

Report

Collection of beta delayed proton emitters for AIDA commissioning at TAMU

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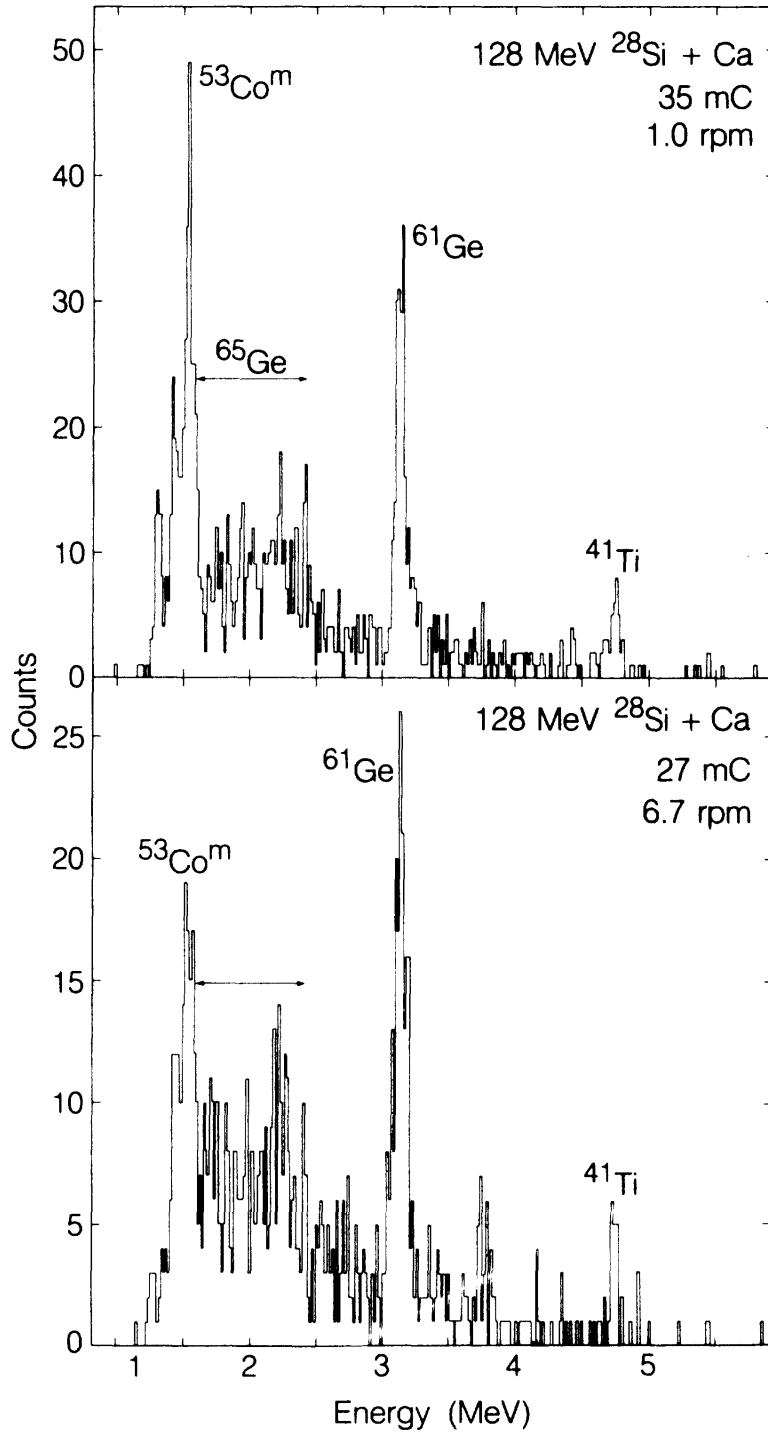
15.1.2009

⁶¹Ge

$T_{1/2} = 40(15)$ ms

$b_p \approx 80\%$

Ref [2]

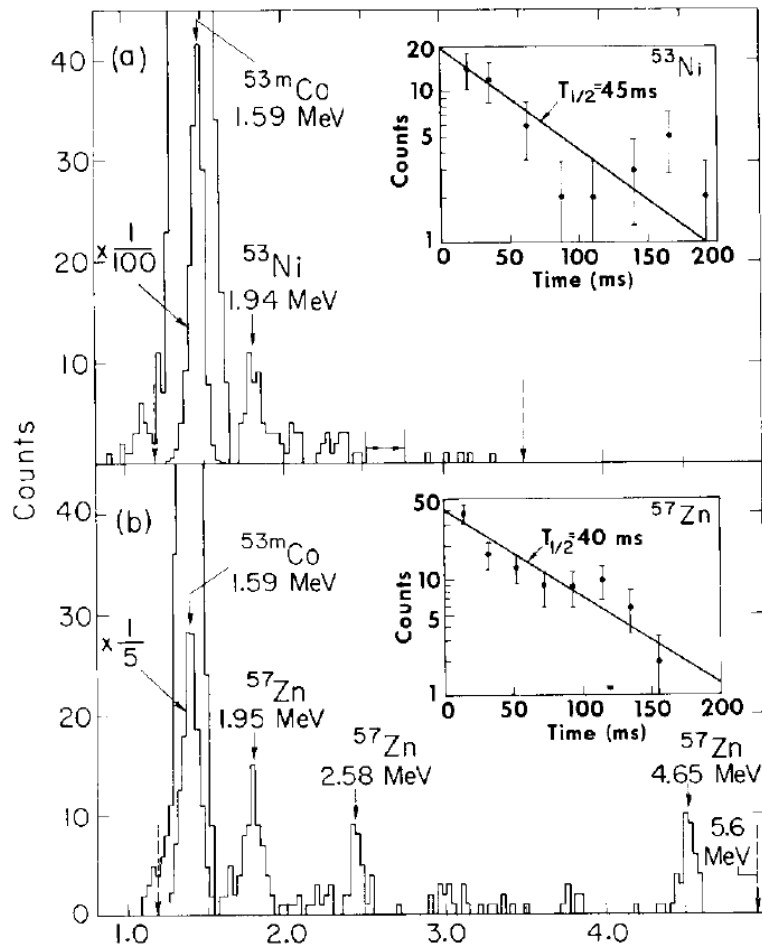


⁵⁷Zn

$T_{1/2} = 40(10)$ ms

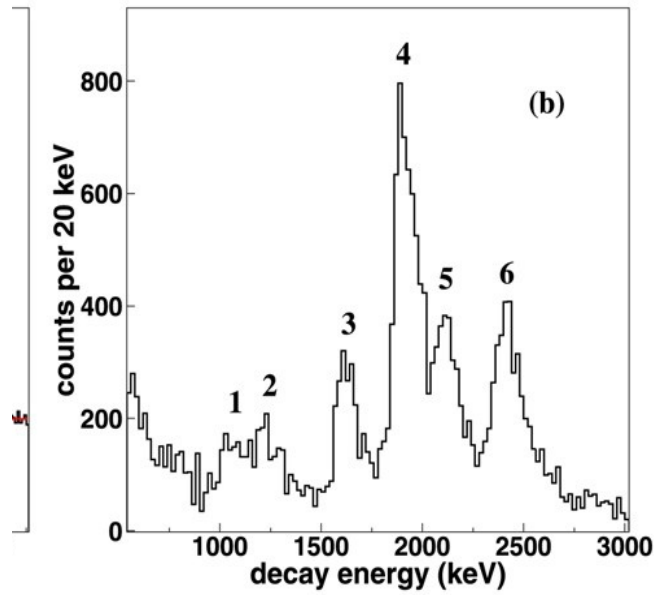
$b_p = 65\%$

Ref [3]



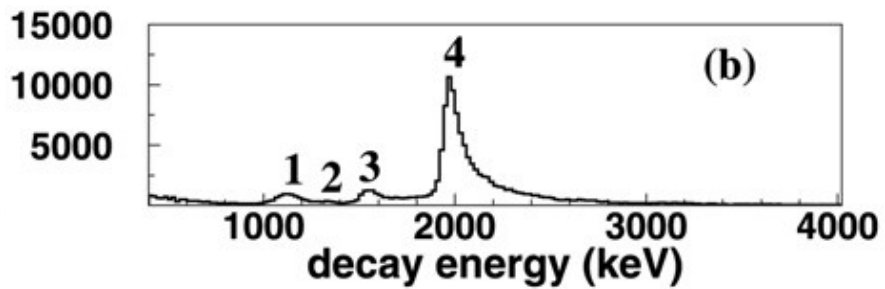
⁵³Ni

$T_{1/2} = 55.2(7)$ ms
 $b_p = 23.4(10)$ %
Ref [1]



⁴⁹Fe

$T_{1/2} = 64.7(3)$ ms
 $b_p = 56.7(4)$ %
Ref [1]

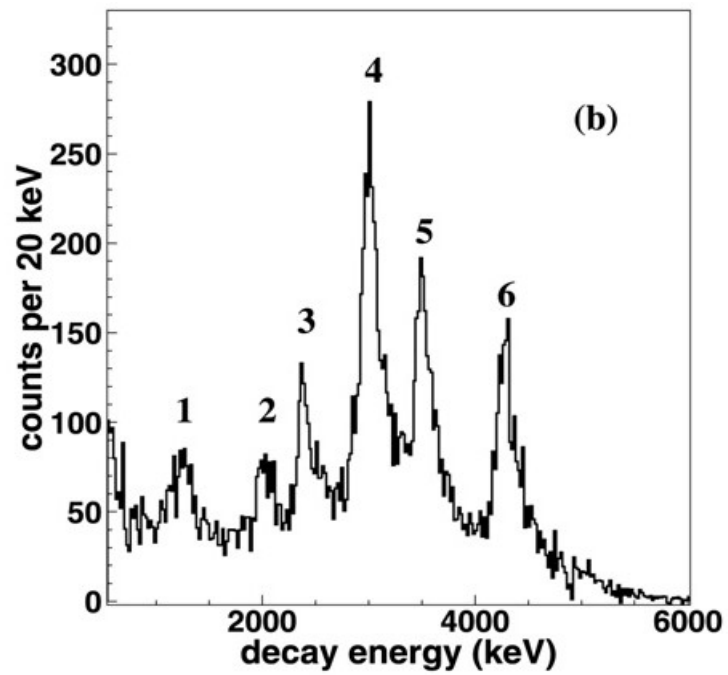


⁴⁶Mn

$T_{1/2} = 36.2(4)$ ms

$b_p = 57.0(8)$ %

Ref [1]

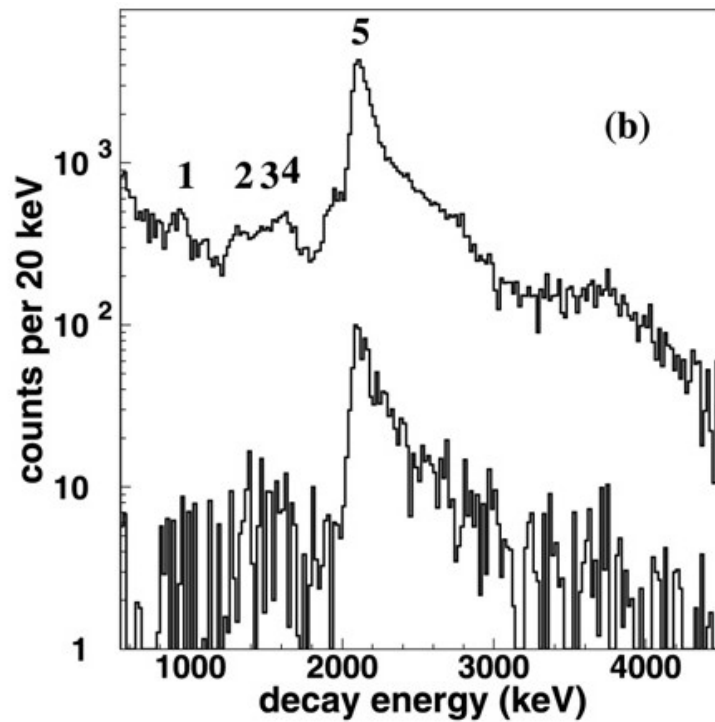


⁴⁵Cr

$T_{1/2} = 60.9(4)$ ms

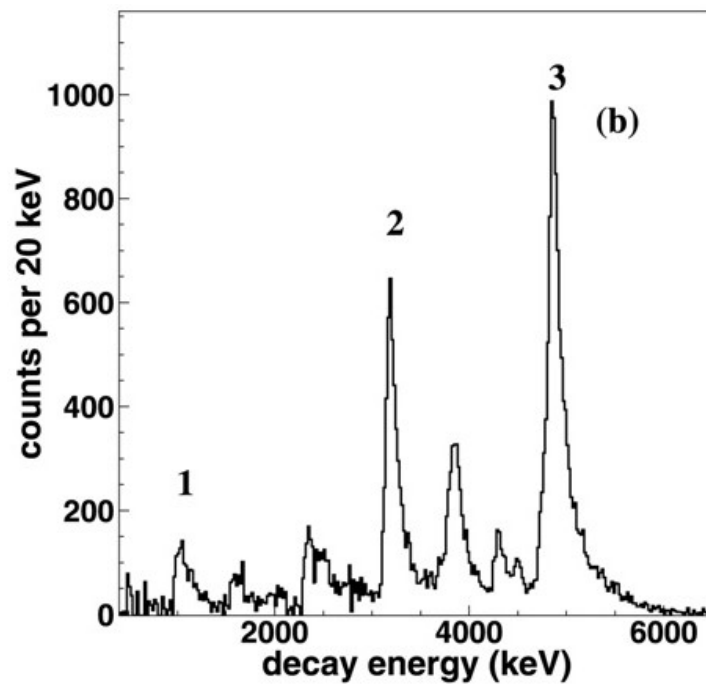
$b_p = 34.4(8)$ %

Ref [1]



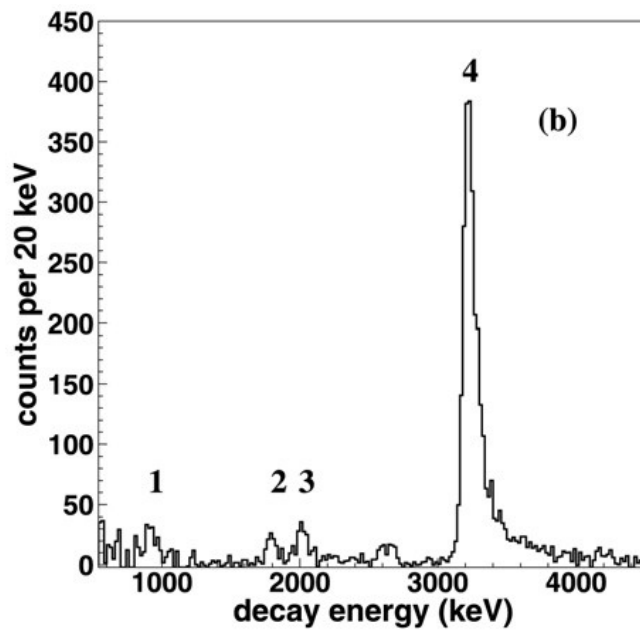
⁴¹Ti

$T_{1/2} = 82.6(5)$ ms
 $b_p = 92.1(16)$ %
Ref [1]



³⁷Ca

$T_{1/2} = 181.7(36)$ ms
 $b_p = 72.2(43)$ %
Ref [1]

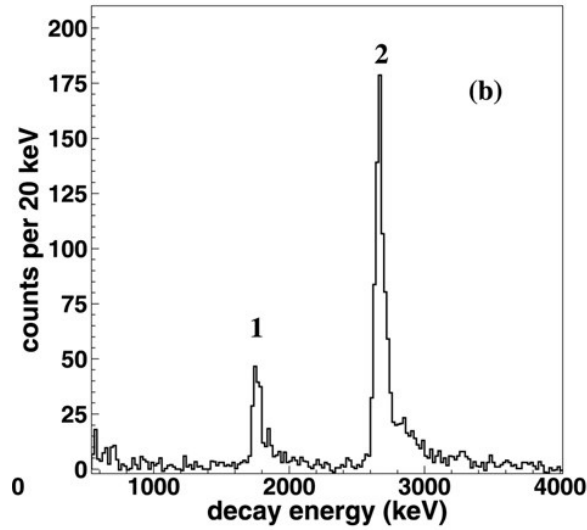


³⁶Ca

$T_{1/2} = 100.1(23)$ ms

$b_p = 51.2(10)$ %

Ref [1]



³¹Cl

$T_{1/2} = 150(25)$ ms

$b_p = 0.7$ %

Ref [4]

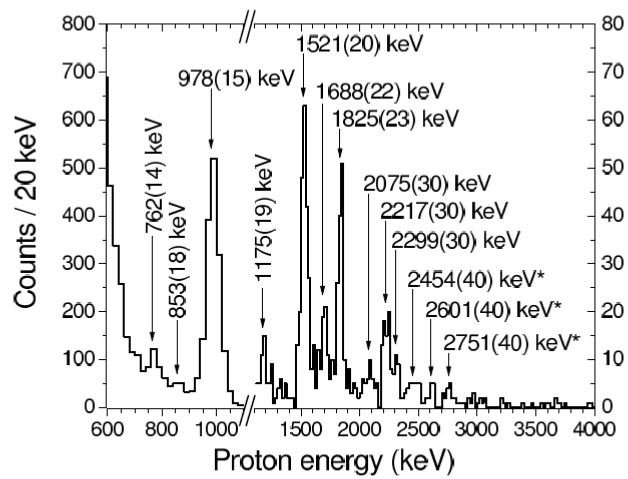


Table 1. Summary of properties.

Precursor	$T_{1/2}$ (ms)	p-branching (%)	Distance from stable isotope
61Ge	40(15)	~ 80	9
57Zn	40(10)	~ 65	7
53Ni	55.2(7)	23.4(10)	5
49Fe	64.7(3)	56.7(4)	5
46Mn	36.2(4)	57.0(8)	9
45Cr	60.9(4)	34.4(8)	5
41Ti	82.6(5)	92.1(16)	5
37Ca	181.7(36)	72.2(43)	3
36Ca	100.1(23)	51.2(10)	4
31Cl	150(25)	~ 7	4

References

- [1] C. Dossat *et al.* Nucl. Phys. A **792** (2007) 18-86.
- [2] M.A.C. Hotchkis *et al.* Phys. Rev. C **35** (1987) 315-319.
- [3] D.J. Vieira *et al.* Phys. Lett. B **60** (1976) 261-264.
- [4] A. Kankainen *et al.* Eur. Phys. J. A **27** (2006) 67-75.