

## <sup>53</sup>Ar

<sup>53</sup>Ar was discovered by Tarasov et al. in 2009 and published in “Evidence for a change in the nuclear mass surface with the discovery of the most neutron-rich nuclei with  $17 \leq Z \leq 25$ ” (2009Ta05). <sup>9</sup>Be targets were bombarded with 132 MeV/u <sup>76</sup>Ge ions accelerated by the Coupled Cyclotron Facility at the National Superconducting Cyclotron Laboratory at Michigan State University. <sup>53</sup>Ar was produced in projectile fragmentation reactions and identified with a two-stage separator consisting of the A1900 fragment separator and the S800 analysis beam line. “The observed fragments include fifteen new isotopes that are the most neutron-rich nuclides of the elements chlorine to manganese (<sup>50</sup>Cl, <sup>53</sup>Ar, <sup>55,56</sup>K, <sup>57,58</sup>Ca, <sup>59,60,61</sup>Sc, <sup>62,63</sup>Ti, <sup>65,66</sup>V, <sup>68</sup>Cr, <sup>70</sup>Mn).”

Adapted from reference (2012Th10)

2009Ta05 O. B. Tarasov, D. J. Morrissey, A. M. Amthor, T. Baumann *et al.*, Phys. Rev. Lett. **102**, 142501 (2009).

2012Th10 M. Thoennessen, At. Data Nucl. Data Tables **98**, 933 (2012).

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