|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **таблица элементарных частиц** | | | | | | | | | | | | | | | |
| Частица | | | | Символ | Масса | | Время  жизни, *с* | Спин,  *ħ* | Заряды | | | Изоспин | | Стран  ность,  *S* | Преобладающая  схема распада |
| МэВ | *me* | *Q* | *L* | *B* | *I* | *IZ* |
| Фотон | | | | γ | 0 | 0 | ∞ | 1 | 0 | 0 | 0 | – | – | – | – |
| **Л**  **Е**  **П**  **Т**  **О**  **Н**  **Ы** | | | Нейтрино |  | 0 | 0 | ∞ | 1/2 | 0 | +1 | 0 | – | – | – | – |
| Электрон | *e*– *e*+ | 0,511 | 1 | ∞ | 1/2 | –1 | +1 | 0 | – | – | – | – |
| Мюон | μ– μ+ | 105,66 | 206,77 | 2,2·10–6 | 1/2 | –1 | +1 | 0 | – | – | – | μ–→ *e*– +  + |
| Тау-лептон | τ– τ+ | 1782 | 3490 | 3,5·10–12 | 1/2 | –1 | +1 | 0 | – | – | – | τ– → μ– +  + |
| **А**  **Д**  **Р**  **О**  **Н**  **Ы** | **М**  **Е**  **З**  **О**  **Н**  **Ы** | | Пи-мезоны | π– π+ | 139,6 | 273,2 | 2,55·10–18 | 0 | –1 | 0 | 0 | 1 | +1 | 0 | π–→ μ– + |
| π0 | 135,0 | 264,2 | 2·10–16 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | π0→ 2γ |
| Ка-мезоны |  | 493,8 | 966,3 | 1,23·10–8 | 0 | –1 | 0 | 0 | 1/2 | +1/2 | +1 | → μ– + |
|  | 498,0 | 974,5 | 10–10÷10–8 | 0 | 0 | 0 | 0 | 1/2 | –1/2 | +1 | → π–+π+, (2÷3)π0, π + *e +* |
| Эта-мезон | η | 548,8 | 1074 | 2,4·10–19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | η → 2γ, 3π0 |
| **Б**  **А**  **Р**  **И**  **О**  **Н**  **Ы** | н  у  к  л  о  н  ы | Протон |  | 938,26 | 1836,1 | ∞ | 1/2 | +1 | 0 | +1 | 1/2 | +1/2 | 0 | – |
| Нейтрон |  | 939,55 | 1838,6 | 103 | 1/2 | 0 | 0 | +1 | 1/2 | –1/2 | 0 | → *p* + *e*– + |
| **Г**  **И**  **П**  **Е**  **Р**  **О**  **Н**  **Ы** | Лямбда-гиперон |  | 1115,4 | 2182,8 | 2,6·10–10 | 1/2 | 0 | 0 | +1 | 0 | 0 | –1 | → *p* + π– |
| Сигма-гипероны |  | 1189,4 | 2328 | 0,8·10–10 | 1/2 | +1 | 0 | +1 | 1 | +1 | –1 | → *n +* π+ |
|  | 1179 | 2342 | 1,6·10–10 | 1/2 | –1 | 0 | +1 | 1 | –1 | –1 | → *n +* π– |
|  | 1192 | 2333 | <10–14 | 1/2 | 0 | 0 | +1 | 1 | 0 | –1 | → + γ |
| Кси-гипероны |  | 1321 | 2585 | 1,7·10–10 | 1/2 | –1 | 0 | +1 | 1/2 | –1/2 | –2 | → + π– |
|  | 1314 | 2572 | 3·10–10 | 1/2 | 0 | 0 | +1 | 1/2 | +1/2 | –2 | → + π0 |
| Омега-гиперон |  | 1675 | 3273 | ~10–10 | 3/2 | –1 | 0 | +1 | 0 | 0 | –3 | → + π0, + |

\*) Справа в колонке «Символ» указано условное обозначение соответствующей античастицы

 

