

Radioactivity measurement of the deciduous teeth



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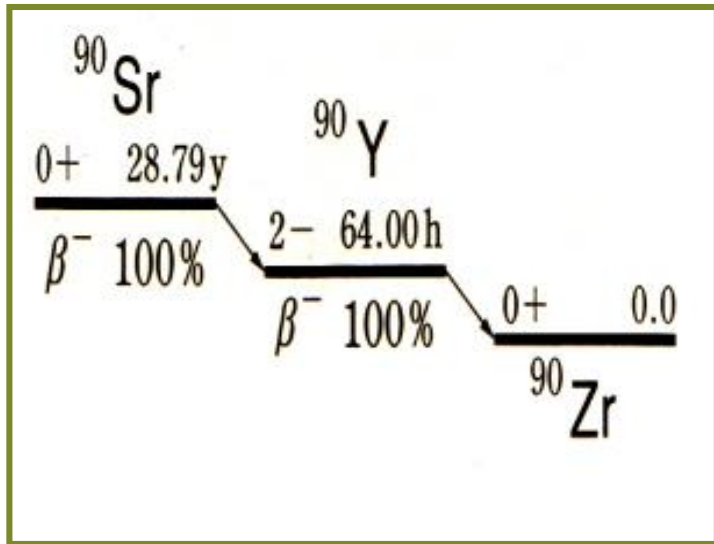
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Fukushima nuclear accident:

emitted radioactive material (^{134}Cs , ^{137}Cs , ^{90}Sr etc.)



Sr

Ca(

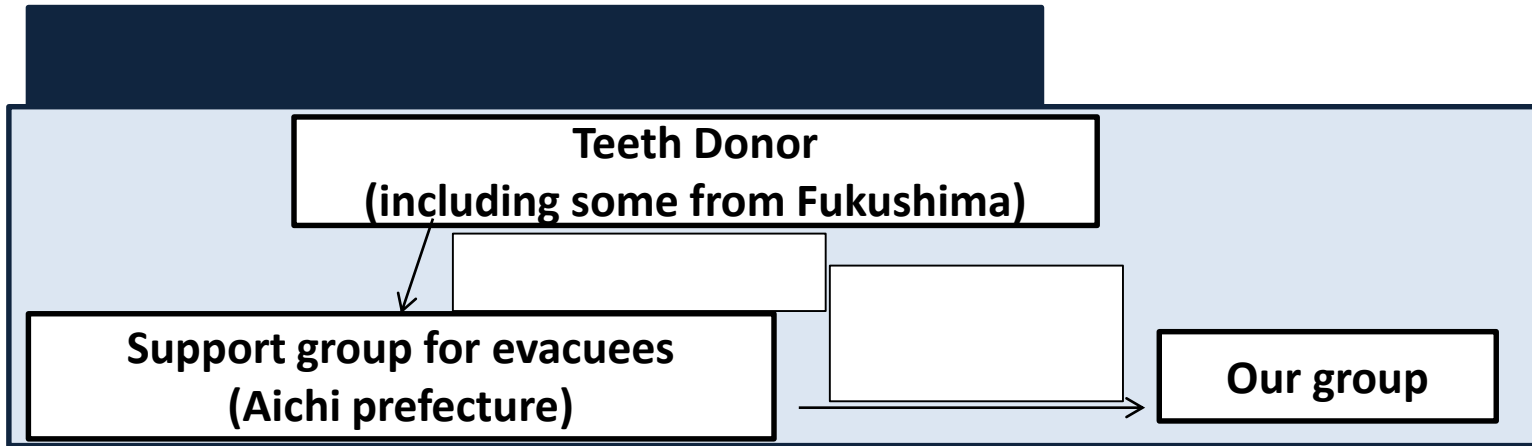
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Chemical similarity

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Radioactivity measurement of teeth

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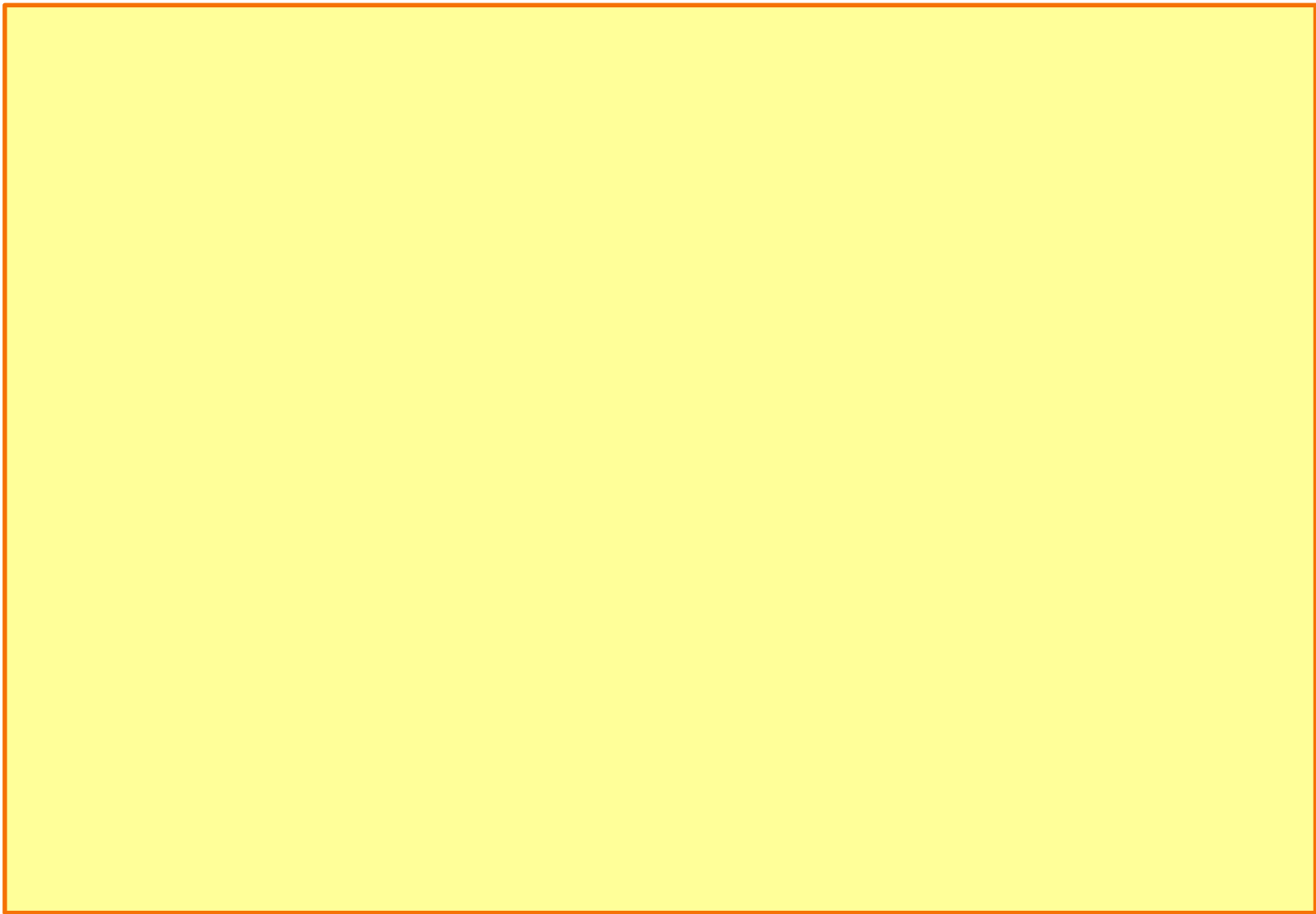


(1) Germanium semiconductor detector

γ



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Shielding of natural radiation: Reduce the background

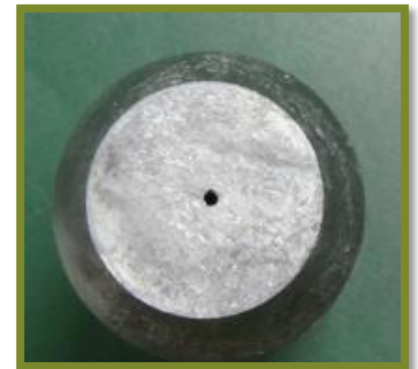
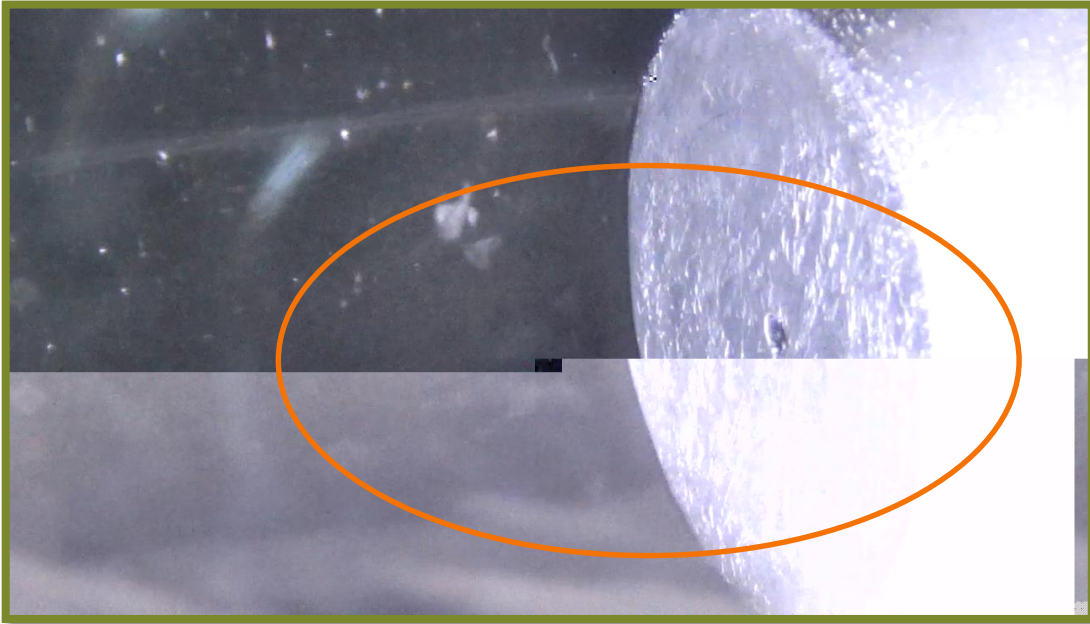
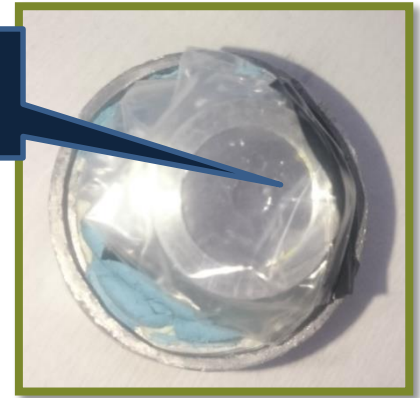


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Background measurement:

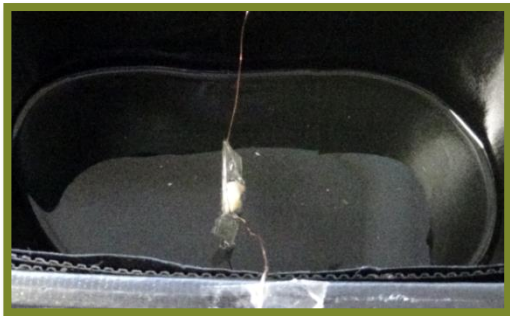
- Measure the frequency of random incoming β rays in the 50cm³ area for 1 hour.
- 2.1mBq/cm³ (1 beta ray/ 8 min.)

^{90}Sr source



mm





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Preliminary result

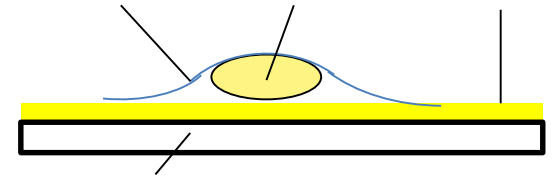
β

$0.84 \pm 0.05 \text{mBq/cm}^3$

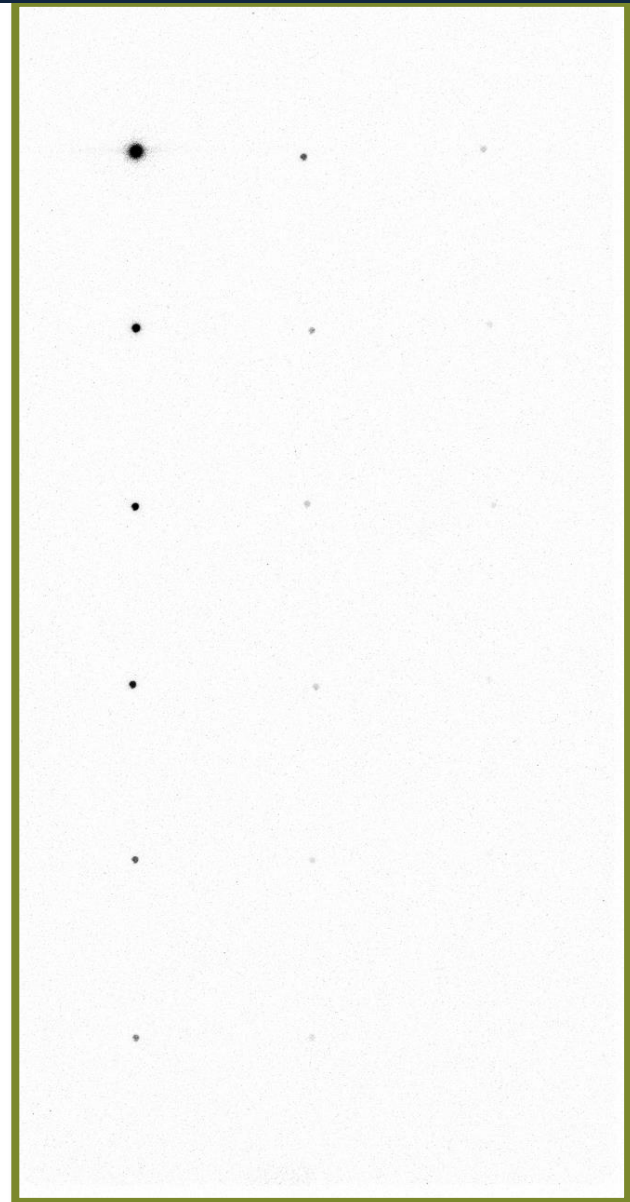
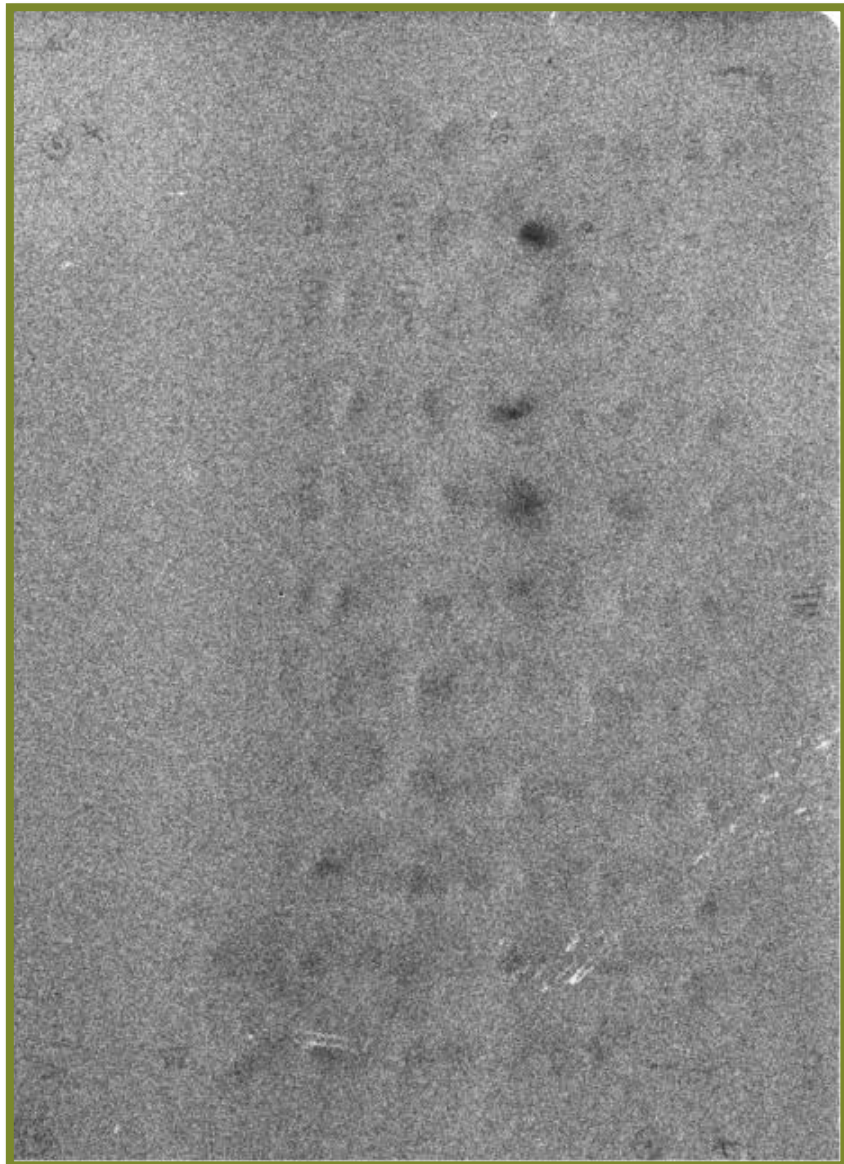
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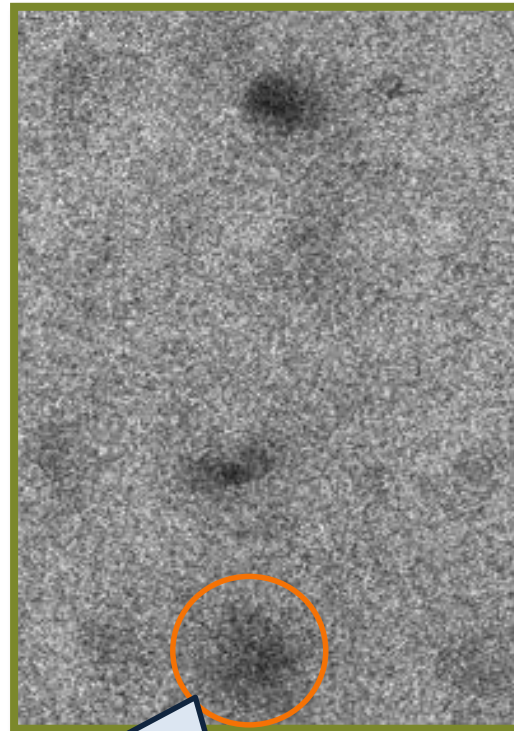
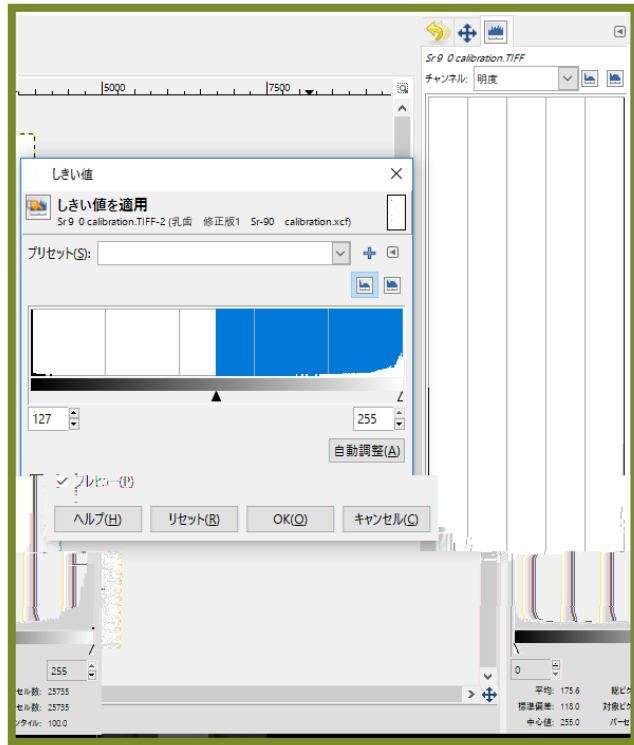
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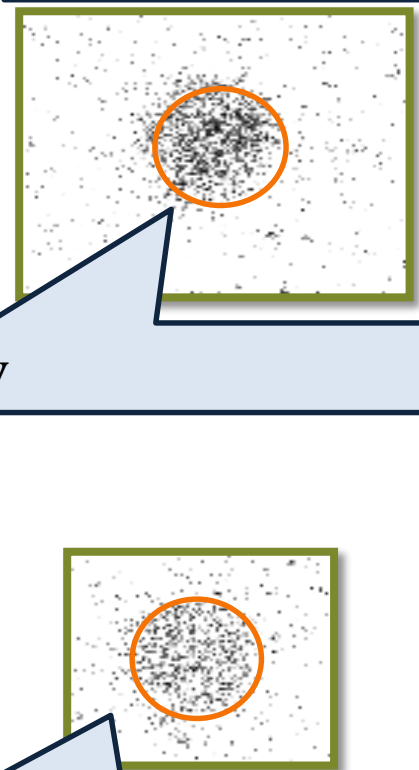
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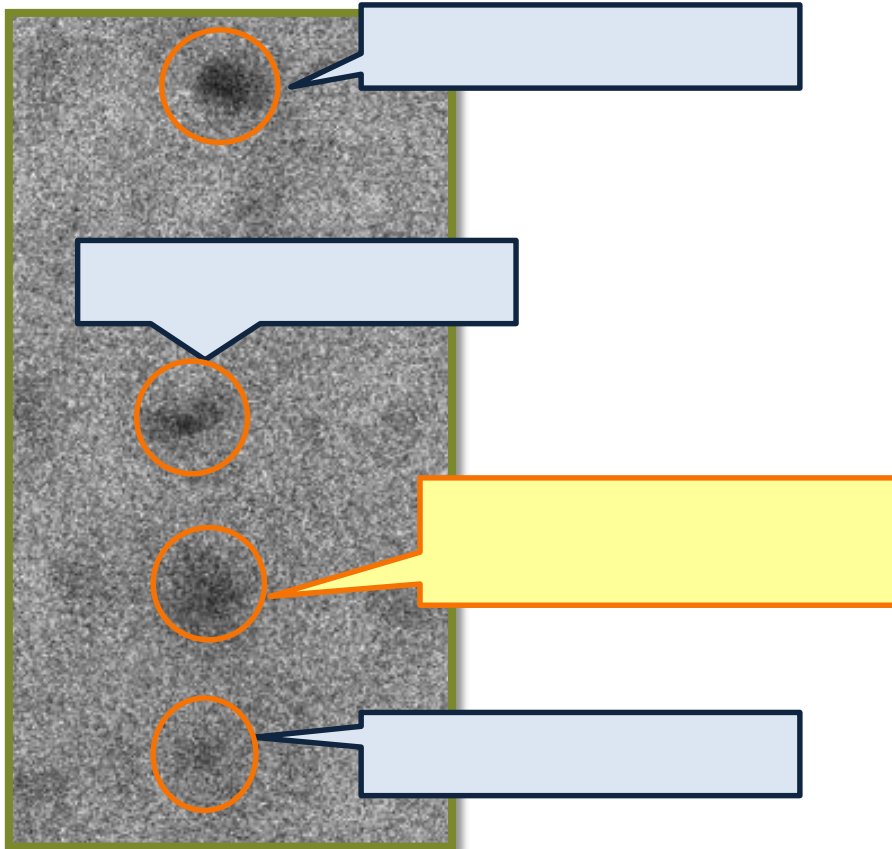
β ray



β ray

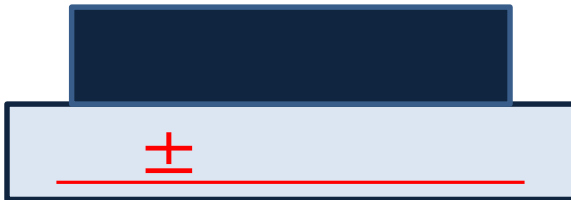
β

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Preliminary result:

⋮ ~ _____
⋮ ~ _____
~ ~ _____



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