presentation note catcher – explaining quantum phenomenon Wakelet: <http://k20.ou.edu/quantumwakelet>

| **Topic** | **Key idea or sketch** | **Notes** |
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| **Wave-Particle Duality**  Summarize why photons and electrons are considered to exhibit properties of both waves and particles and include specific examples. |  |  |
| **De Broglie Wavelength**  If all objects exhibit wavelike properties, why don’t we observe the wave properties of macroscopic objects? |  |  |
| **Heisenberg Uncertainty Principle**  Explain how this principle emphasizes that photons and electrons do not fit into the wave or particle box. |  |  |
| **Fourier Transformation**  Describe how the Fourier Transformation explains why there fundamentally will be uncertainty rather than precise measurements of both position and momentum at the same time. |  |  |