



**Fig. 11.** Left panel: standard DM model ( $r_h = 0$ )—thin-dotted lines are derived using the GAL09 instead of the W03 fragmentation cross-sections. Right panel: modified DM model ( $r_h \neq 0$ ). For both panels, shown are the best-fit parameters on  $B/C + {}^{10}\text{Be}/{}^9\text{Be} + {}^{26}\text{Al}/{}^{27}\text{Al} + {}^{36}\text{Cl}/\text{Cl}$  data, as a function of the diffusion slope  $\delta$ . The latter is varied between 0.1 and 1.0 for model II (blue lines, open and filled squares) and model III (black lines, open and filled circles). From top to bottom,  $L$ ,  $K_0/L$ ,  $V_a/\sqrt{K_0}$ , and  $V_c$  as a function of  $\delta$  are shown. The bottom panel shows the best  $\chi^2/\text{d.o.f}$  for each  $\delta$ .

for the three combinations  $B/C + \text{Be}/\text{B}$ ,  $B/C + \text{Al}/\text{Mg}$ , and  $B/C + \text{Cl}/\text{Ar}$ . The trend is similar to that for isotopic ratios:  $L$  increases with increasing  $\delta$ . The main difference is that the increase is sharper for both models II and III. For the former, only a small region around  $\delta \approx 0.2$  corresponds to small halo sizes. For the latter, the halo size increases sharply above  $\delta \gtrsim 0.6$ .

For completeness, similar fits were carried out for the modified DM ( $r_h \neq 0$ ). However, adding an additional degree of freedom only worsens the situation, and the models converge to arbitrarily small or high values of  $L$  and  $r_h$ . Finally, if we fit the combined  $B/C$  data, the three isotopic ratios and the three elemental ratios, we do not obtain more constraints than when fitting  $B/C$  and the three isotopic ratios. This may indicate that the models have difficulties in