^{33}S

In the 1926 article "The isotopes of sulphur" Aston reported the discovery of ^{33}S (1926As01). The discovery was possible due to an improved resolving power of the new Cavendish mass spectrograph. Previously, Aston was not able to identify sulfur isotopes other than ^{32}S due to possible hydrogen compounds (1920As02). "The matter has now been put beyond reasonable doubt by the negative mass-spectrum obtained by using pure SO_2 and exposing for an hour with both fields reversed. All three lines were visible, and again showed the same intensity relations. Sulphur is therefore a triple element like the two even ones, magnesium and silicon, which precede it in the periodic table. The lightest mass-number is for the most abundant in all three cases. S^{34} appears to be about three times as abundant as S^{33}; the two together probably amount to about 3 per cent. of the whole."

Adapted from reference (2012Th10)

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