

Fluorine

Update : september 3th 2010

Radioactive Beam (half-life)	Charge State	Vsource (Kv)	Intensity (pps)		Energy (MeV/nucleon)		Primary Beam	Primary Beam Power on ECS Target (kW)	Primary Beam Energy (MeV/nucleon)	Date
			LEB	Target*	Min	Max				
¹⁷ F (64.8s)	+2	26	1.7 10 ⁴	2 10 ³	2.0	3.5	²⁰ Ne	1.4	95	
¹⁸ F# (109min)	4/9+			2 10 ⁵	7.0	7.0	²⁰ Ne	0.3	95	
¹⁸ F# (109min)	2/9+	19		1 10 ⁴	2.4		²⁰ Ne	1.4	95	
¹⁸ F# (109min)	2/9+	26		2 10 ⁴	3.0		²⁰ Ne	1.4	95	
¹⁸ F _[1] (109min)	4/9+			2 10 ⁴	4.5	9	²⁰ Ne	1.1	95	04/2010
²⁰ F (11.63s)	+4	28	1.6 10 ⁴	3 10 ³		10.5	²² Ne	0.7	75	
²⁰ F _[2] (11.63s)	3/9+	17.4	1.1 10 ⁵	1.5 10 ⁴	3.0	5.6	²² Ne	1.4	78.9	07/2010
²⁰ F## (11.63s)	2/9+	25	4 10 ⁵	4 10 ⁴	2.5	2.6	²⁰ Ne	1.4	95	
	3/9+		2 10 ⁵	2 10 ⁴	3.0	4.0	²⁰ Ne	1.4	95	
	3/9+		3 10 ⁵	6 10 ⁴	4.0	5.8	²⁰ Ne	1.4	95	
²¹ F (4.16s)	+2	24	1.1 10 ⁴	1 10 ³	2.0	2.4	²² Ne	1.3	80	
	+4	26	2.5 10 ³	5 10 ²		9.5	²² Ne	0.6	75	

* Available intensity for the experiment.

Polluted by ¹⁸O and molecules (degrader + stripper to be used)

Polluted, ²⁰Ne + ²⁰O ; stripper to be used

[1] Polluted by ¹⁸O and ¹⁸Ne : to be stripped and degraded (6 mu Al + 60 µg/cm² C)
=> 98% purity obtained

[2] Polluted by ²⁰O³⁺ : high resolution tuning to avoid ²⁰Ne pollution

Color code :

2.8 10⁷ = extrapolated figures from SIRA experiment from 400 W to 1.4 kW.

2.8 10⁷ = measured figures with SPIRAL.

2.8 10⁷ = expected figures after acceleration (not measured) with 20% transport efficiency.