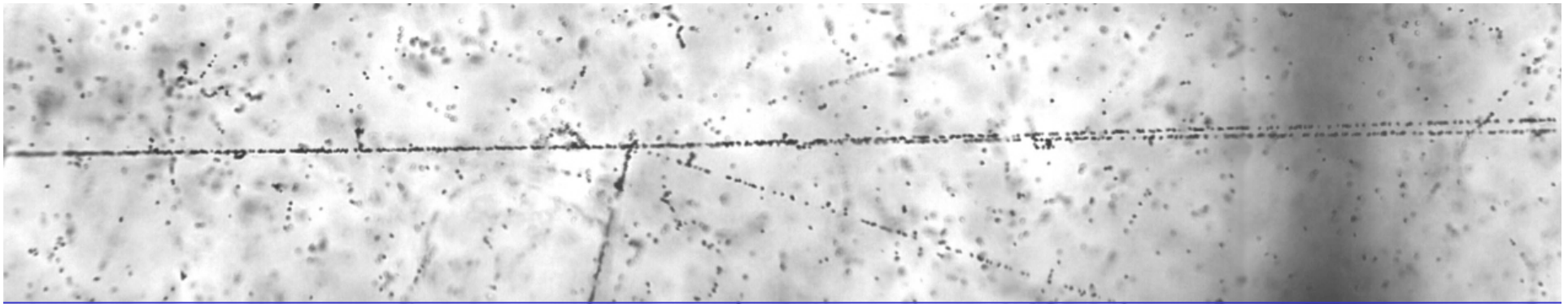
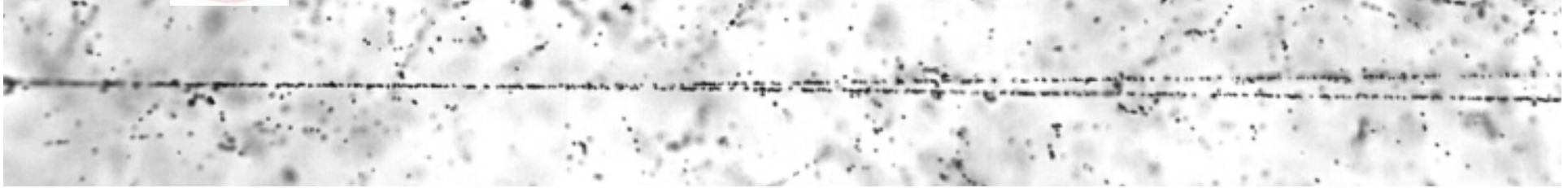


## *Relativistic ${}^7\text{Be}$ fragmentation into helium nuclei*



***${}^3\text{He}$  clustering.*** *Substitution of  $\alpha$  clusters in  ${}^8\text{Be}$ ,  ${}^9\text{Be}$ ,  ${}^9\text{B}$ ,  ${}^{10}\text{B}$ , and  ${}^{12}\text{C}$  by the  ${}^3\text{He}$  nuclei gives similar cluster states in  ${}^6\text{Be}$ ,  ${}^7\text{Be}$ ,  ${}^8\text{B}$ , and  ${}^9\text{C}$ .*

*${}^6\text{Be}$  nucleus is a  ${}^3\text{He}$ - ${}^3\text{He}$  resonance close in its properties to the  $\alpha$ - $\alpha$  system in  ${}^8\text{Be}$ . By analogy with  ${}^9\text{Be}$ , in  ${}^7\text{Be}$  there are possible  $n$ - ${}^6\text{Be}$  and  ${}^3\text{He}$ - $n$ - ${}^3\text{He}$  excitations in addition to  $\alpha$ - ${}^3\text{He}$  states. It is interesting to separate a  ${}^3\text{He}$ - ${}^3\text{He}$ - ${}^3\text{He}$  state in  ${}^9\text{C}$ . There are other interesting states like  $\alpha$ - ${}^3\text{He}$ - ${}^3\text{He}$  in  ${}^{10}\text{C}$ ,  $\alpha$ - $\alpha$ - ${}^3\text{He}$  in  ${}^{11}\text{C}$ .*