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Multiply Charged Ion Source Based on High Current Short Pulse Duration Vacuum Arc

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Elevation of ion charge states in broad beam of vacuum arc source leads to proportional increasing of ion beam energy without elevation of accelerating voltage. The ion charge states were elevated by using of high current vacuum arc with a few microsecond pulse duration. The heavy ion (bismuth) beam of several microseconds with pulsed ion beam current of several hundreds of milliamperes and mean ion charge state about 10^{+} was generated. Physics and techniques of ion source are discussed.

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