

# Images of Wave Function Solutions for the Electron and Positron generated by VectPotential 3D finite element modeling software

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These images are generated by VectPotential software [ref 1]:

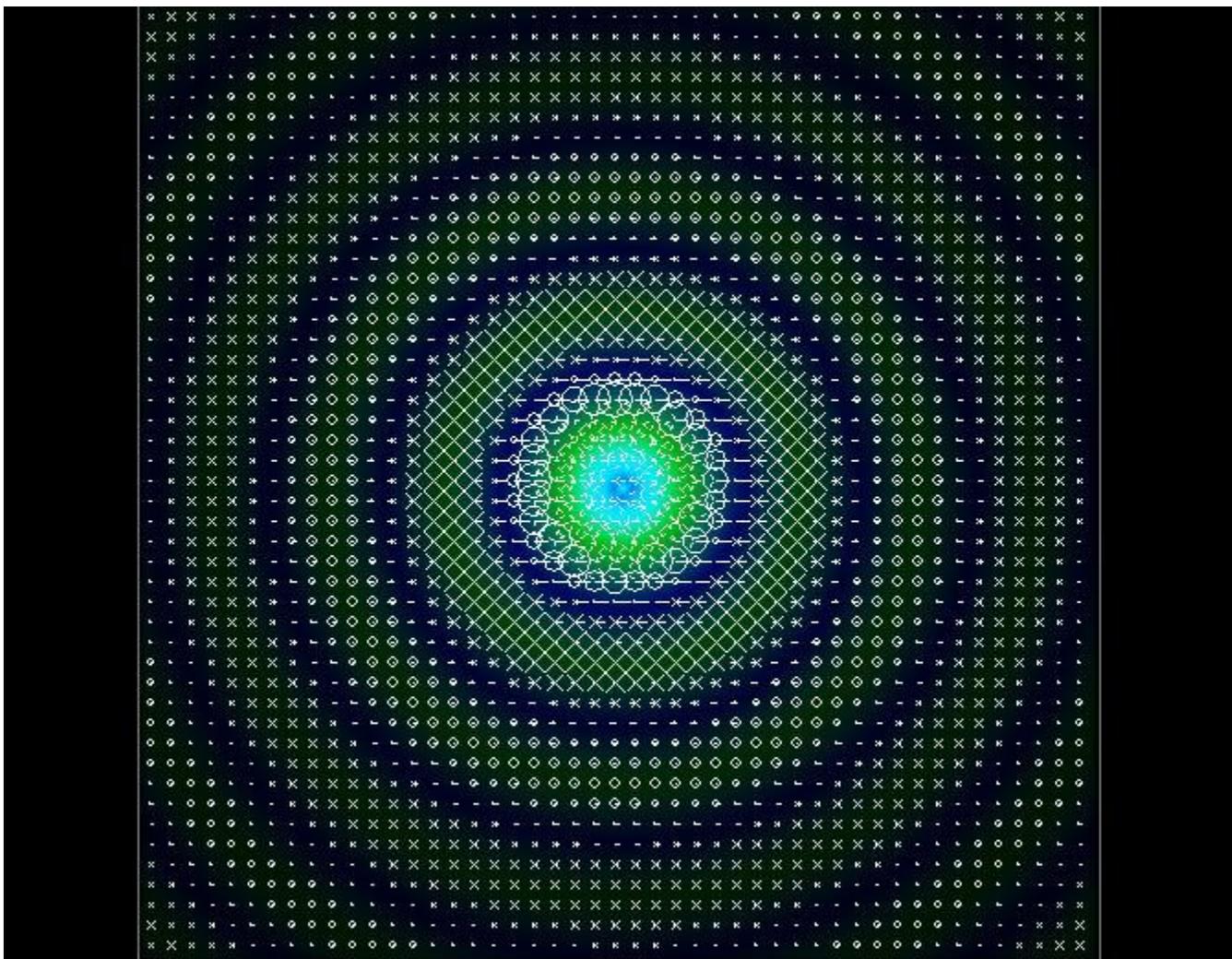


Fig 1. The Electron wave function from the side (spin axis is vertical).

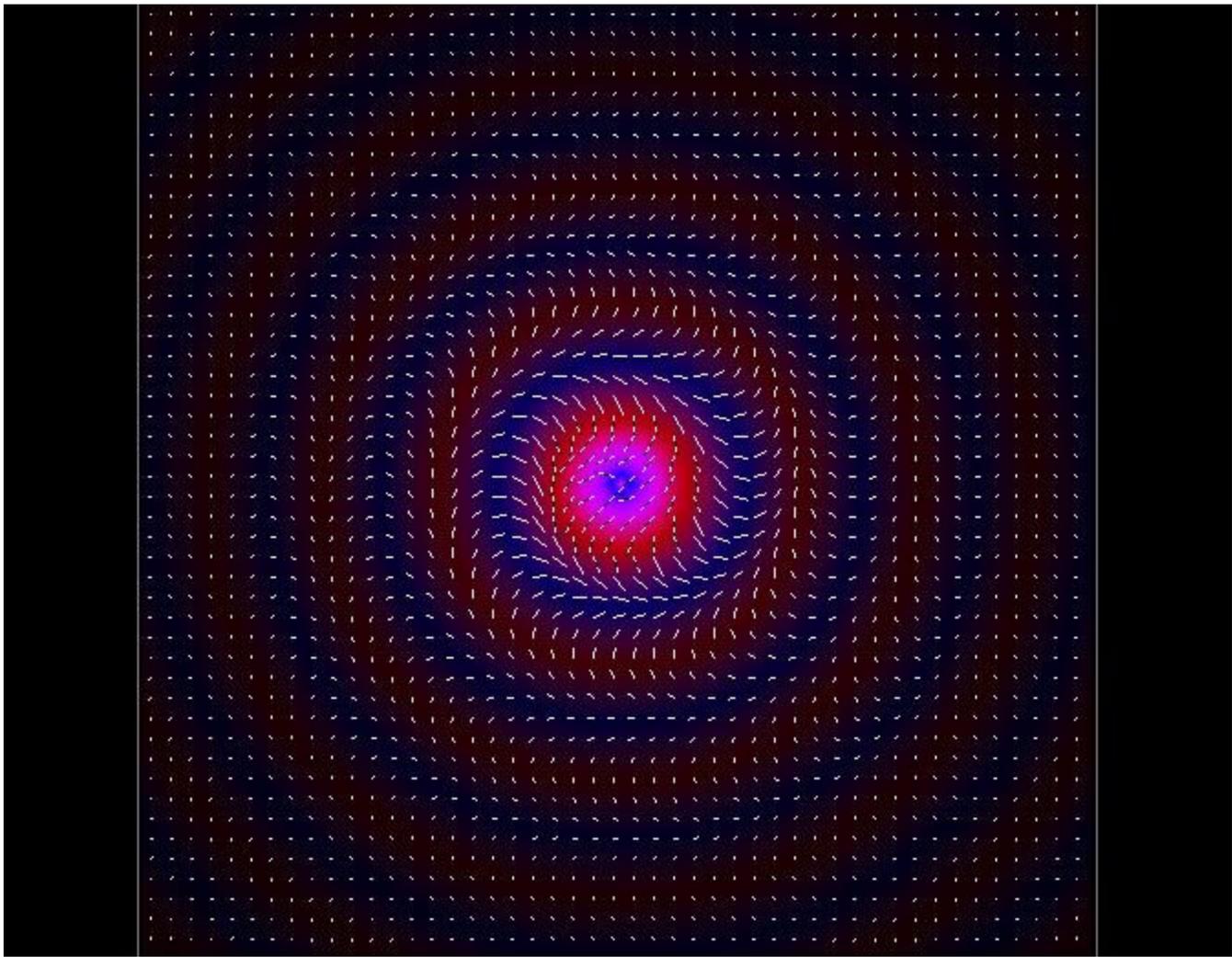


Fig 2. The Electron wave function from the top (down the spin axis).



Fig 3. The Electric Potential showing the double spiral of charge layers.

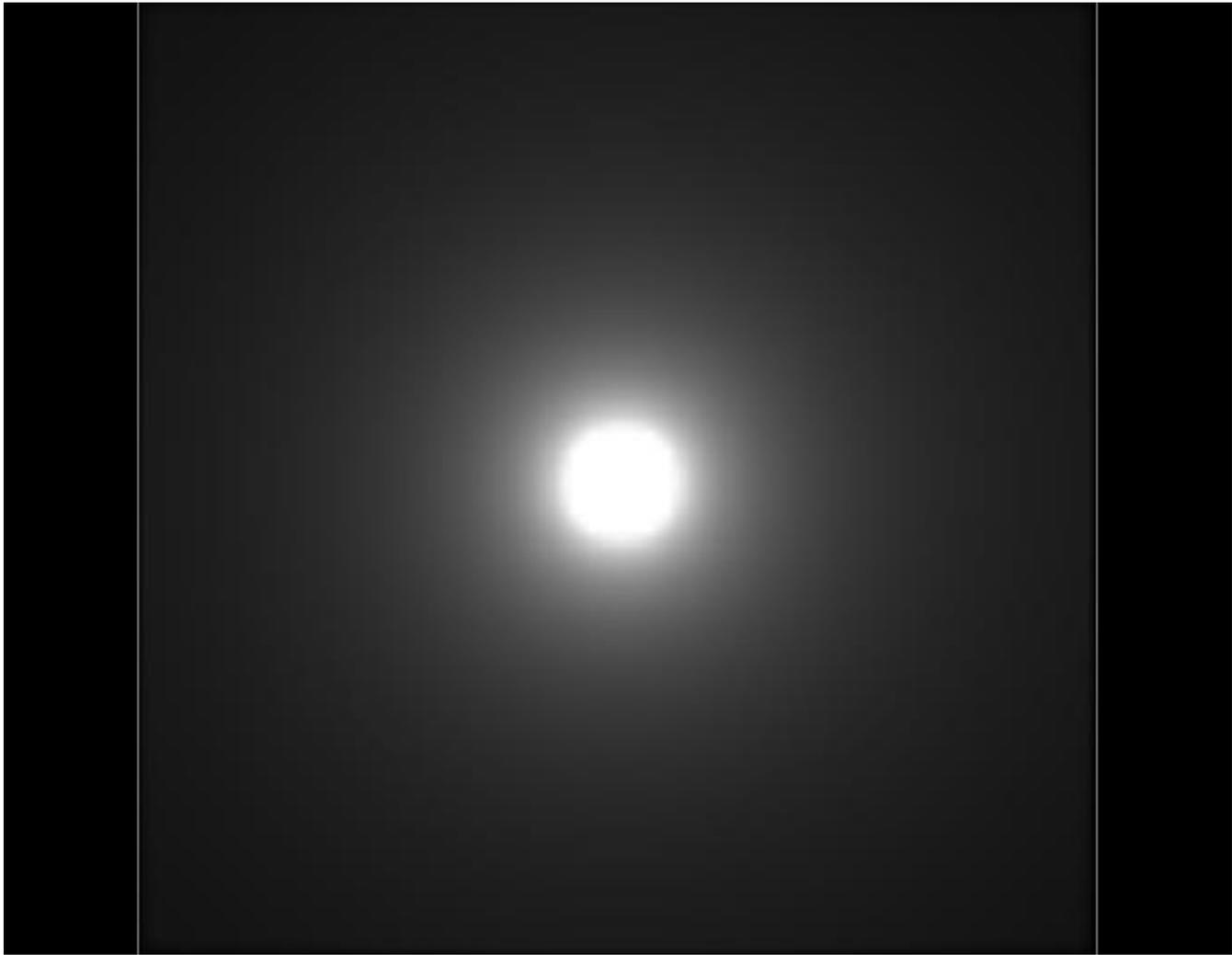


Fig 4. The Electric Potential at large distance scales where the individual charge layers are not visible (too small to see).

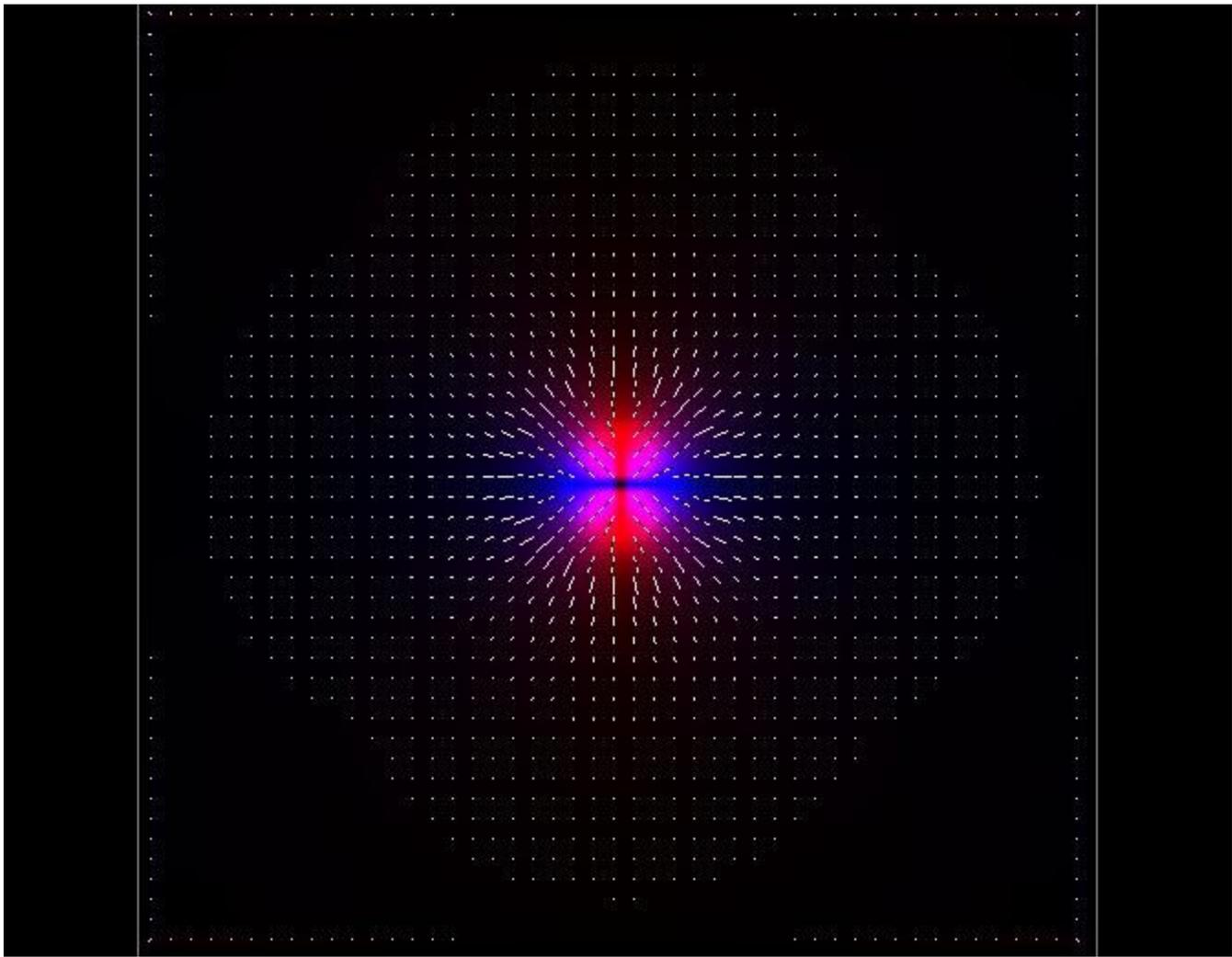


Fig 5. The Electric field at large distance scales where the appearance of the wave undulations are smoothed out.

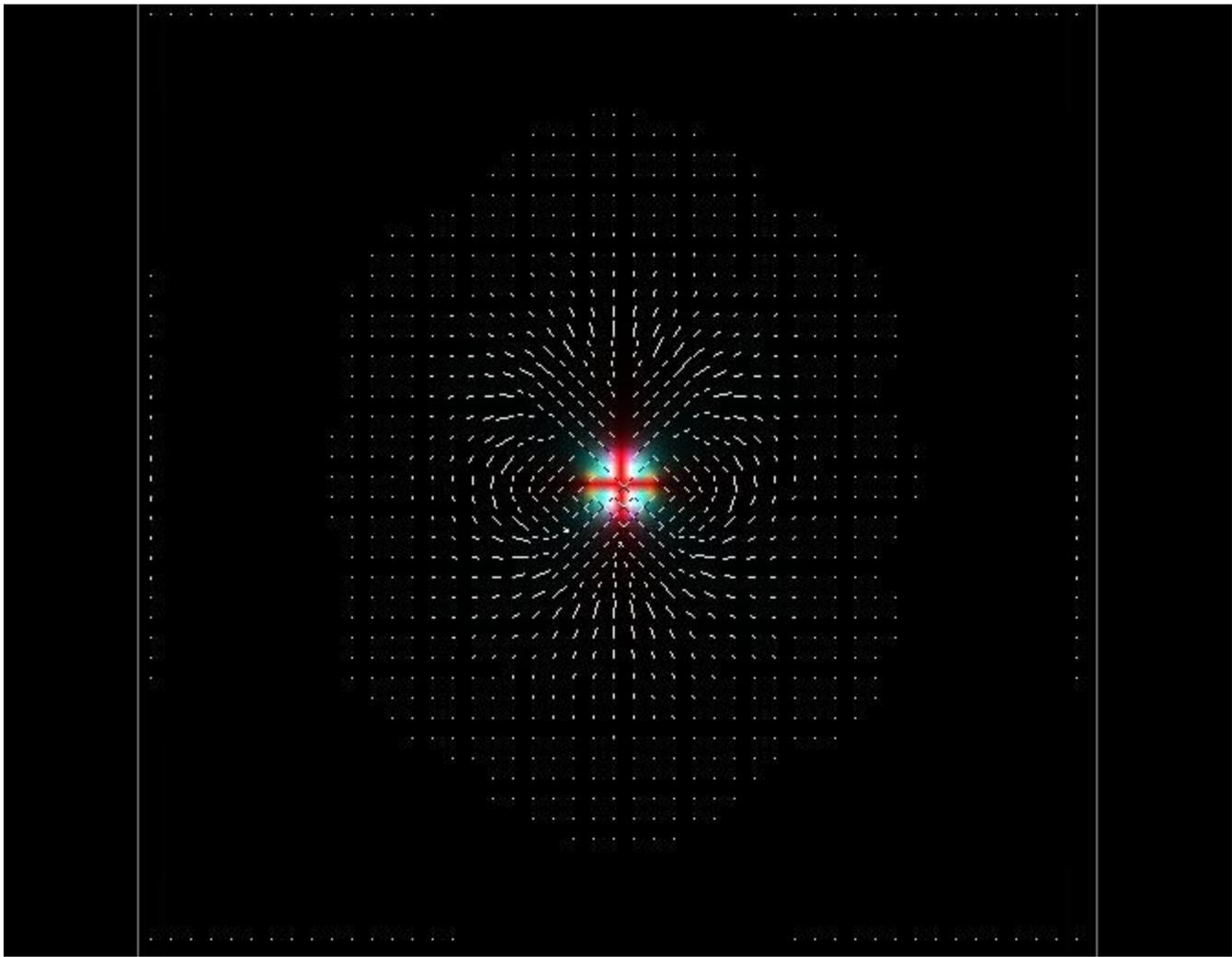


Fig 6. The Magnetic field from the side (spin axis is vertical) at large distance scales where the appearance of the wave undulations are smoothed out. Also vectors into/out of the page are not shown in order to reveal the nice magnetic field lines.

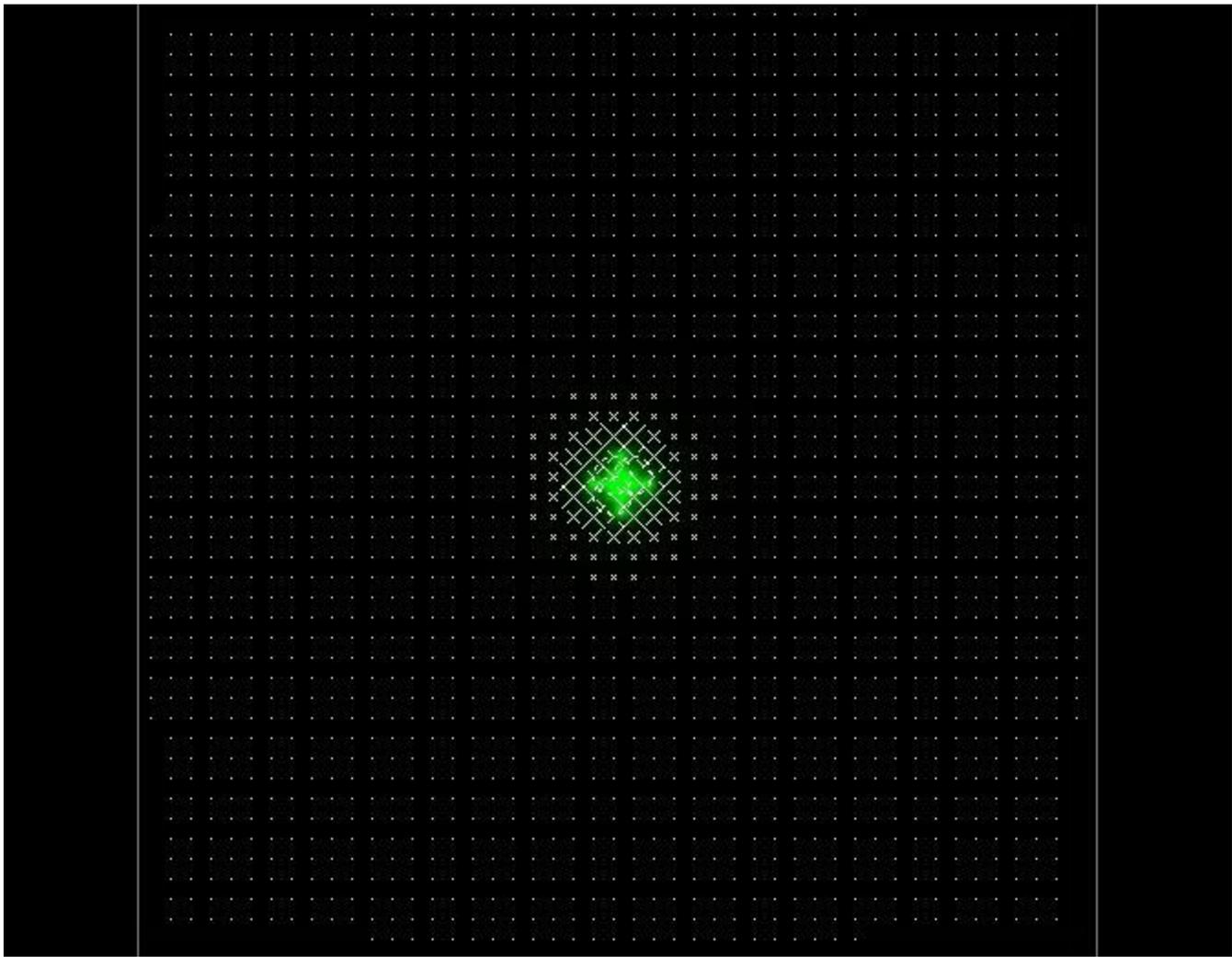


Fig 7. The Magnetic field at large distance scales from the top (looking down the spin axis) where the appearance of the wave undulations are smoothed out.

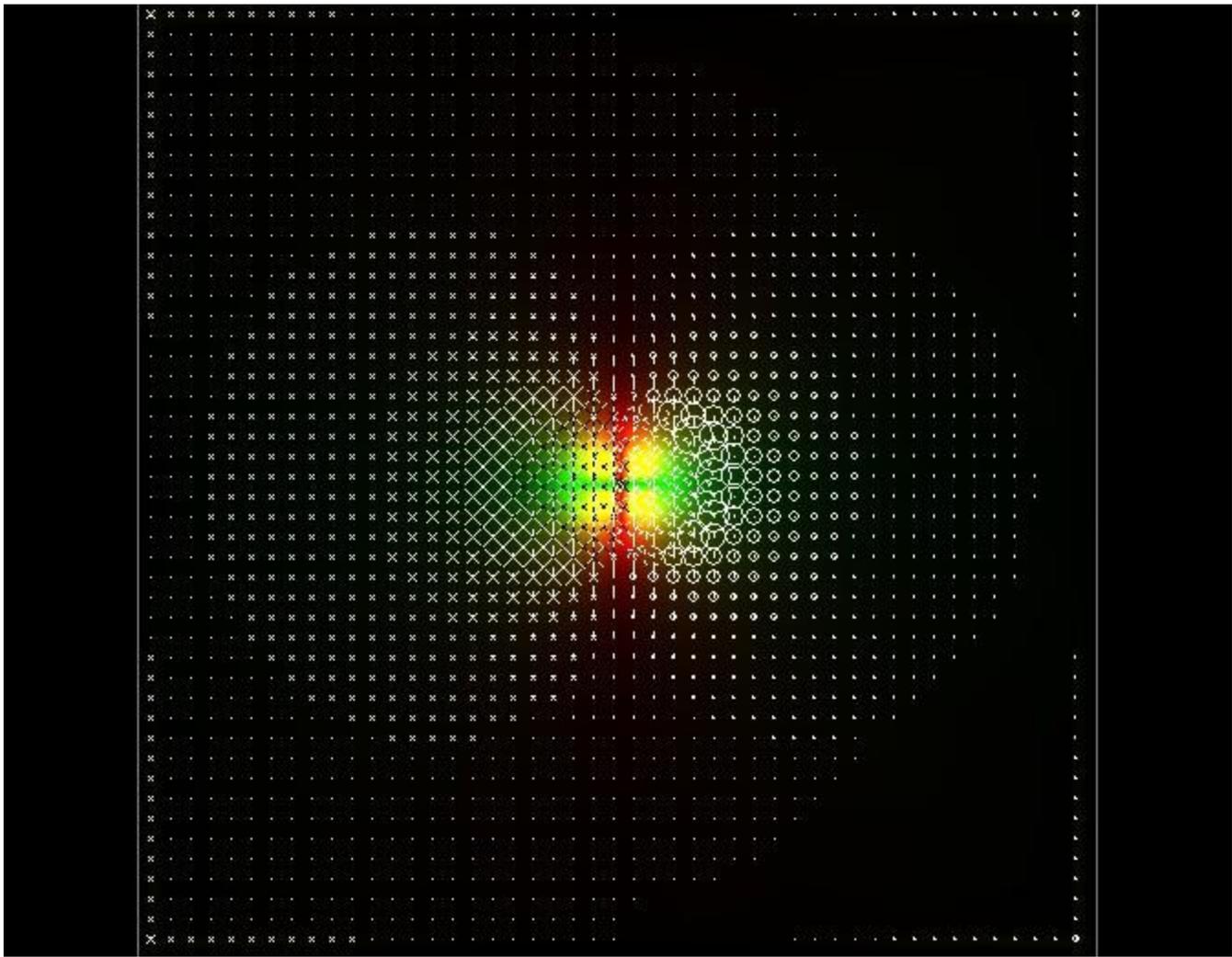


Fig 8. The Vector Potential field from the side (spin axis is vertical) at large distance scales from the top where the appearance of the wave undulations are smoothed out.

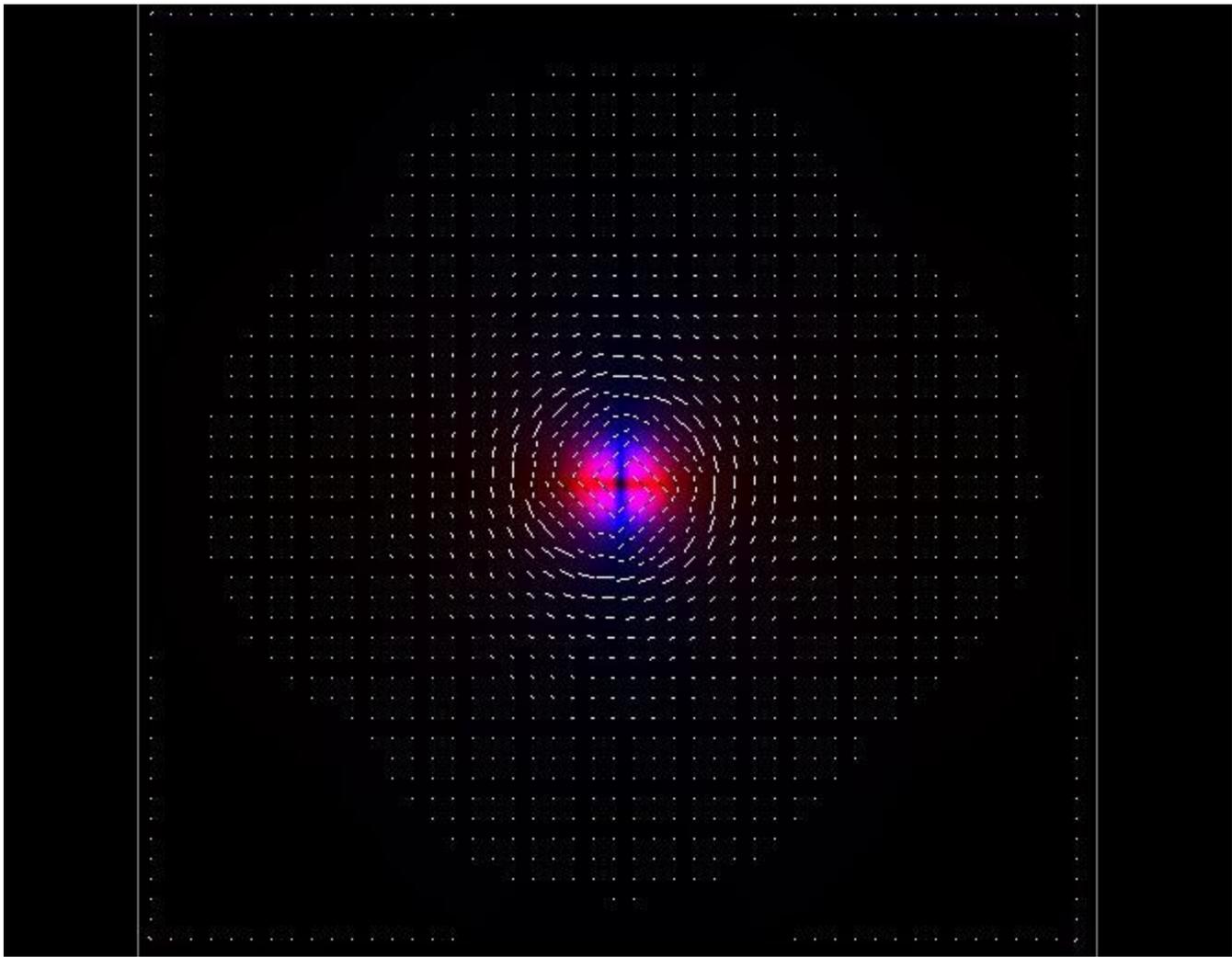


Fig 9. The Vector Potential field from the top (looking down the spin axis) at large distance scales from the top where the appearance of the wave undulations are smoothed out. Note how the energy of the particle flows around the spin axis in closed loops.

## References

1. Traill, D. VectPotential 3D finite element vector modeling software.

WSM Newsgroup. Files section. (2013)

[http://f1.grp.yahoofs.com/v1/THWwURic1tS-7eyJ3MbHXCefqZGFTM5inWrO4Ps1v1ukUiklyEIBcnzDci2LR3E1FEPrzy07ojsvtjb5nYxOBEFccD3SEQZAhjSp-\\_snlHKOzQEYOQ/VectPotential\\_Electron\\_WaveFunction\\_Solved.zip](http://f1.grp.yahoofs.com/v1/THWwURic1tS-7eyJ3MbHXCefqZGFTM5inWrO4Ps1v1ukUiklyEIBcnzDci2LR3E1FEPrzy07ojsvtjb5nYxOBEFccD3SEQZAhjSp-_snlHKOzQEYOQ/VectPotential_Electron_WaveFunction_Solved.zip)

(last accessed 6/6/2013)