

CYRIC 930サイクロトロン加速実績のあるイオン種と最大ビーム電流

※下記以外のイオン種・エネルギーを検討されている場合はお問い合わせ下さい。

※最大ビーム電流は目安です。実際はビームスポットサイズ等実験条件に依存します。

| 元素 | 質量数 | 電荷 | エネルギー     | 最大ビーム電流      | イオン源   | 備考               |       |
|----|-----|----|-----------|--------------|--------|------------------|-------|
| H  | 1   | 1+ | 14 MeV    | 5.6 $\mu$ A  | pitECR |                  |       |
|    |     |    | 16 MeV    | 5.14 $\mu$ A |        |                  |       |
|    |     |    | 18 MeV    | 5.3 $\mu$ A  |        |                  |       |
|    |     |    | 20 MeV    | 3.91 $\mu$ A |        |                  |       |
|    |     |    | 21 MeV    | 5.2 $\mu$ A  |        |                  |       |
|    |     |    | 30 MeV    | 3.27 $\mu$ A |        |                  |       |
|    |     |    | 35 MeV    | 3.8 $\mu$ A  |        |                  |       |
|    |     |    | 40 MeV    | 900 nA       |        |                  |       |
|    |     |    | 45 MeV    | 1.7 $\mu$ A  |        |                  |       |
|    |     |    | 50 MeV    | 4 $\mu$ A    |        |                  |       |
|    |     |    | 60 MeV    | 945 nA       |        |                  |       |
|    |     |    | 65 MeV    | 2.15 $\mu$ A |        |                  |       |
|    |     |    | 70 MeV    | 3 $\mu$ A    |        |                  |       |
|    |     |    | 80 MeV    | ~100 nA      |        |                  |       |
|    |     | 1- | 50 MeV    | 30 $\mu$ A   |        | 現在利用不可<br>現在利用不可 |       |
| H  | 2   | 1+ | 10 MeV    | 1.25 $\mu$ A | pitECR |                  |       |
|    |     |    | 12 MeV    | 2.95 $\mu$ A |        |                  |       |
|    |     |    | 16 MeV    | 2.15 $\mu$ A |        |                  |       |
|    |     |    | 20 MeV    | 2.43 $\mu$ A |        |                  |       |
|    |     |    | 25 MeV    | 2.7 $\mu$ A  |        |                  |       |
|    |     |    | 40 MeV    | 4.25 $\mu$ A |        |                  |       |
| He | 4   | 2+ | 23 MeV    | 104 nA       | ECR1   |                  |       |
|    |     |    | 30 MeV    | 1.82 $\mu$ A |        |                  |       |
|    |     |    | 35 MeV    | 1.6 $\mu$ A  |        |                  |       |
|    |     |    | 40 MeV    | 3.54 $\mu$ A |        |                  |       |
|    |     |    | 45 MeV    | 2.5 $\mu$ A  |        |                  |       |
|    |     |    | 50 MeV    | 6.88 $\mu$ A |        |                  |       |
|    |     |    | 70 MeV    | 5.75 $\mu$ A |        |                  |       |
|    |     |    | 80 MeV    | 4.87 $\mu$ A |        |                  |       |
|    |     |    | 85 MeV    | 1.56 $\mu$ A |        |                  |       |
| C  | 12  | 3+ | 35 MeV    | 207 nA       | ECR1   | カクテルビーム2         |       |
|    |     | 3+ | 40 MeV    | 10.2 nA      |        |                  |       |
|    |     | 3+ | 50 MeV    | 1.05 $\mu$ A |        |                  |       |
|    |     | 3+ | 70 MeV    | 490 nA       |        |                  |       |
|    |     | 3+ | 79 MeV    | 47nA         |        |                  |       |
|    |     | 4+ | 70 MeV    | 360nA        |        |                  |       |
|    |     | 4+ | 90 MeV    | 960nA        |        |                  |       |
|    |     | 4+ | 110 MeV   | 2.3 $\mu$ A  |        |                  | ECR10 |
|    |     | 4+ | 120 MeV   | 642nA        |        |                  |       |
|    |     | 4+ | 130 MeV   | 960nA        |        |                  |       |
| C  | 13  | 3+ | 53 MeV    | 33nA         |        |                  |       |
|    |     | 3+ | 65 MeV    | 14nA         |        |                  |       |
|    |     | 3+ | 75 MeV    | 44nA         |        |                  |       |
|    |     | 4+ | 129.2 MeV | 1.5 $\mu$ A  |        |                  |       |

| 元素  | 質量数     | 電荷    | エネルギー     | 最大ビーム電流      | イオン源  | 備考       |
|-----|---------|-------|-----------|--------------|-------|----------|
| N   | 14      | 3+    | 40 MeV    | 720nA        | ECR1  |          |
|     |         | 3+    | 44 MeV    | 1.85 $\mu$ A |       |          |
|     |         | 3+    | 55 MeV    | 385nA        |       |          |
|     |         | 5+,6+ | 130 MeV   | 13nA         |       |          |
|     |         | 6+    | 210 MeV   | 31nA         |       |          |
|     |         | 6+    | 270 MeV   | 32nA         |       |          |
| N   | 15      | 3+    | 56.3 MeV  | 85nA         | ECR10 | カクテルビーム1 |
|     |         | 5+    | 150 MeV   | 298nA        | ECR1  |          |
| O   | 16      | 4+    | 100 MeV   | 45nA         |       | カクテルビーム2 |
|     |         | 4+    | 105 MeV   | 120nA        |       |          |
|     |         | 5+    | 115 MeV   | 193nA        |       |          |
|     |         | 5+    | 130 MeV   | 19nA         |       |          |
|     |         | 5+    | 133 MeV   | 128nA        |       |          |
|     |         | 5+    | 140 MeV   | 120nA        |       |          |
| O   | 18      | 4+    | 70 MeV    | 1.05 $\mu$ A |       |          |
|     |         | 4+    | 80 MeV    | 45nA         |       |          |
|     |         | 5+    | 100 MeV   | 3.7 $\mu$ A  |       |          |
| Ne  | 20      | 4+    | 75 MeV    | 86nA         |       | カクテルビーム1 |
|     |         | 5+    | 87 MeV    | 680nA        |       |          |
|     |         | 5+    | 131 MeV   | 183nA        |       |          |
|     |         | 6+    | 130 MeV   | 59nA         |       |          |
| Si  | 28      | 9+    | 280 MeV   | 2.75 $\mu$ A |       |          |
| Ar  | 36      | 11+   | 324 MeV   | 378nA        |       |          |
| Ar  | 40      | 7+,8+ | 128 MeV   | 3.0 $\mu$ A  |       | カクテルビーム1 |
|     |         | 7+    | 135 MeV   | 10nA         |       |          |
|     |         | 8+    | 150 MeV   | 470nA        |       |          |
|     |         | 8+    | 171 MeV   | 90nA         |       |          |
|     |         | 9+    | 185 MeV   | 16nA         |       |          |
|     |         | 9+    | 195 MeV   | 43nA         |       |          |
|     |         | 9+    | 212 MeV   | 16nA         |       |          |
| 12+ | 378 MeV | 130nA |           |              |       |          |
| Fe  | 56      | 12+   | 270 MeV   | 700nA        |       |          |
| Kr  | 84      | 13+   | 200 MeV   | 80nA         | ECR10 | カクテルビーム1 |
|     |         | 14+   | 245 MeV   | 15nA         |       |          |
|     |         | 17+   | 322.5 MeV | 45nA         |       |          |
|     |         | 18+   | 405 MeV   | 45nA         |       |          |
|     |         | 19+   | 451 MeV   | 24nA         |       |          |
| Xe  | 129     | 20+   | 300 MeV   | 220nA        | ECR10 | カクテルビーム1 |
|     |         | 23+   | 422 MeV   | 3nA          |       |          |
|     |         | 25+   | 454.2 MeV | 38nA         |       |          |
|     |         | 26+   | 540 MeV   | 14nA         |       |          |