z_2 e^2}{r_2} \right) \Psi(\vec{r}) = E \Psi(\vec{r}),
$$

where $r_1$ and $r_2$ are the distances of the electron from the two centers, $\vec{r}$ is the position vector of the electron, and $E$ is the electronic energy. In this talk, we will present a qualitative analysis and asymptotic behavior of this equation under certain parametric conditions.