

Group meeting

WD 的调整

在低能的情况下，对与弹性微分散射截面后角区的会偏小，这是由于surface absorption 太强所导致的，因此，我们要对表面吸收项的系数 WD 进行一个调整。

我们将 WD 乘以一个系数 γ ，让 γ 在0到1的范围内以0.01的步长变化，每变化一次就计算一次微分散射截面，并求计算值和实验值的方差 χ^2 。

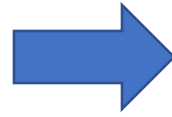
$$\chi^2 = \sum \left[\frac{d\sigma}{d\Omega}(i)_{cal} - \frac{d\sigma}{d\Omega}(i)_{exp} \right]^2$$

选取当 χ^2 有最小值时的那次计算的微分散射截面，看看其与实验数据是符合的较好。

WD 的调整

C12+Pb208 体系

| E (MeV) | gamma |
|---------|-------|
| 56.5 | 0.00 |
| 57.0 | 0.00 |
| 58.9 | 0.05 |
| 60.9 | 0.00 |
| 62.9. | 0.30 |
| 64.9 | 0.37 |
| 69.9 | 0.57 |
| 74.9 | 0.67 |
| 84.9 | 0.92 |
| 118.0 | 1.00 |



WD 的调整

C12+Si28 体系

| E (MeV) | gamma |
|---------|-------|
| 22.0 | 1.00 |
| 25.0 | 1.00 |
| 28.0 | 1.00 |
| 32.0 | 1.00 |
| 35.0 | 1.00 |
| 40.9 | 1.00 |
| 44.0 | 1.00 |
| 48.0 | 0.77 |
| 56.0 | 1.00 |
| 59.0 | 1.00 |
| 66.0 | 1.00 |
| 69.5 | 1.00 |
| 70.0 | 1.00 |

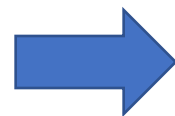


WV 的调整

我们并没有得到想要的结果, 下面我们对WV调整来看看, 同样我们也给WV一个系数 γ' 。

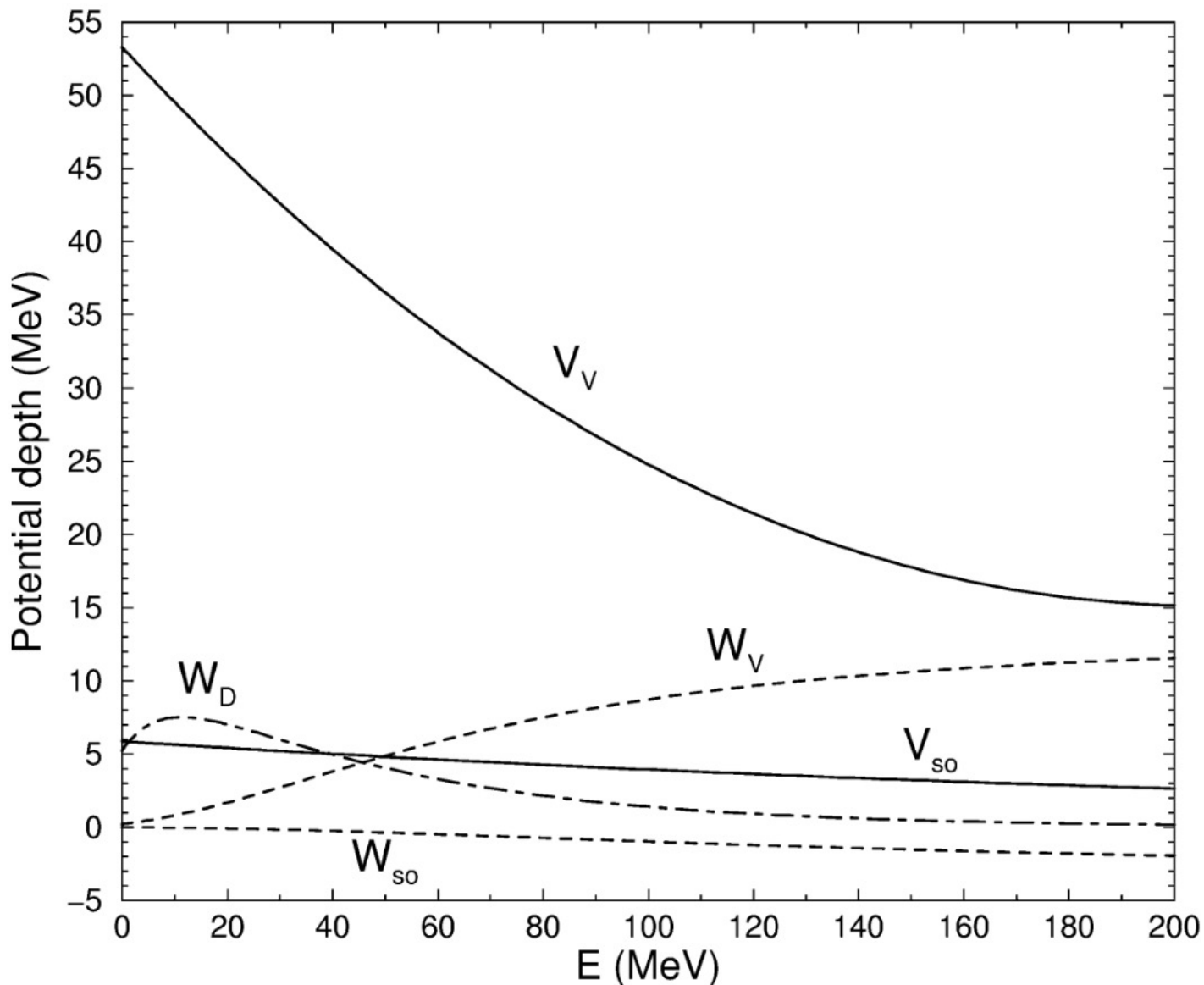
C12+Pb208 体系

| E (MeV) | gamma' |
|---------|--------|
| 56.5 | 0.00 |
| 57.0 | 0.00 |
| 58.9 | 0.00 |
| 60.9 | 0.00 |
| 62.9. | 0.00 |
| 64.9 | 0.00 |
| 69.9 | 0.00 |
| 74.9 | 0.00 |
| 84.9 | 0.00 |
| 118.0 | 1.00 |

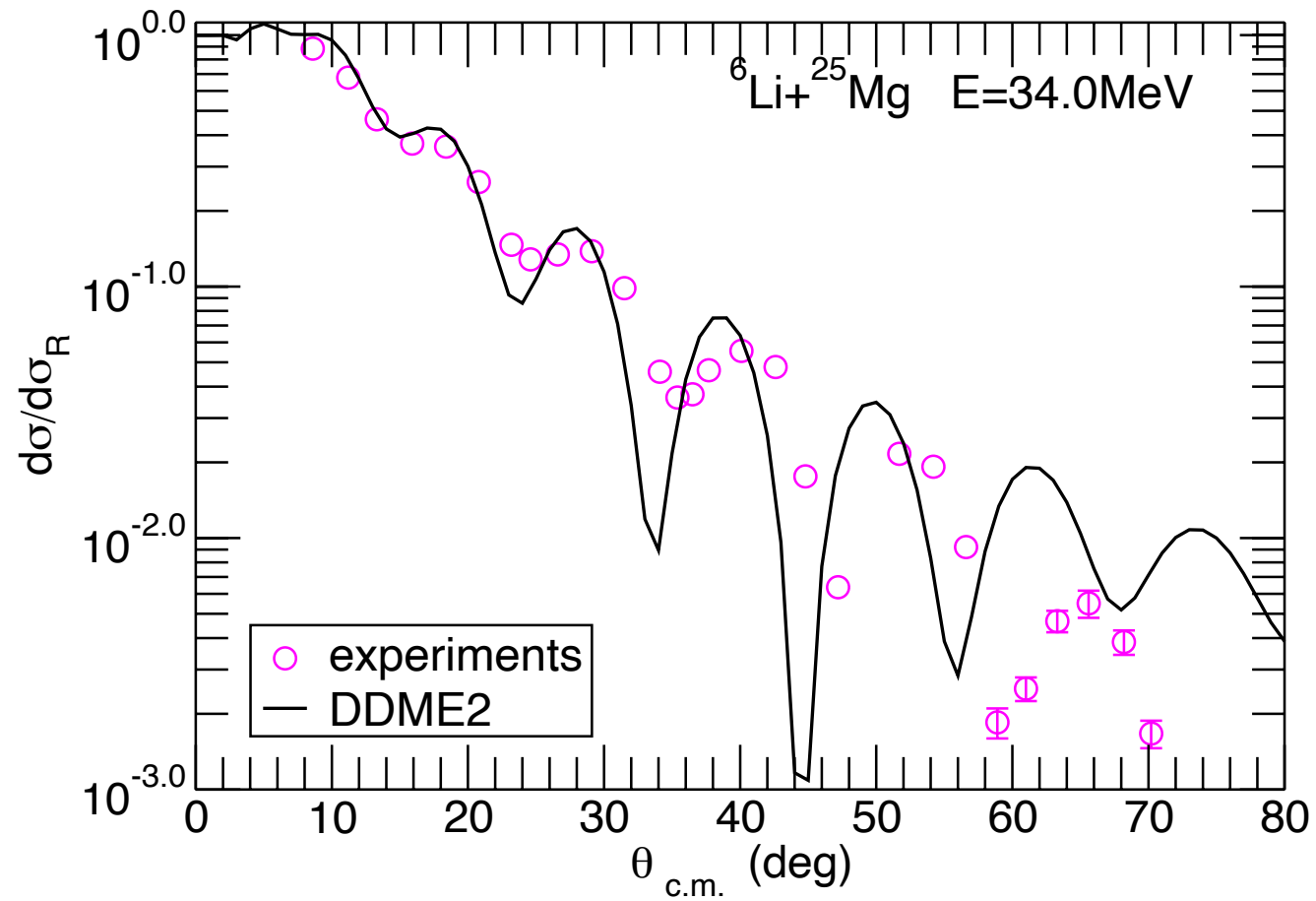


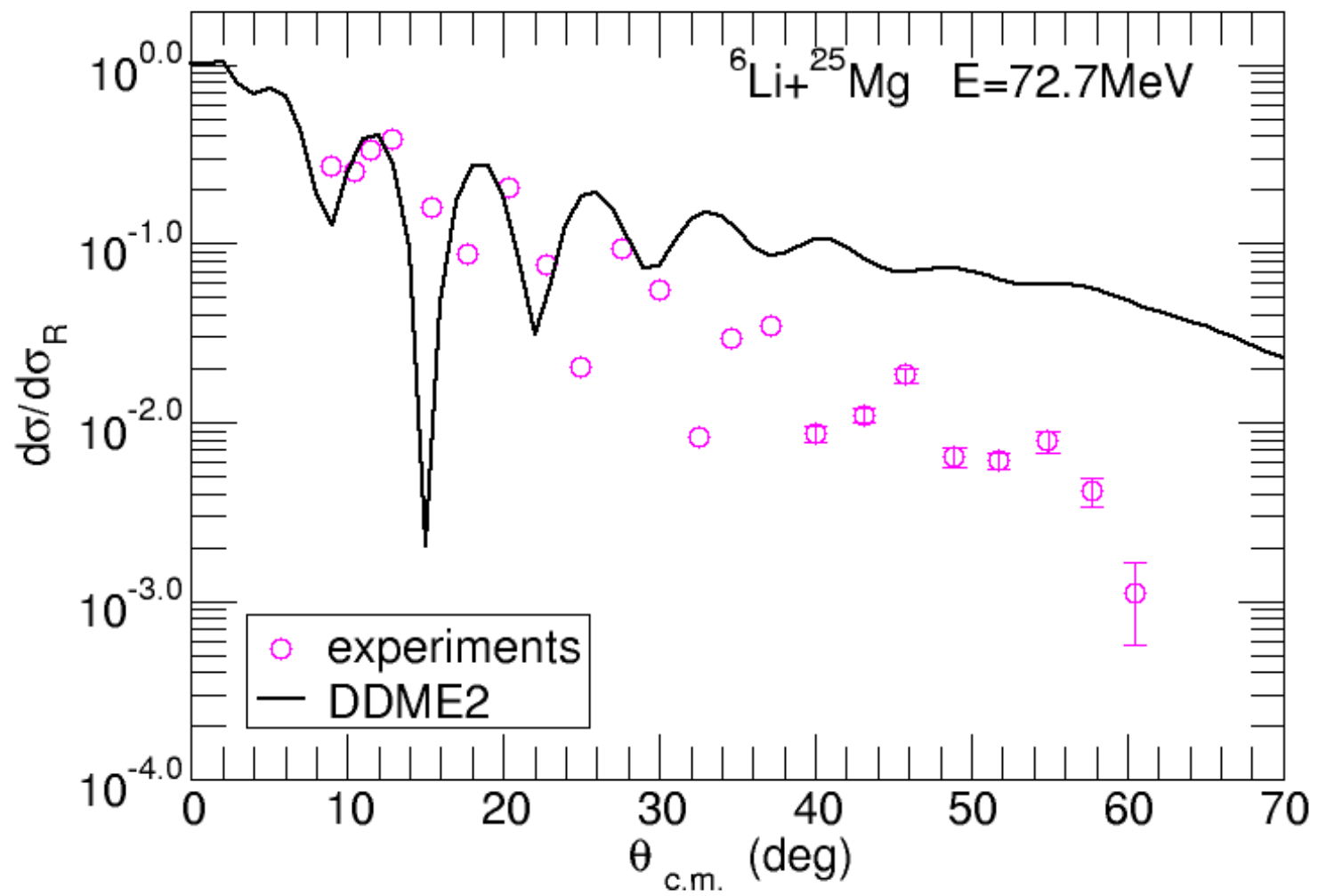
WV 的调整

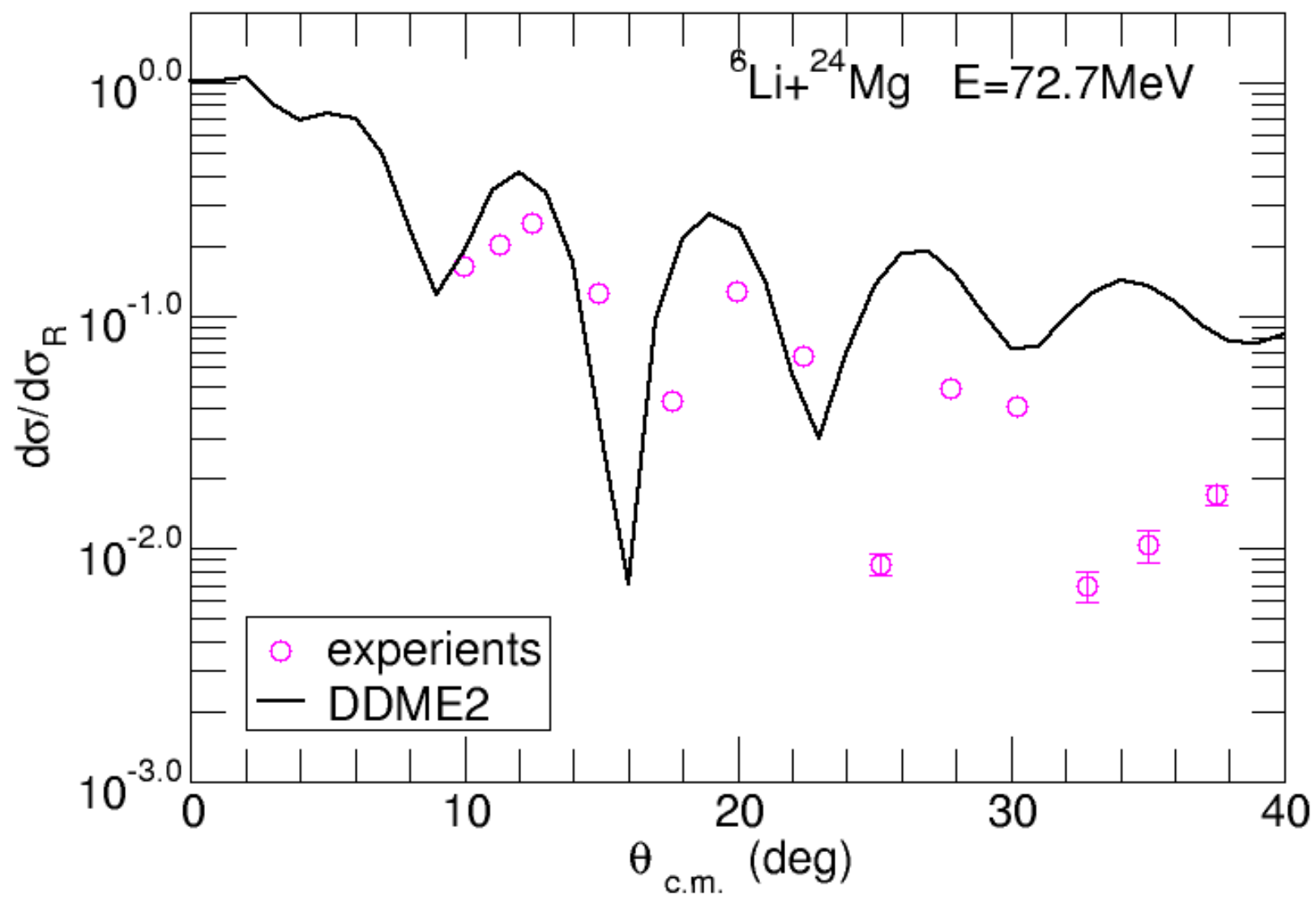
实际上，即使在能量为 118.0MeV 时，单个核子的能量也只有 9.83MeV，在这样比较低的能量的情况下， W_V 本来就很小。占主导地位的是 surface 项，有没有体积项虚部几乎对微分散射截面没有影响。

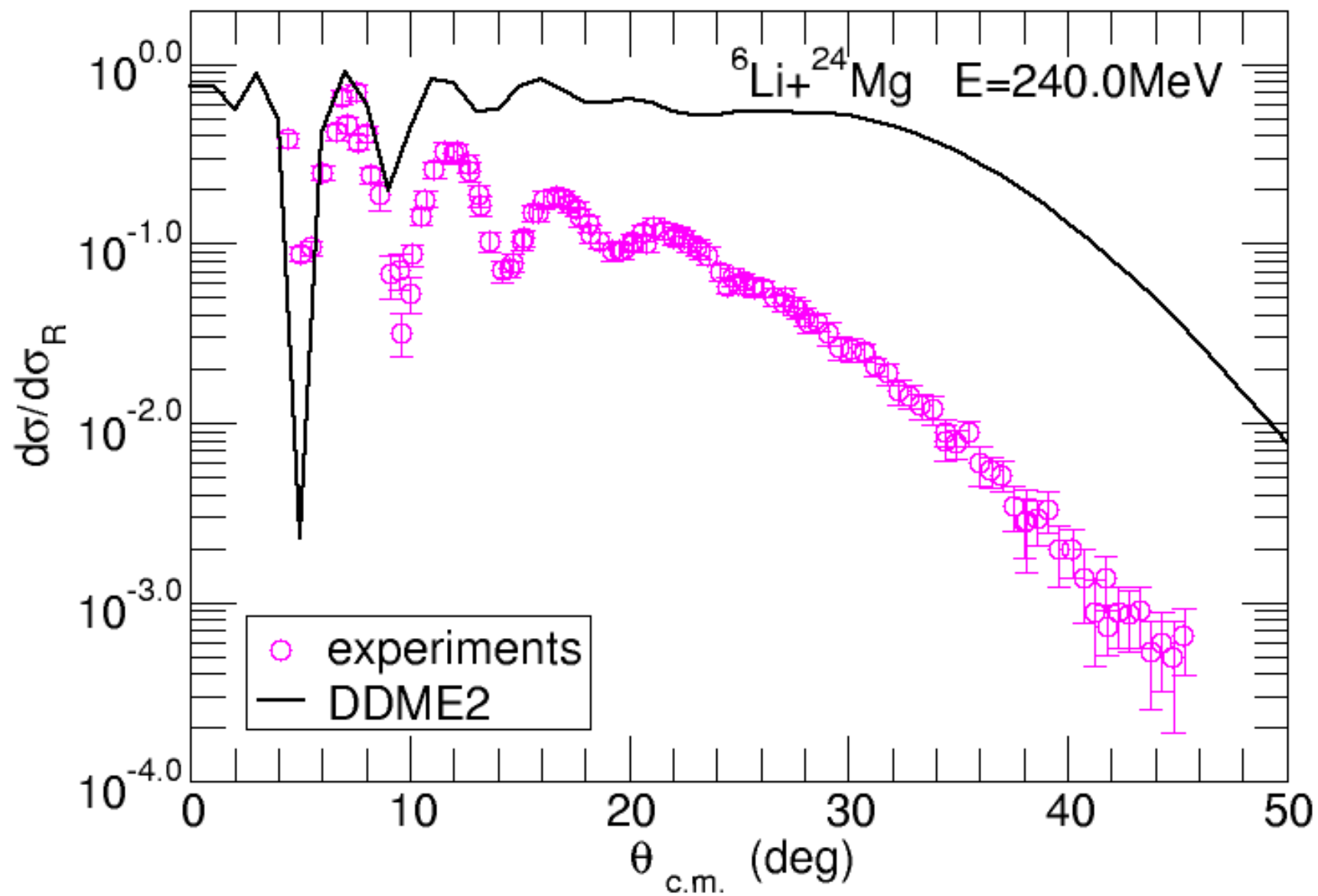


Li6+Mg

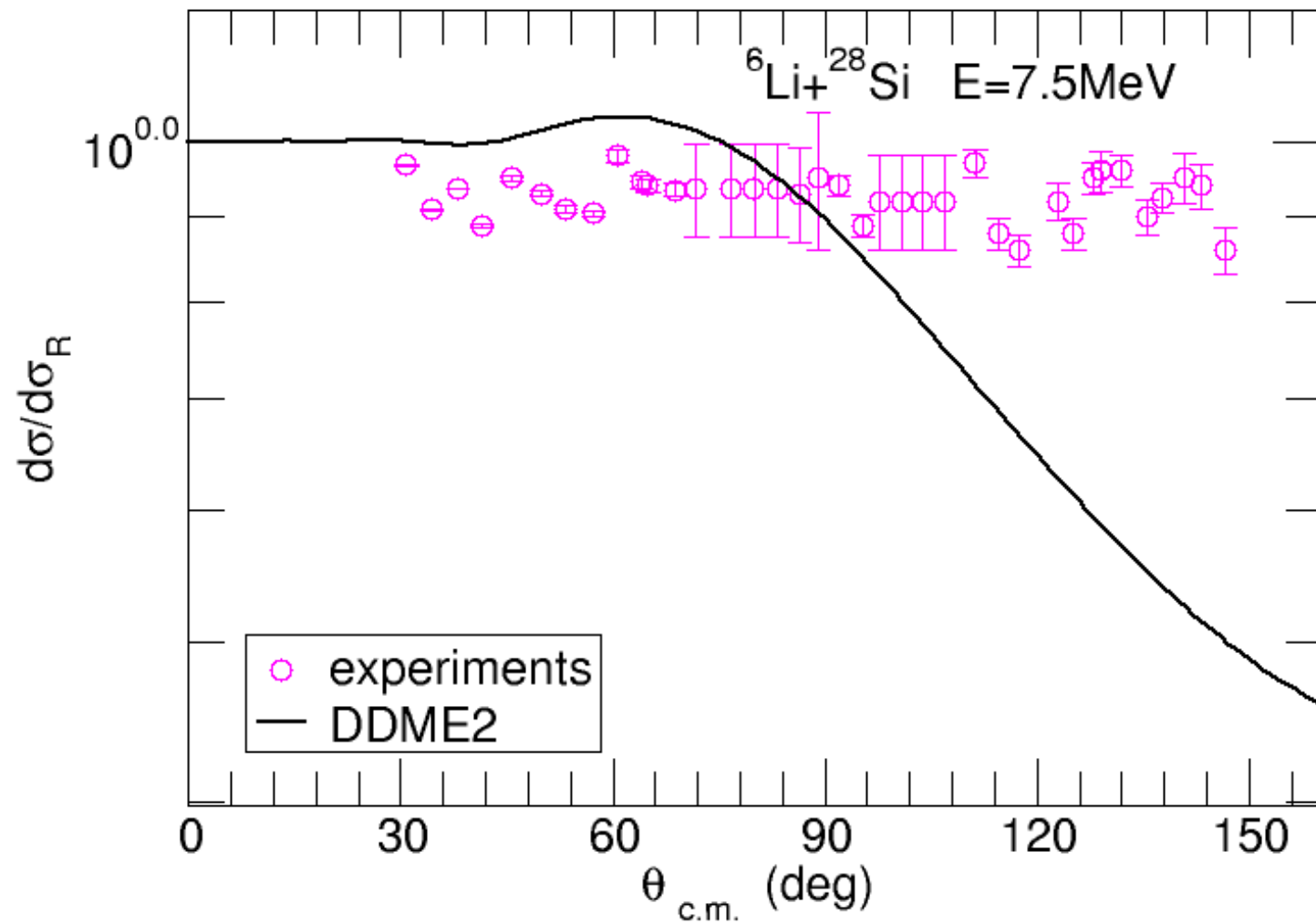


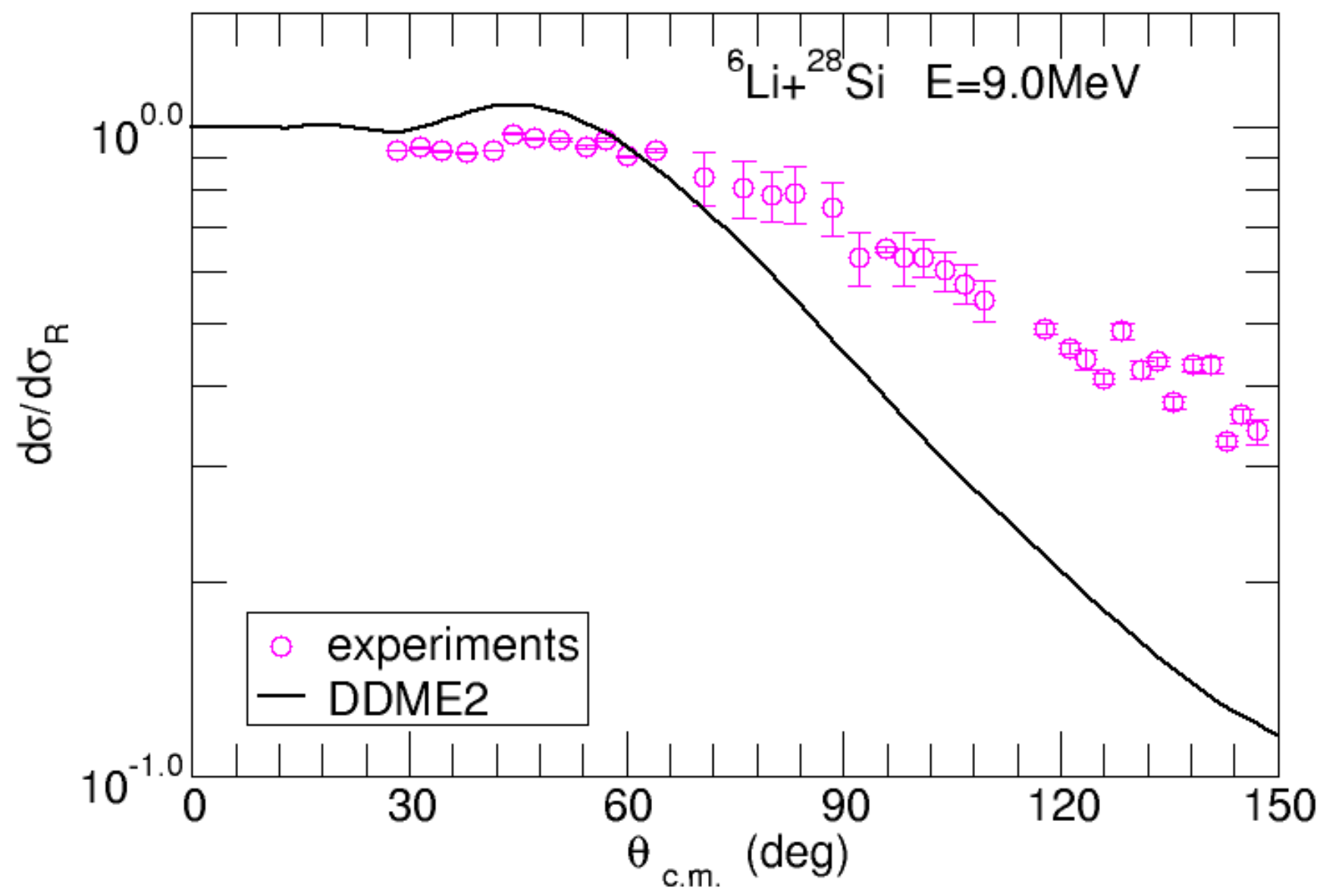


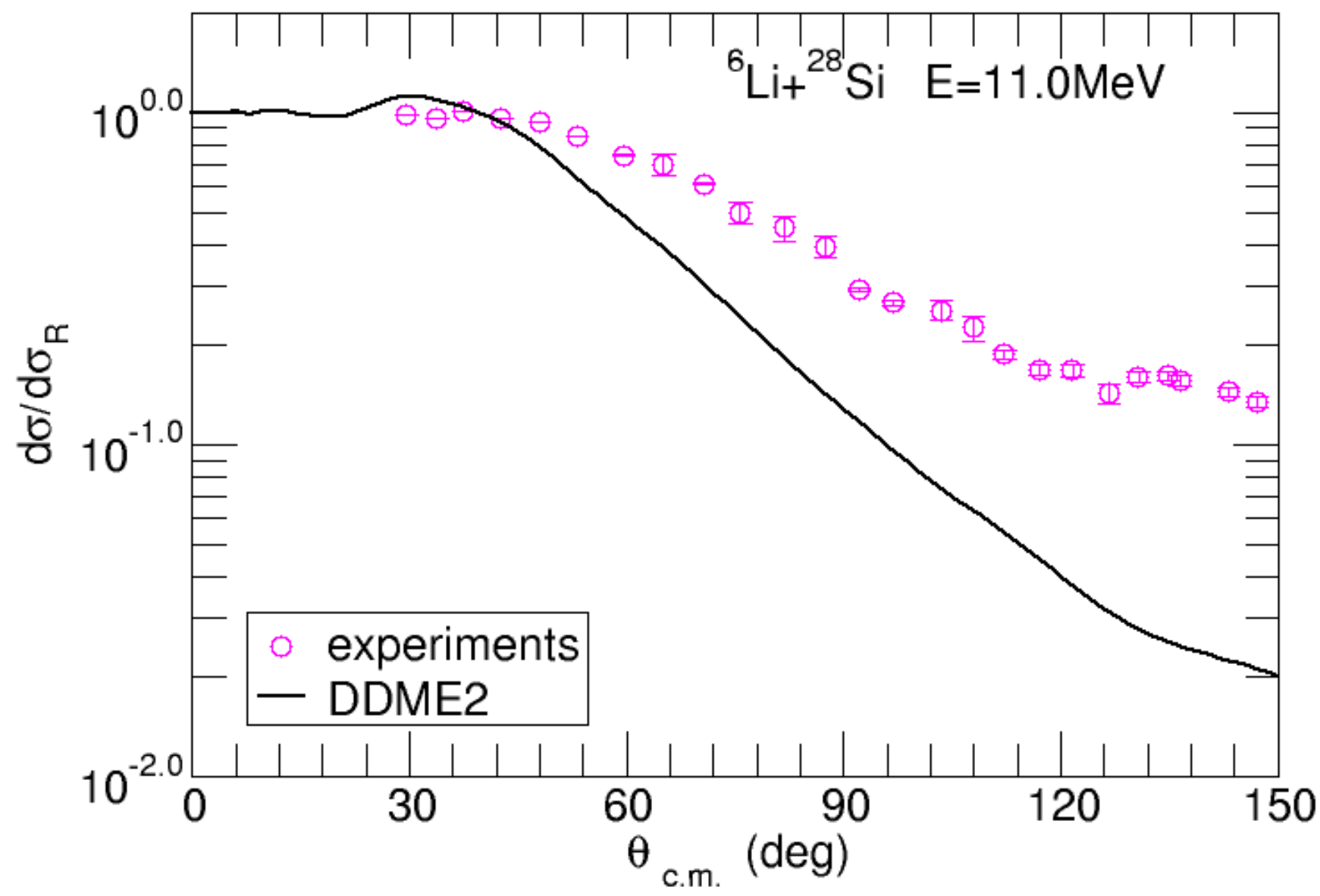


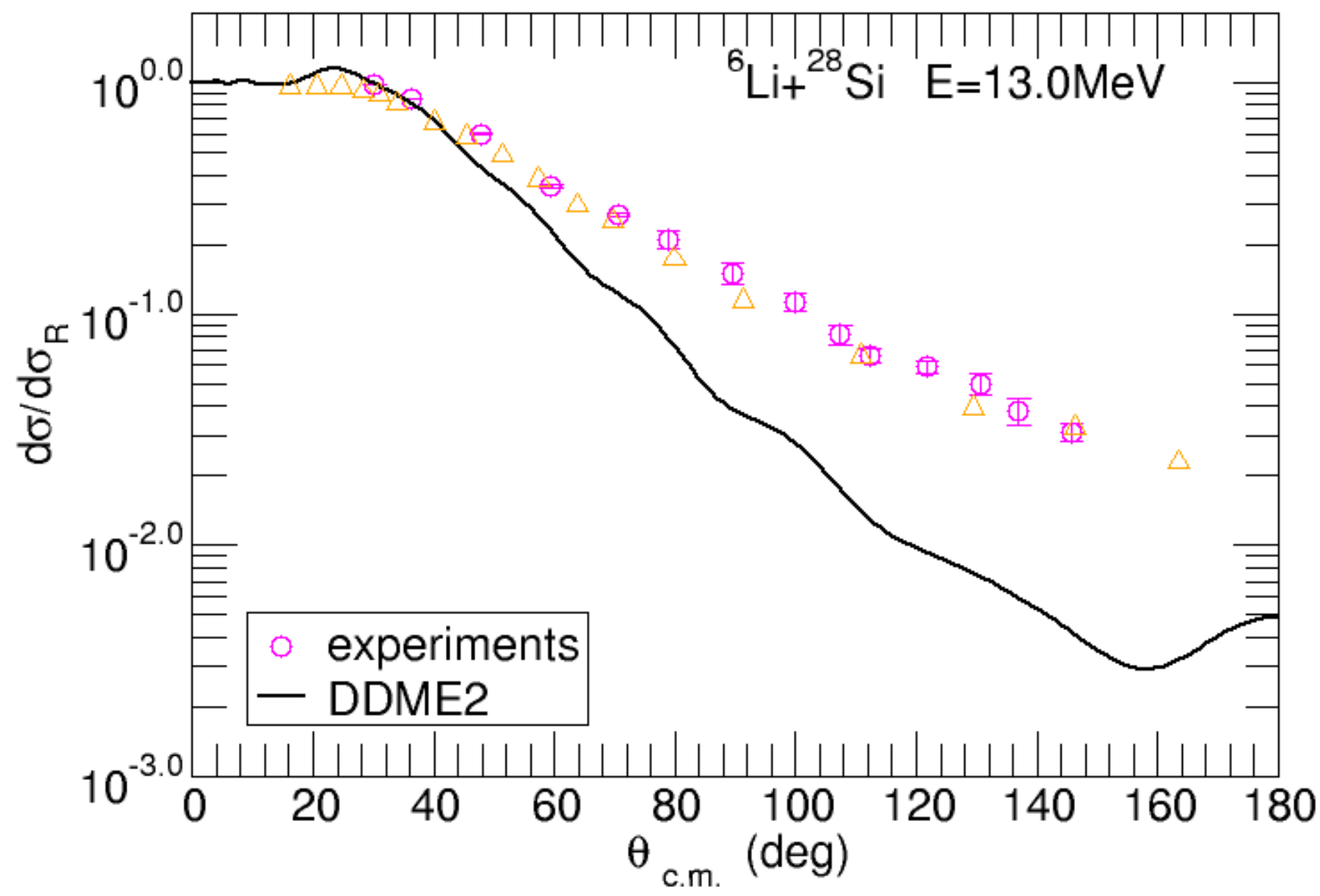


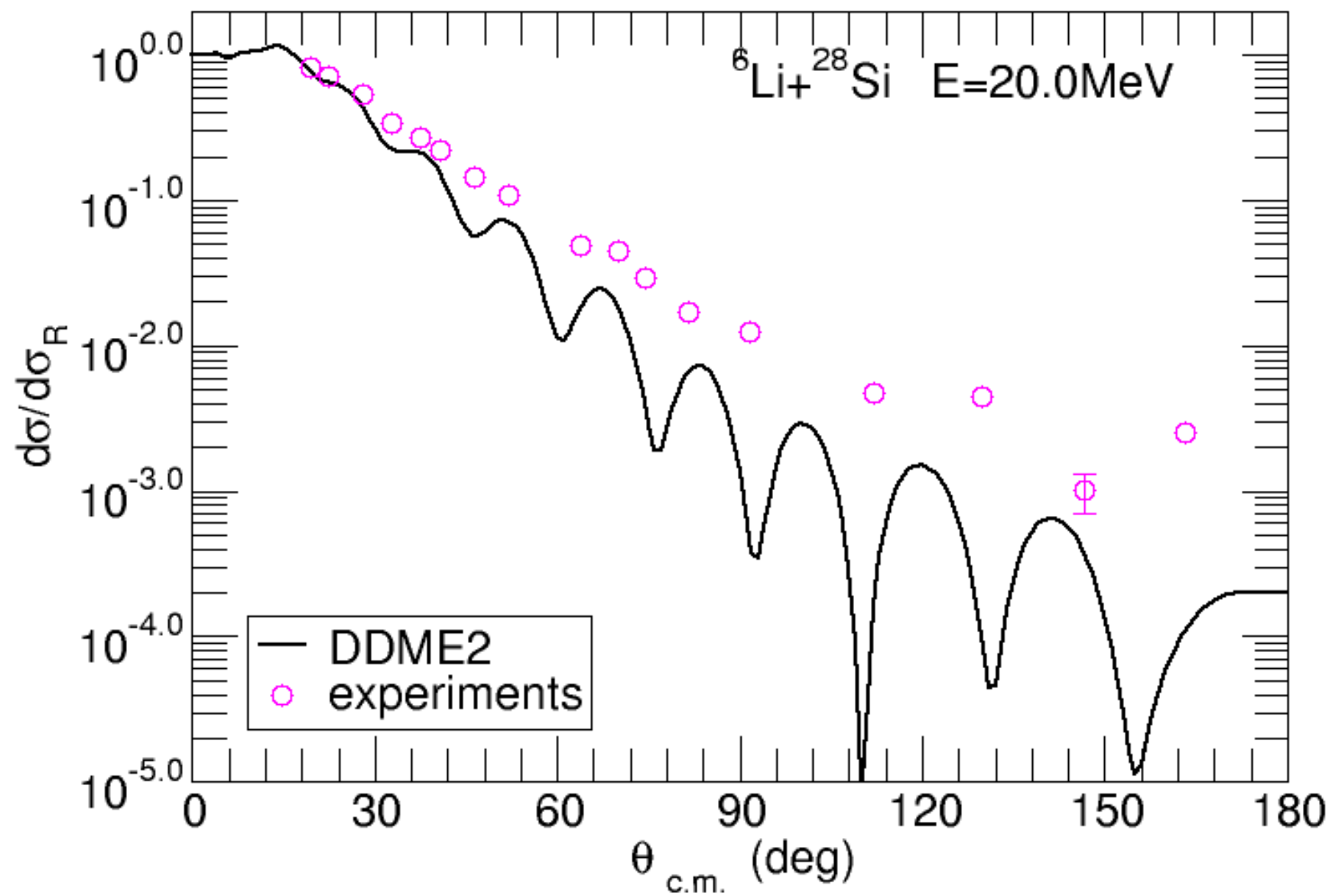
Li6+Si28

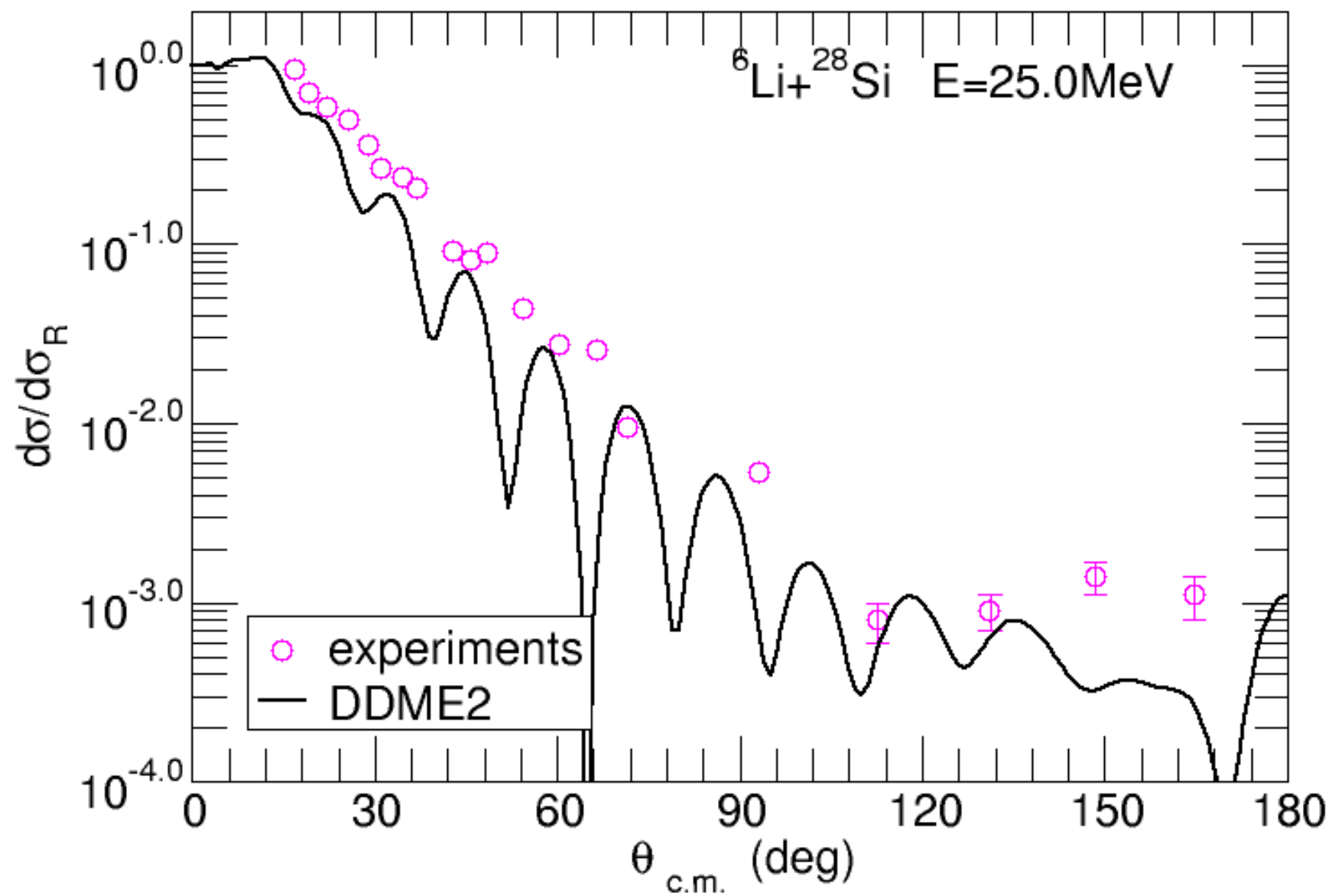


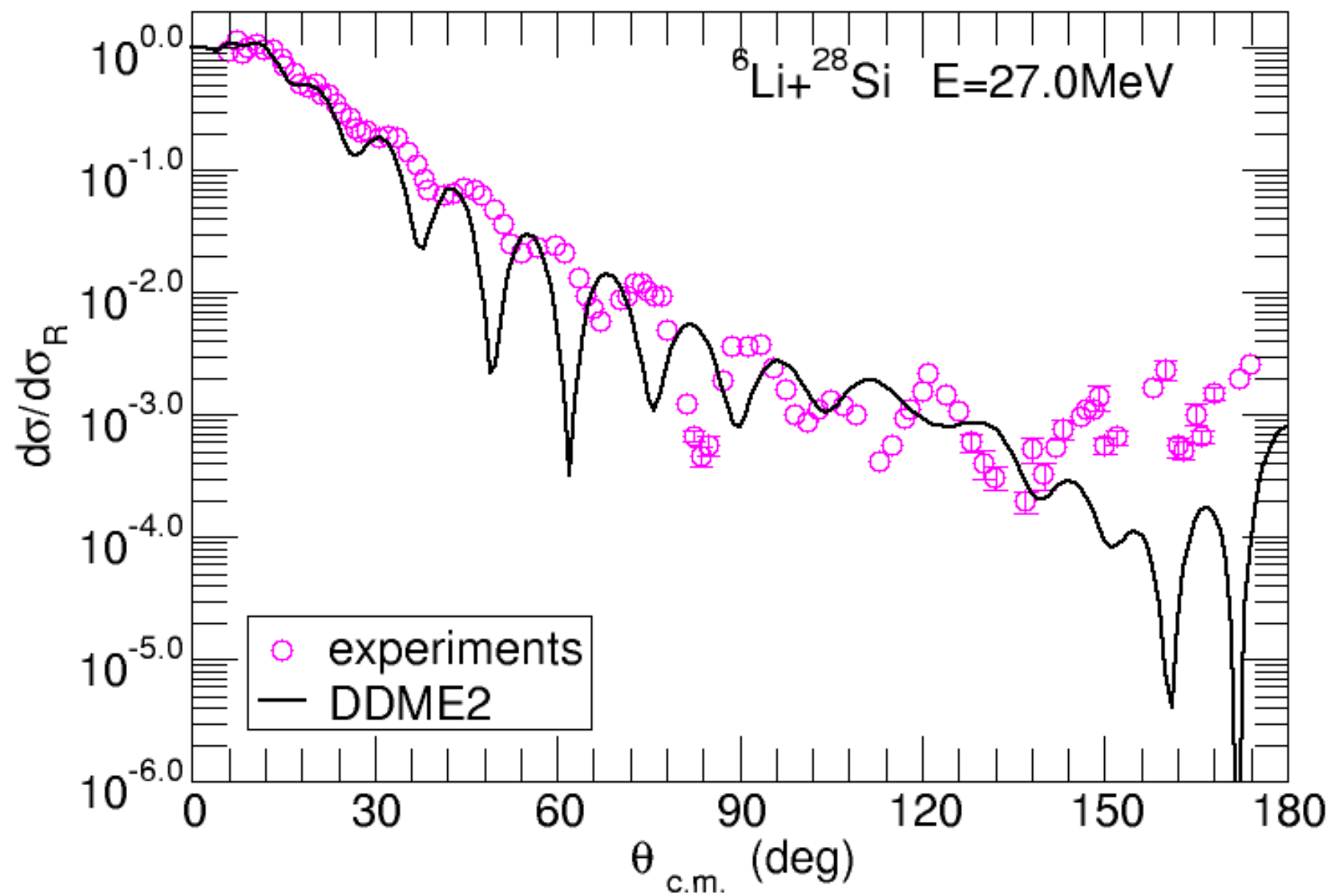


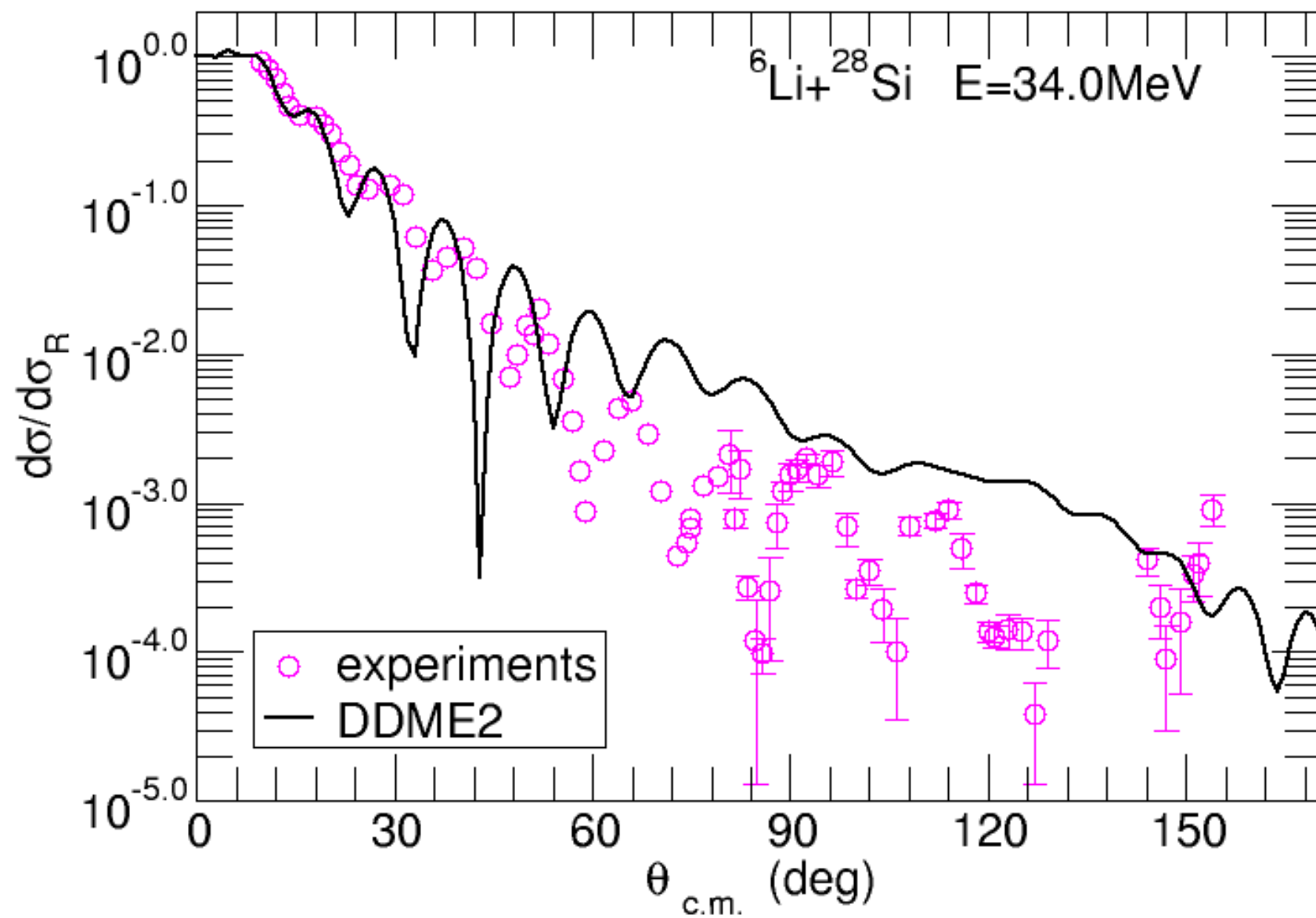


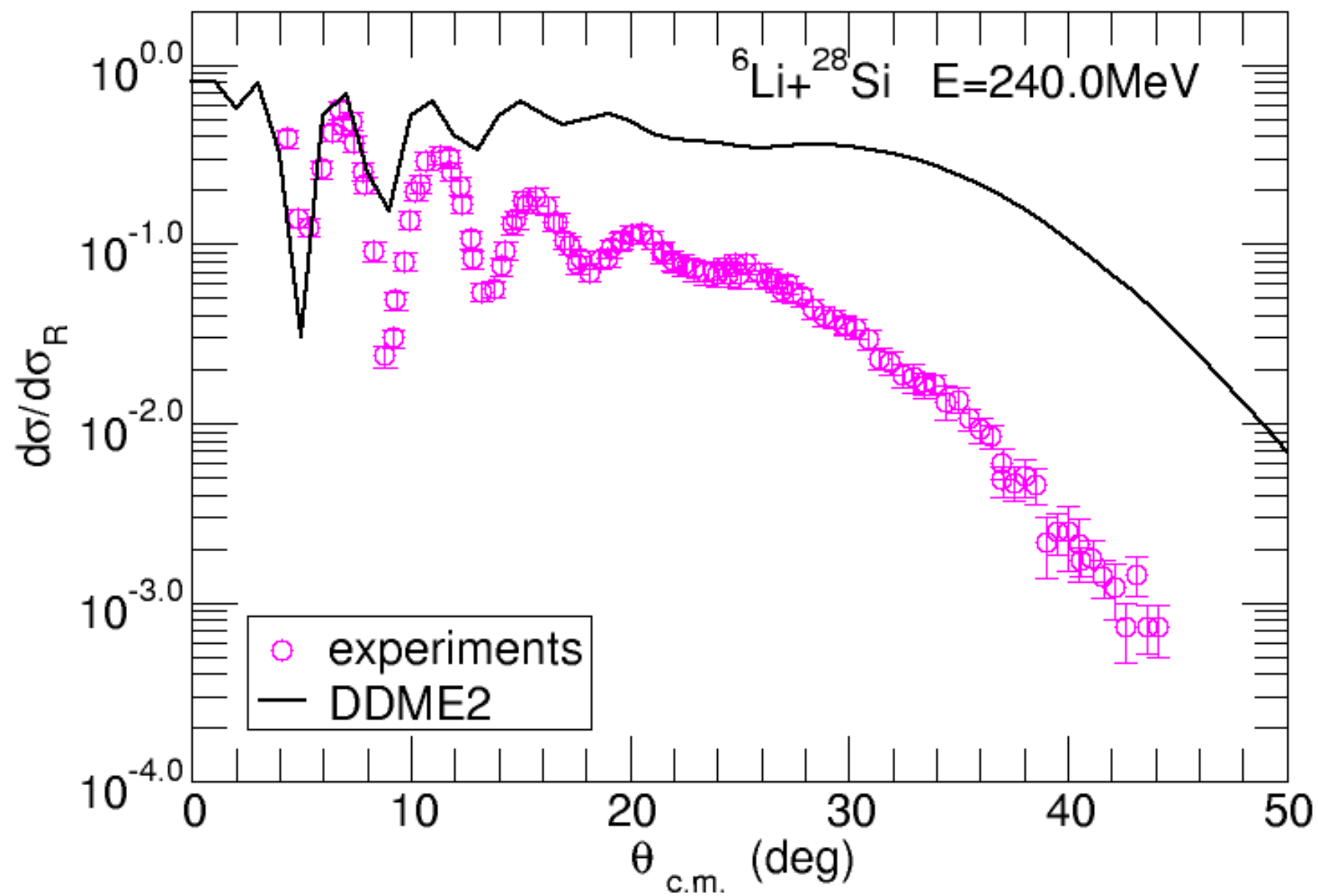




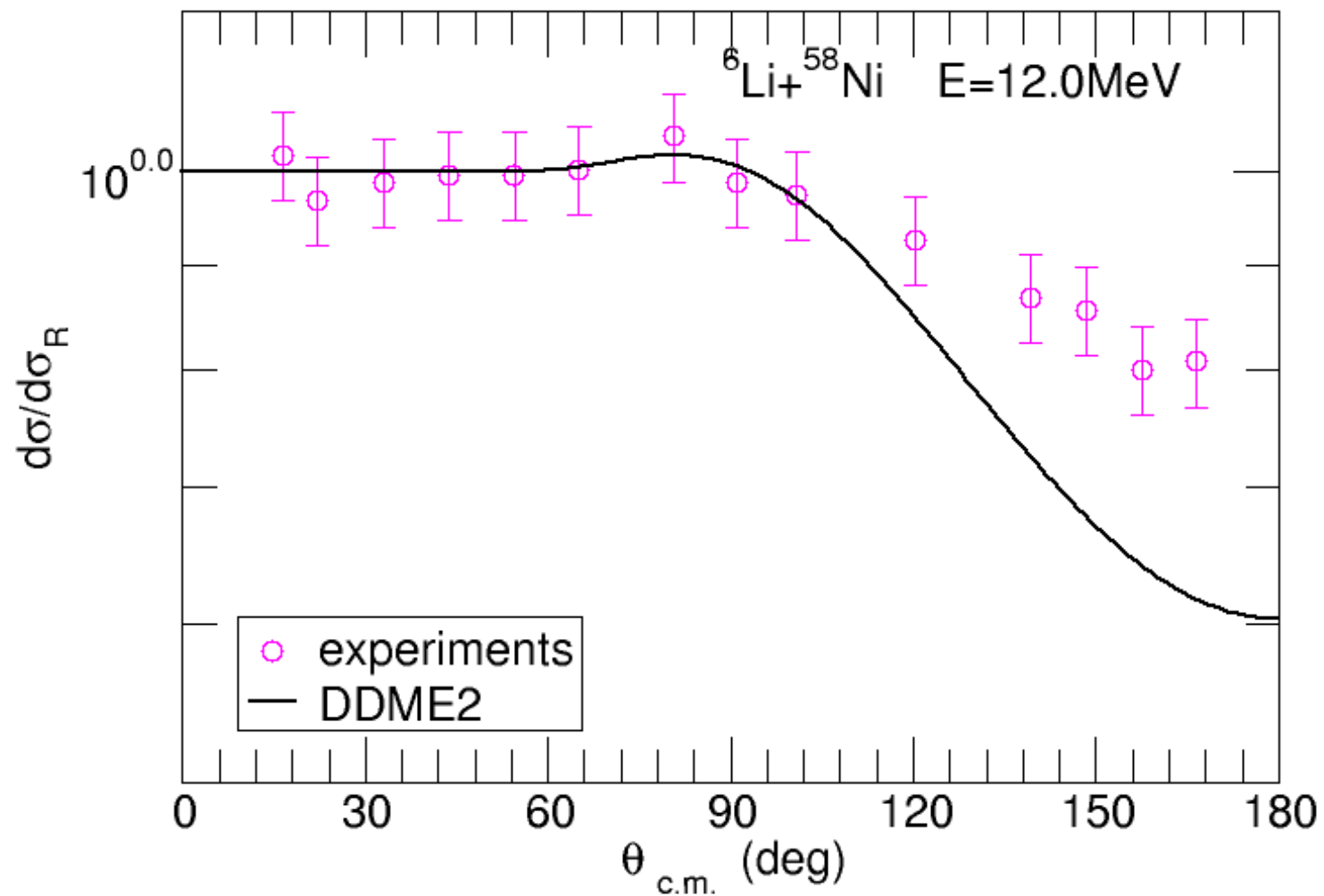


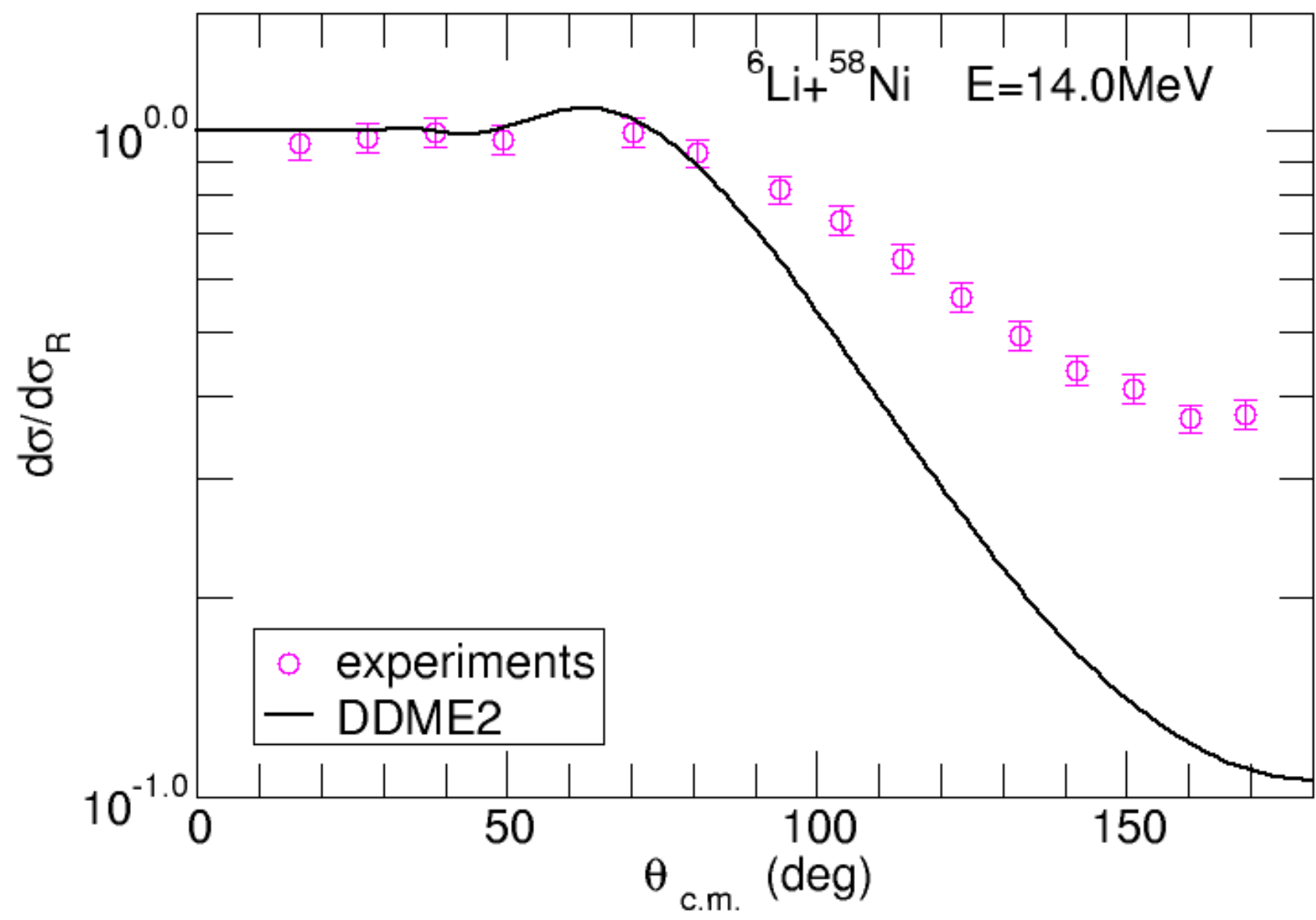


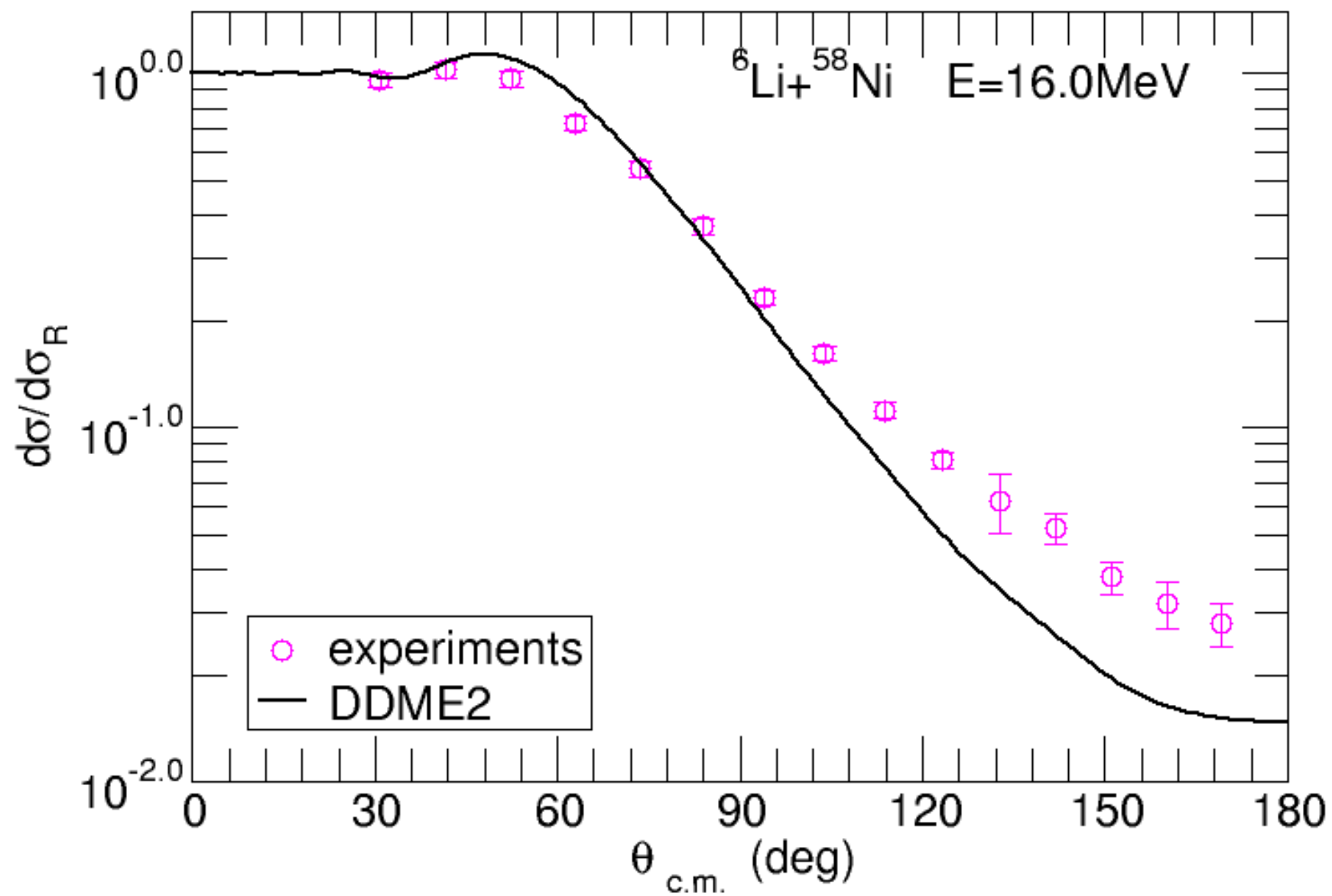


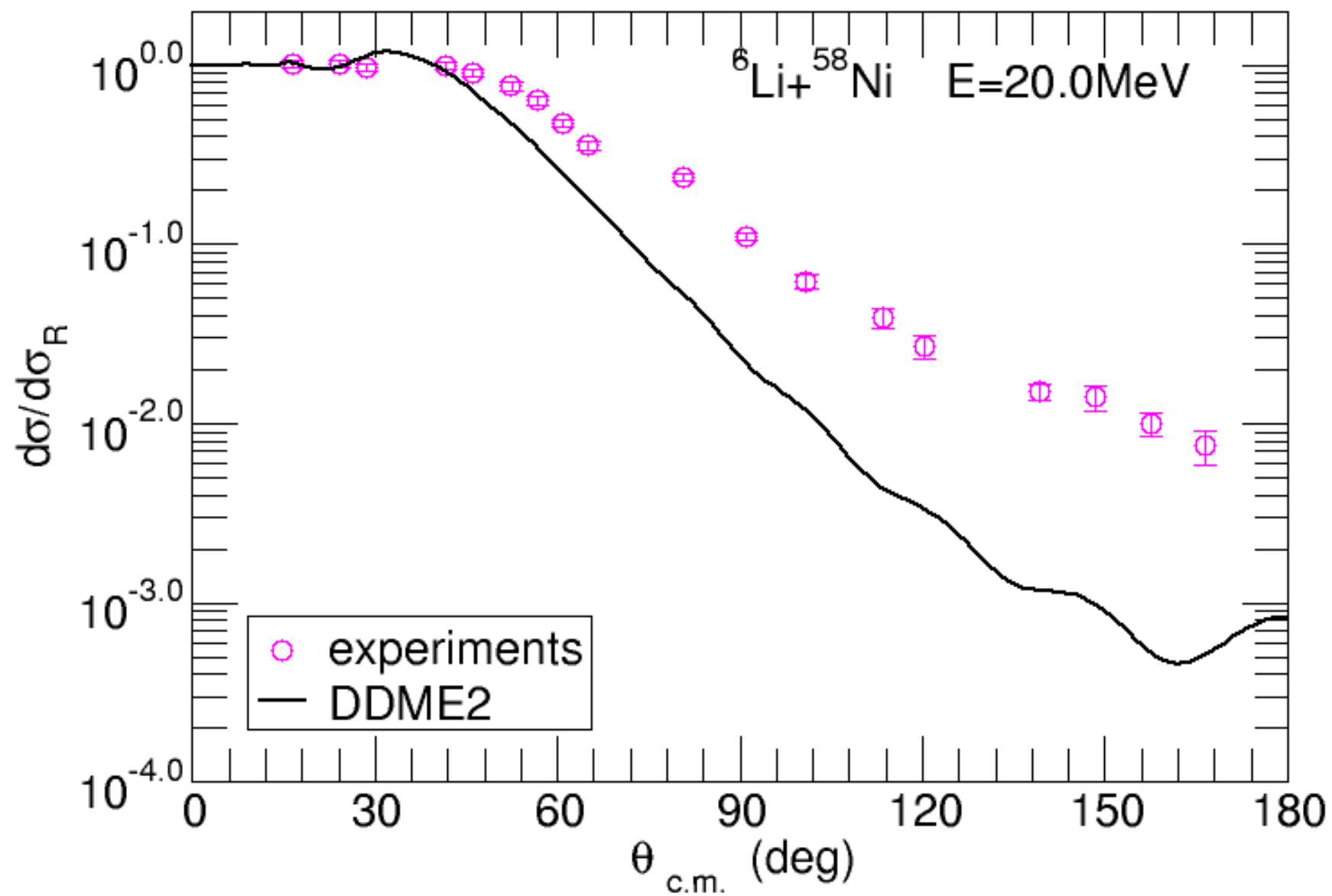


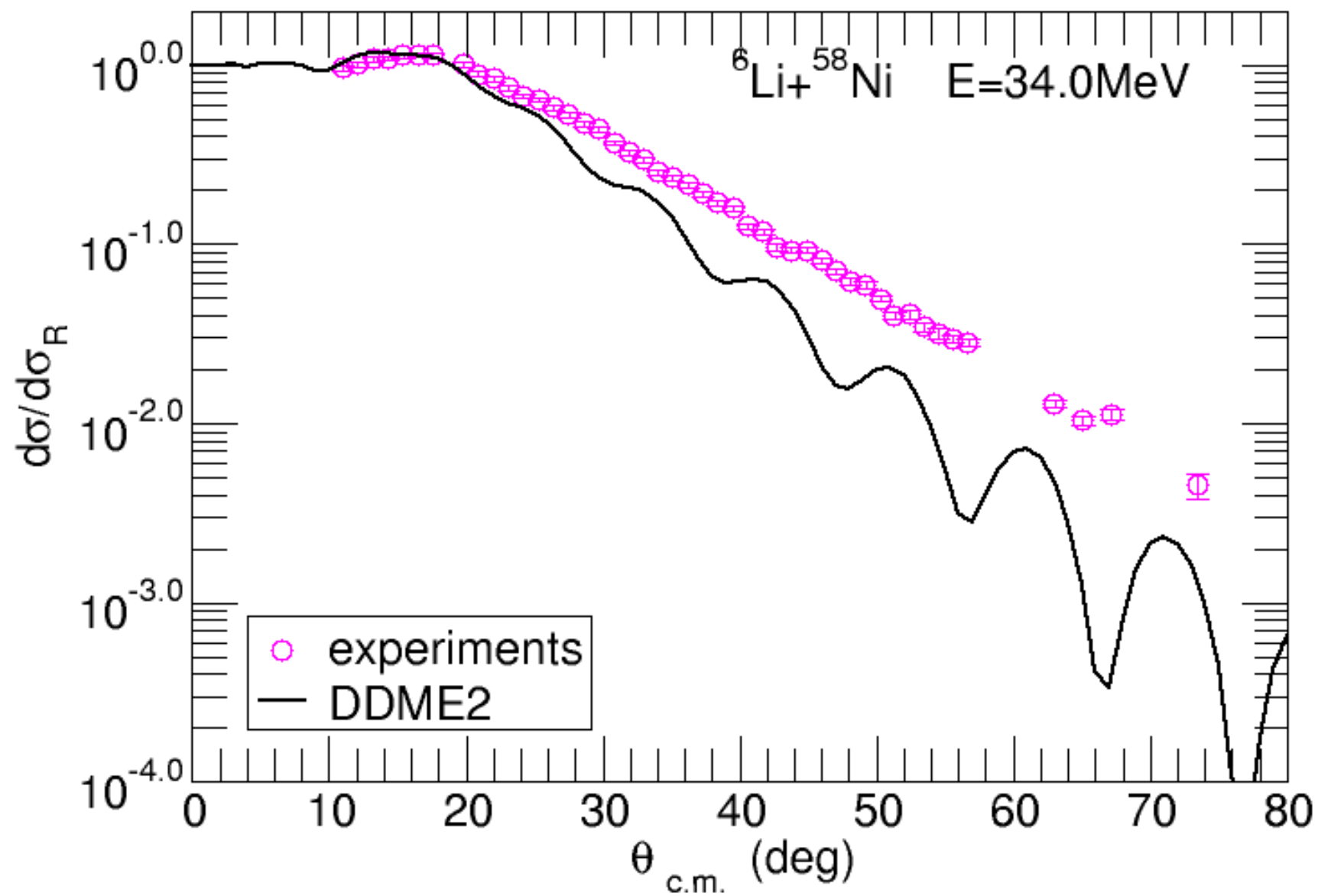
Li6+Ni58

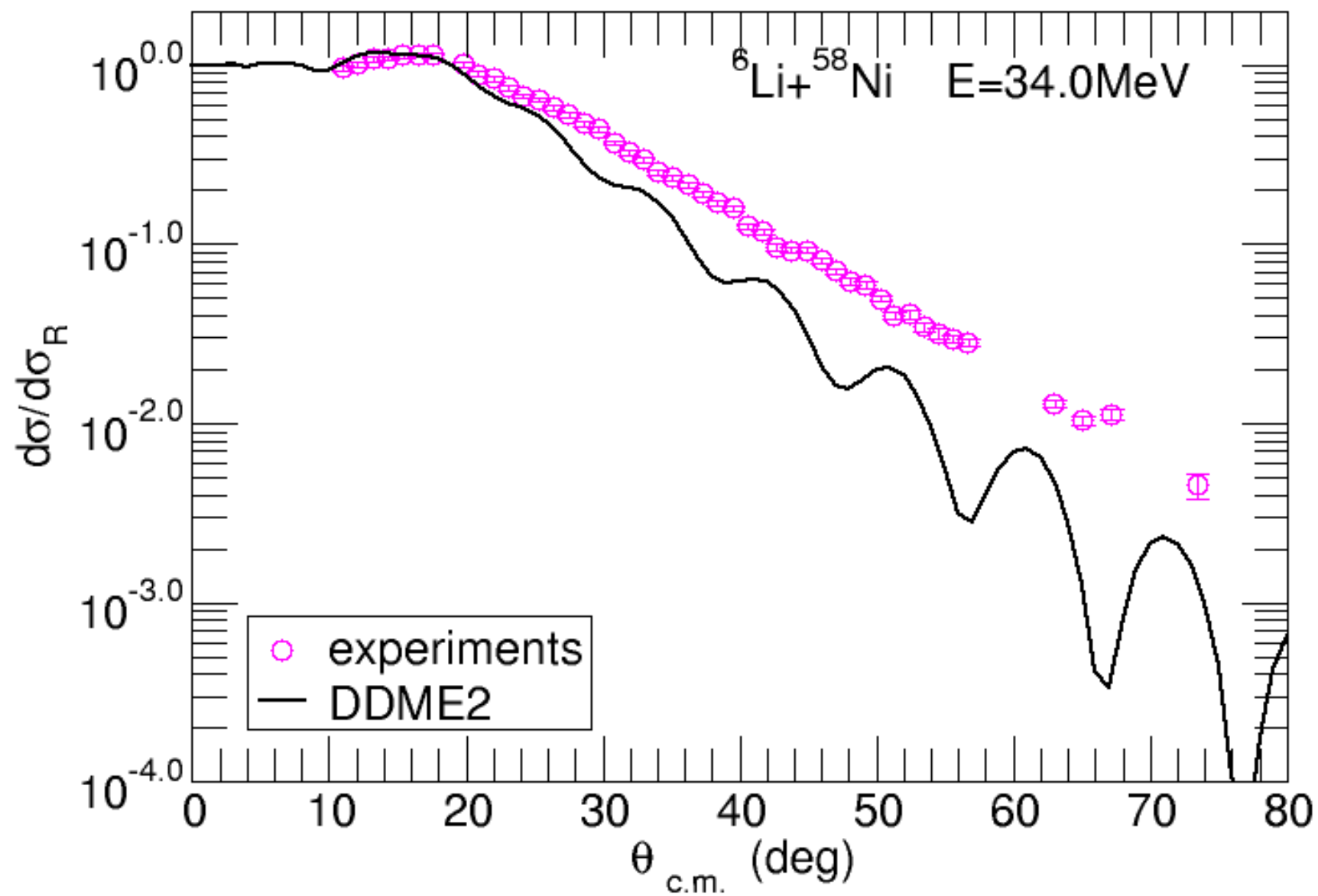


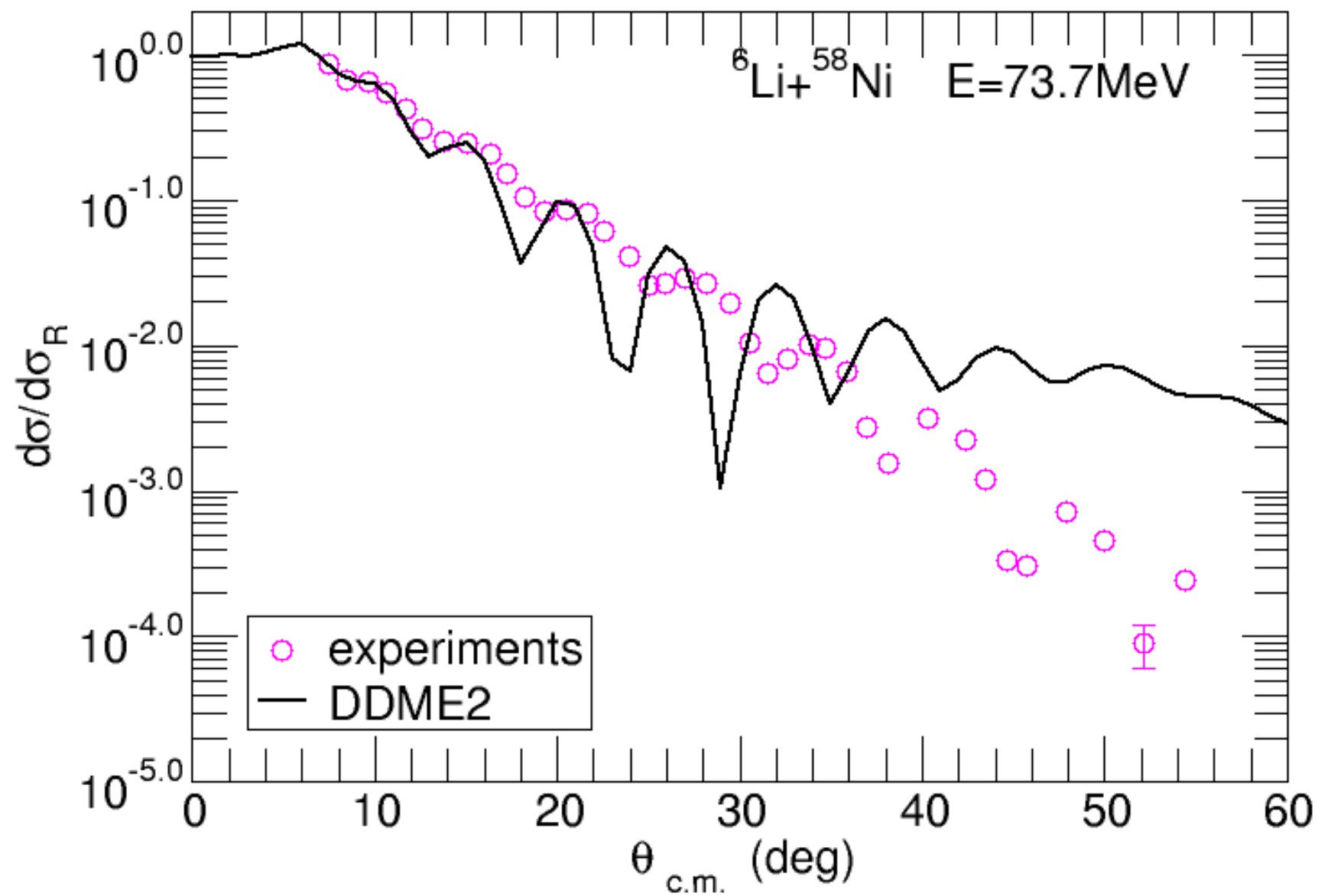


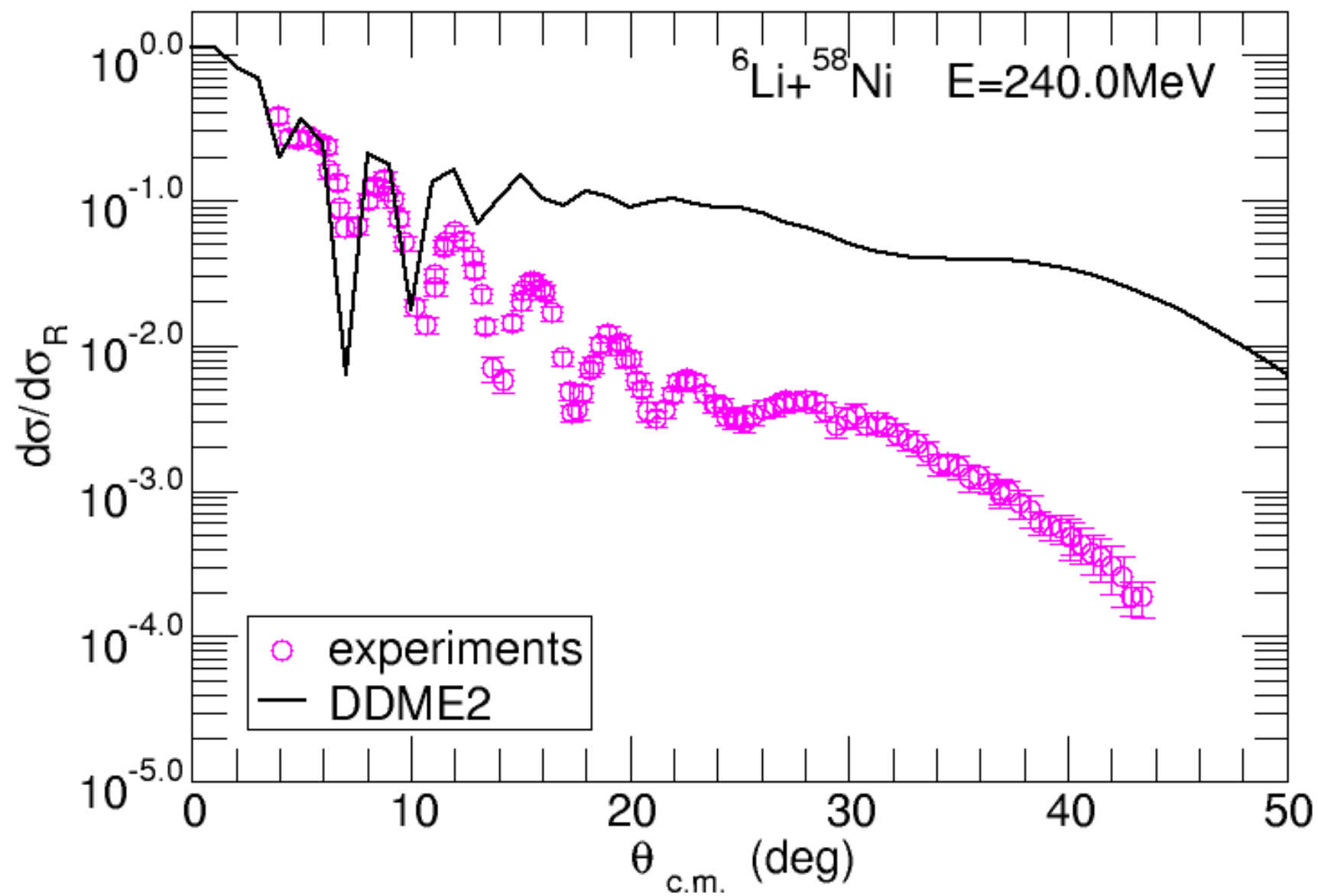




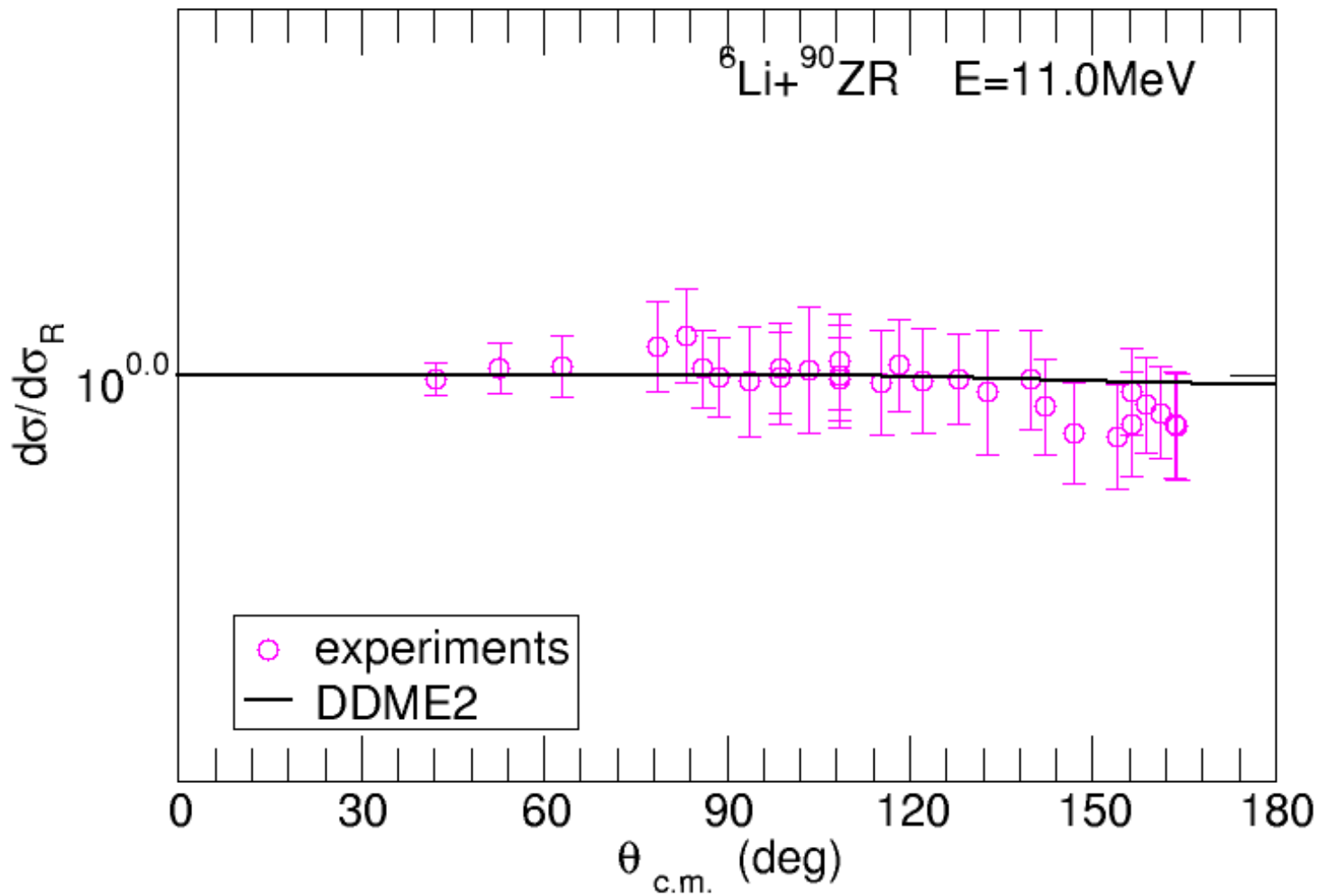


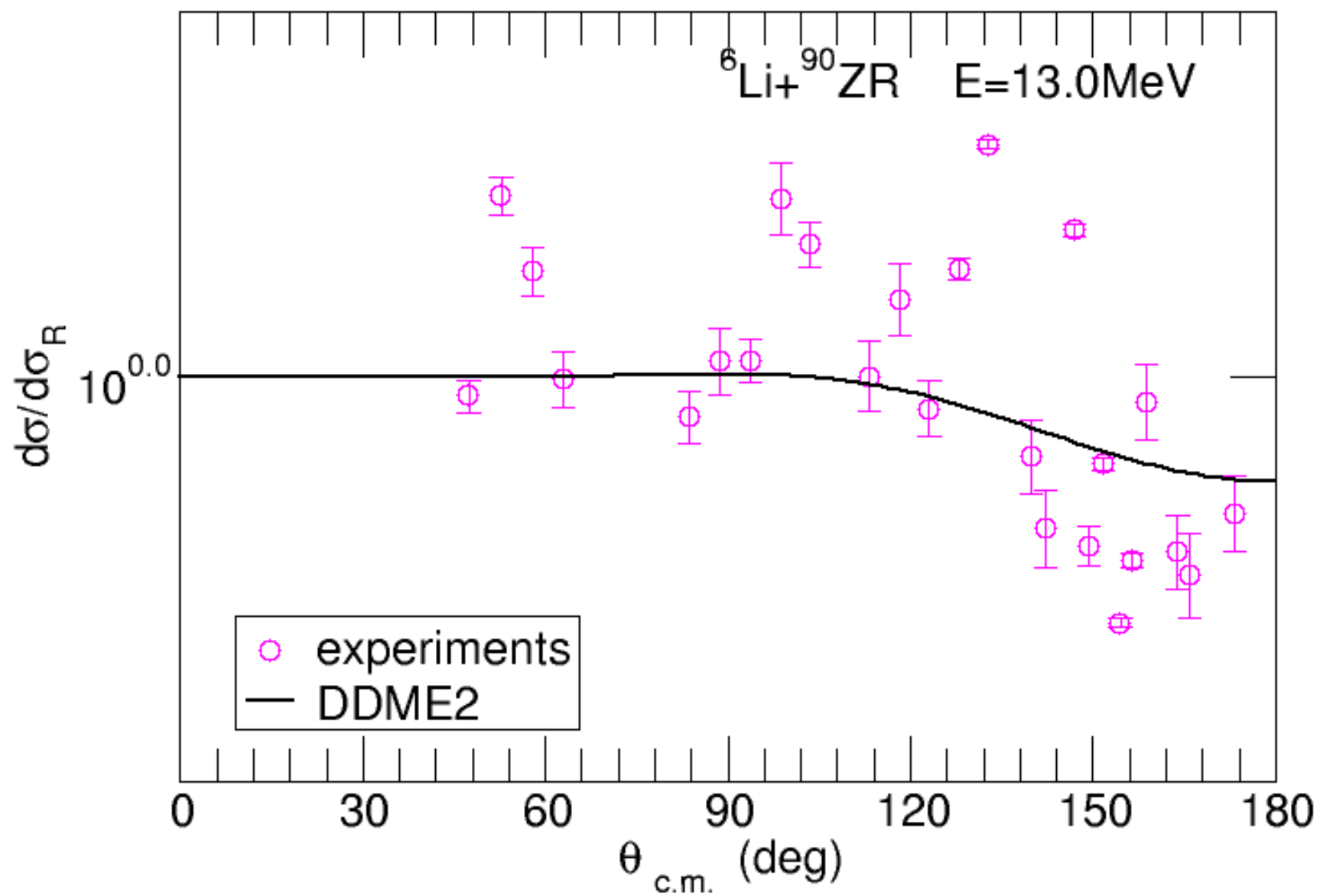


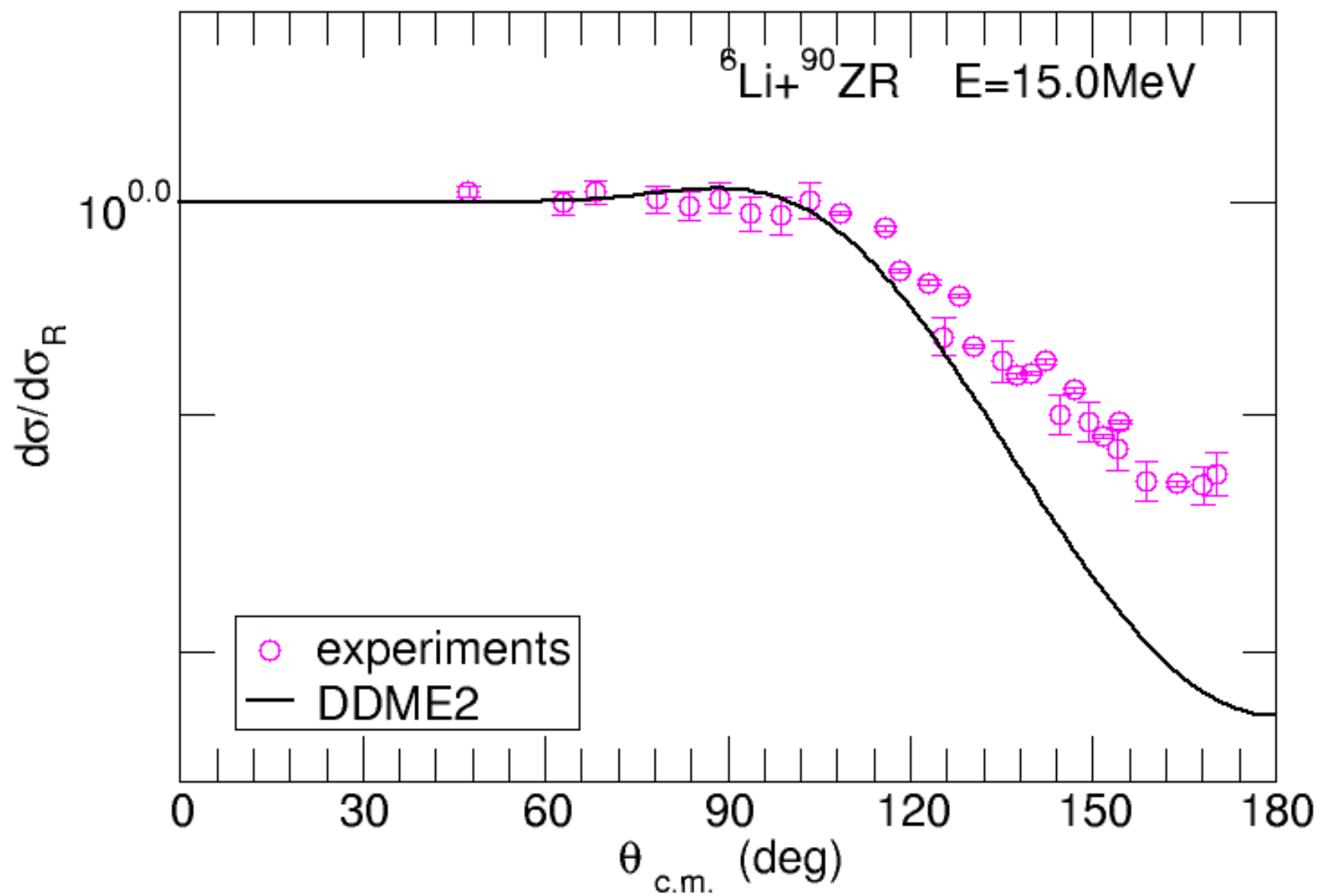


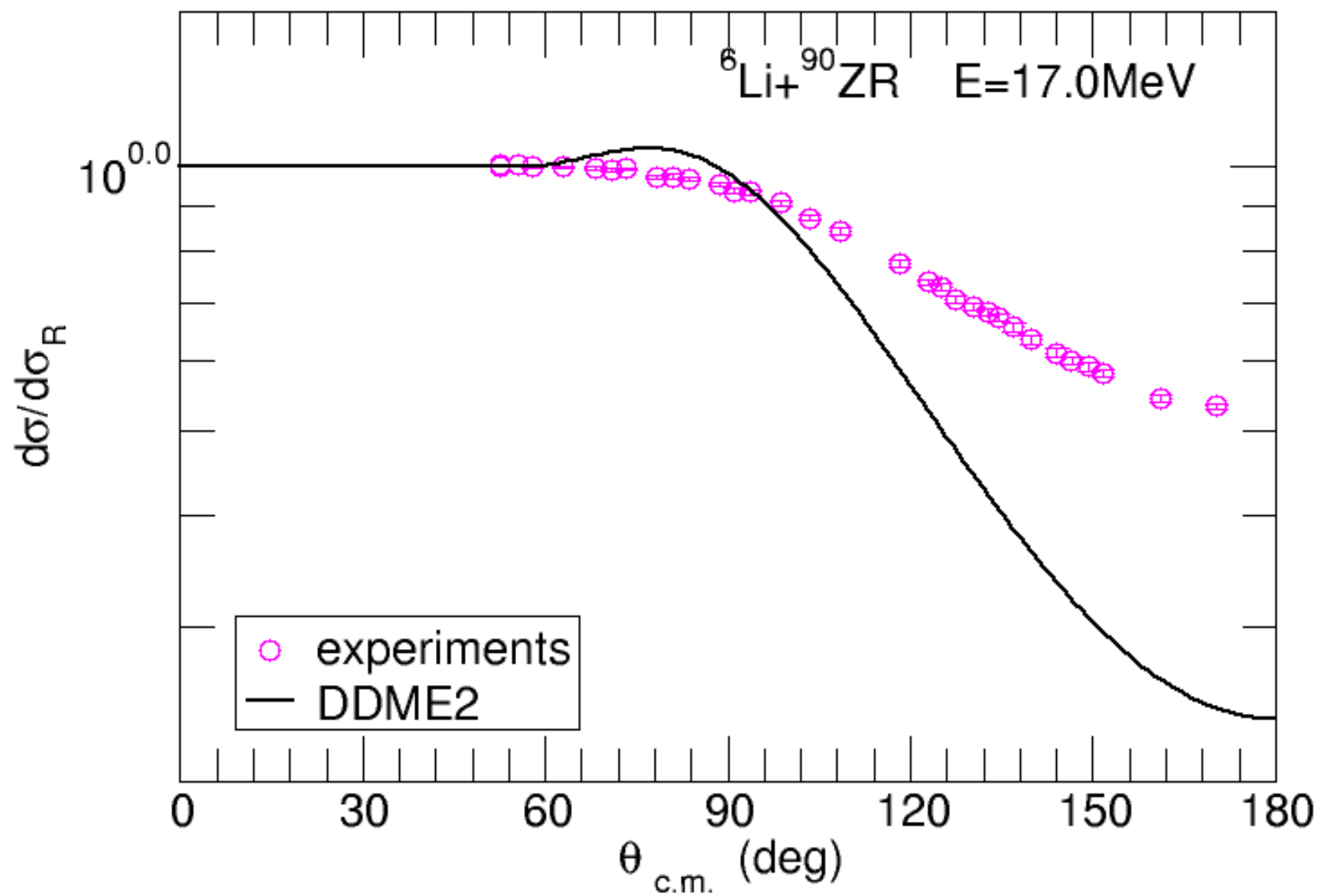


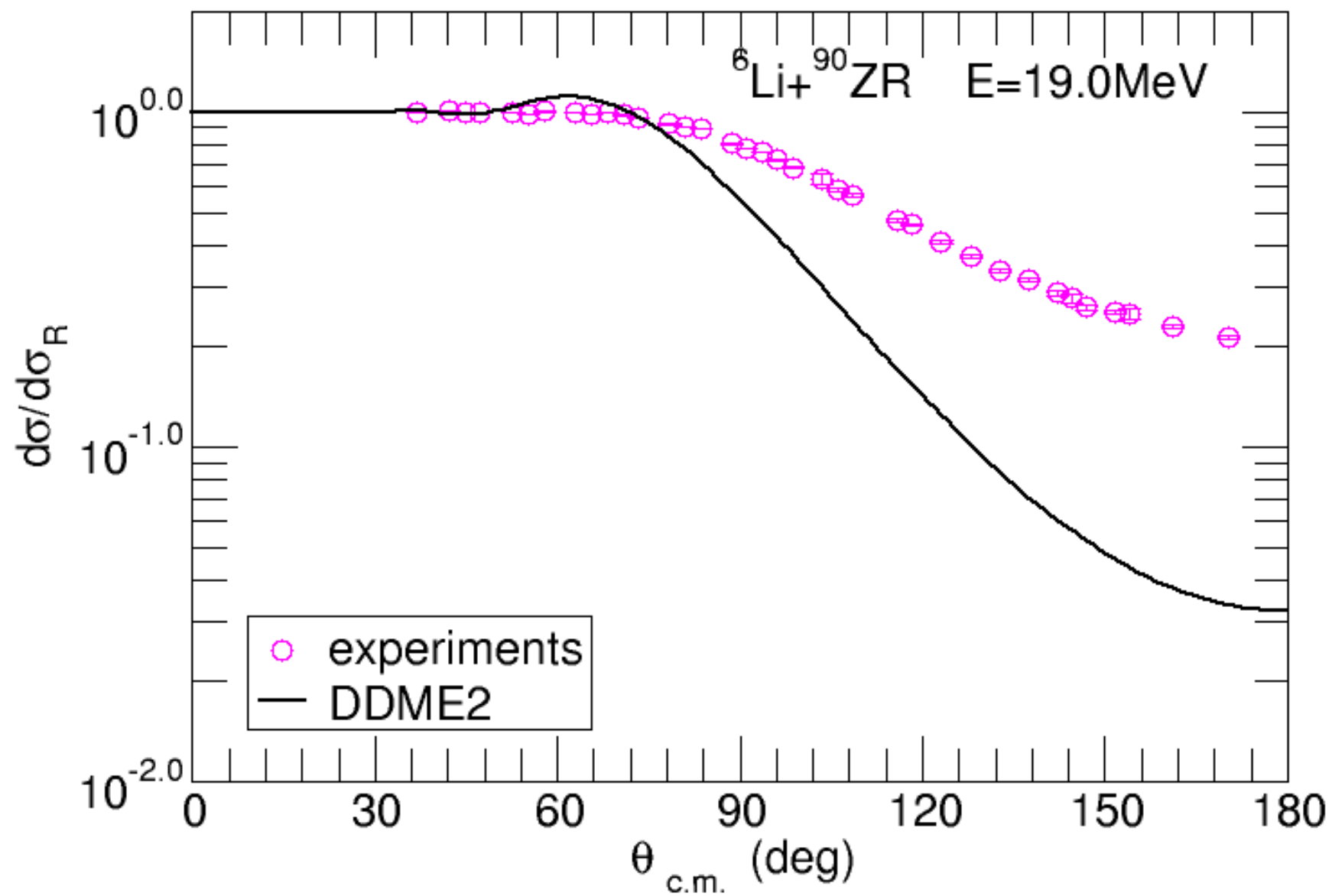
Li6+ZR90

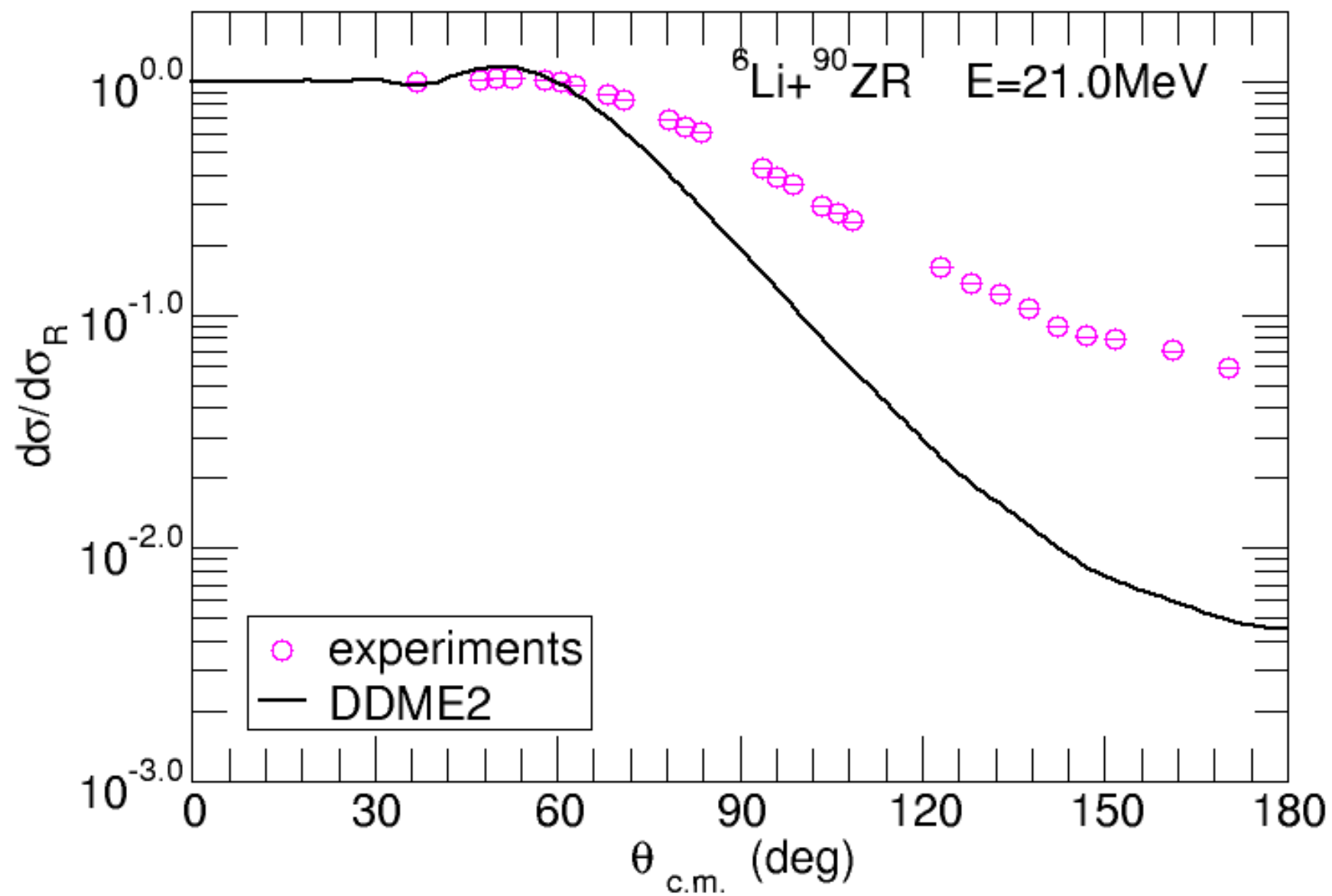


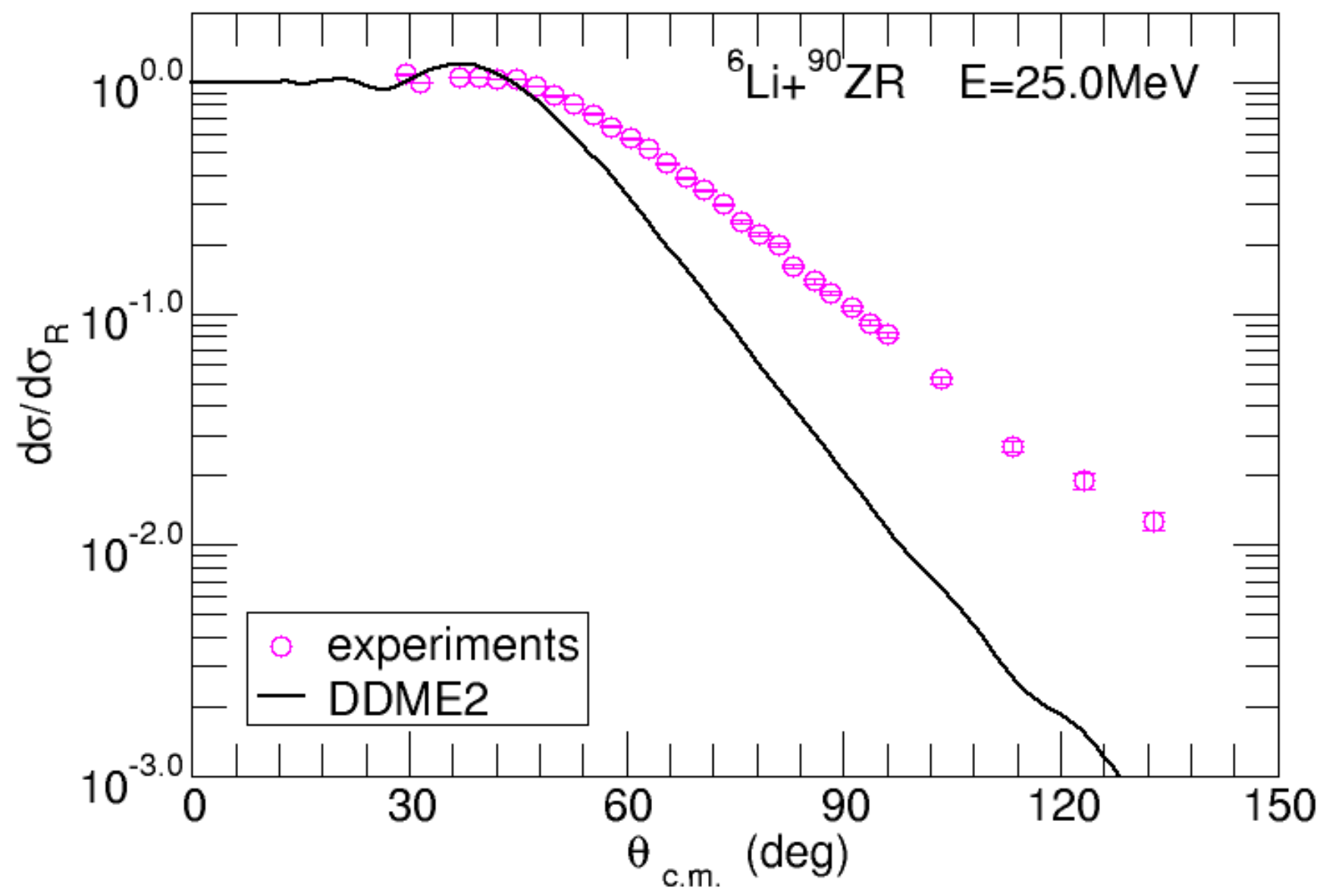


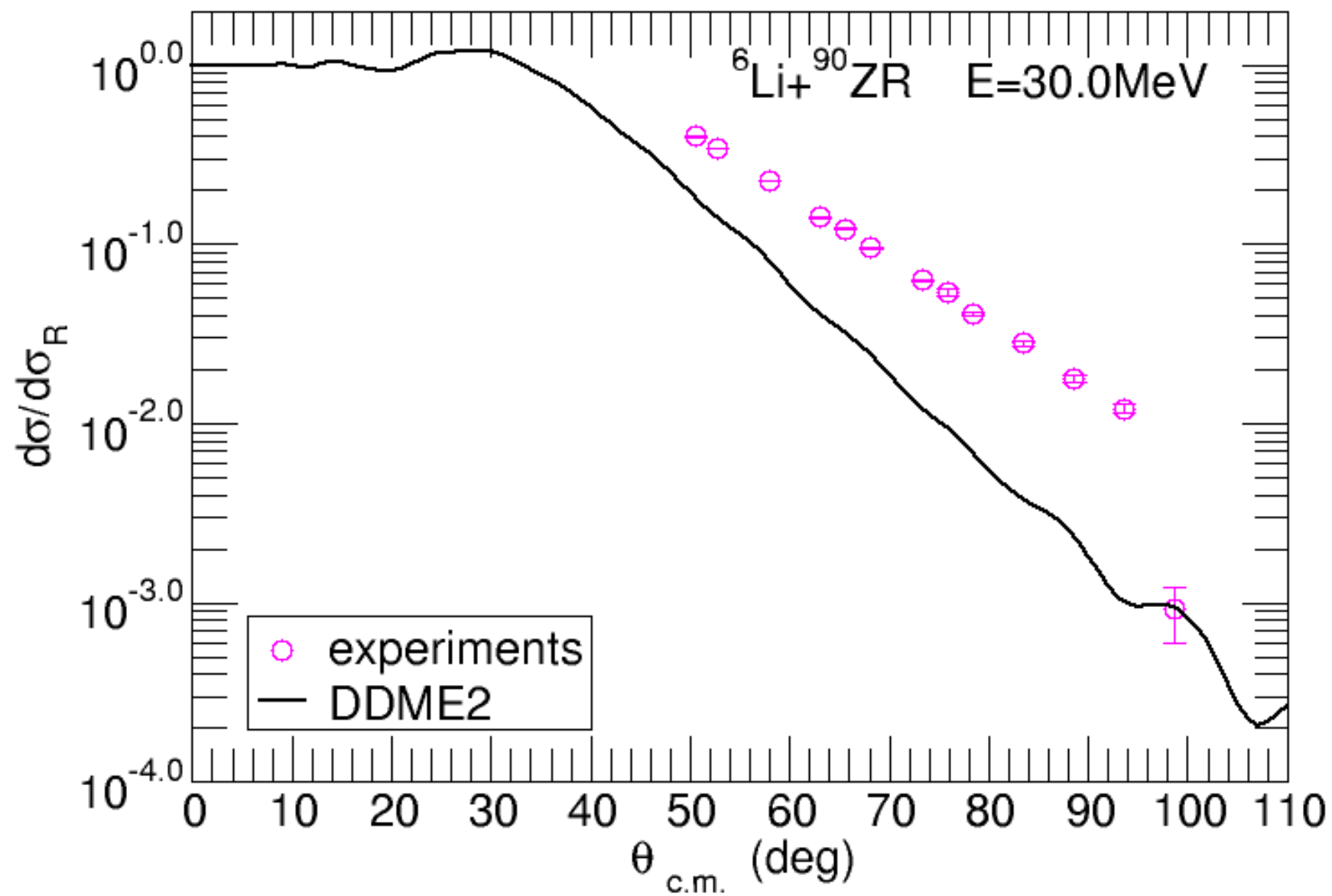


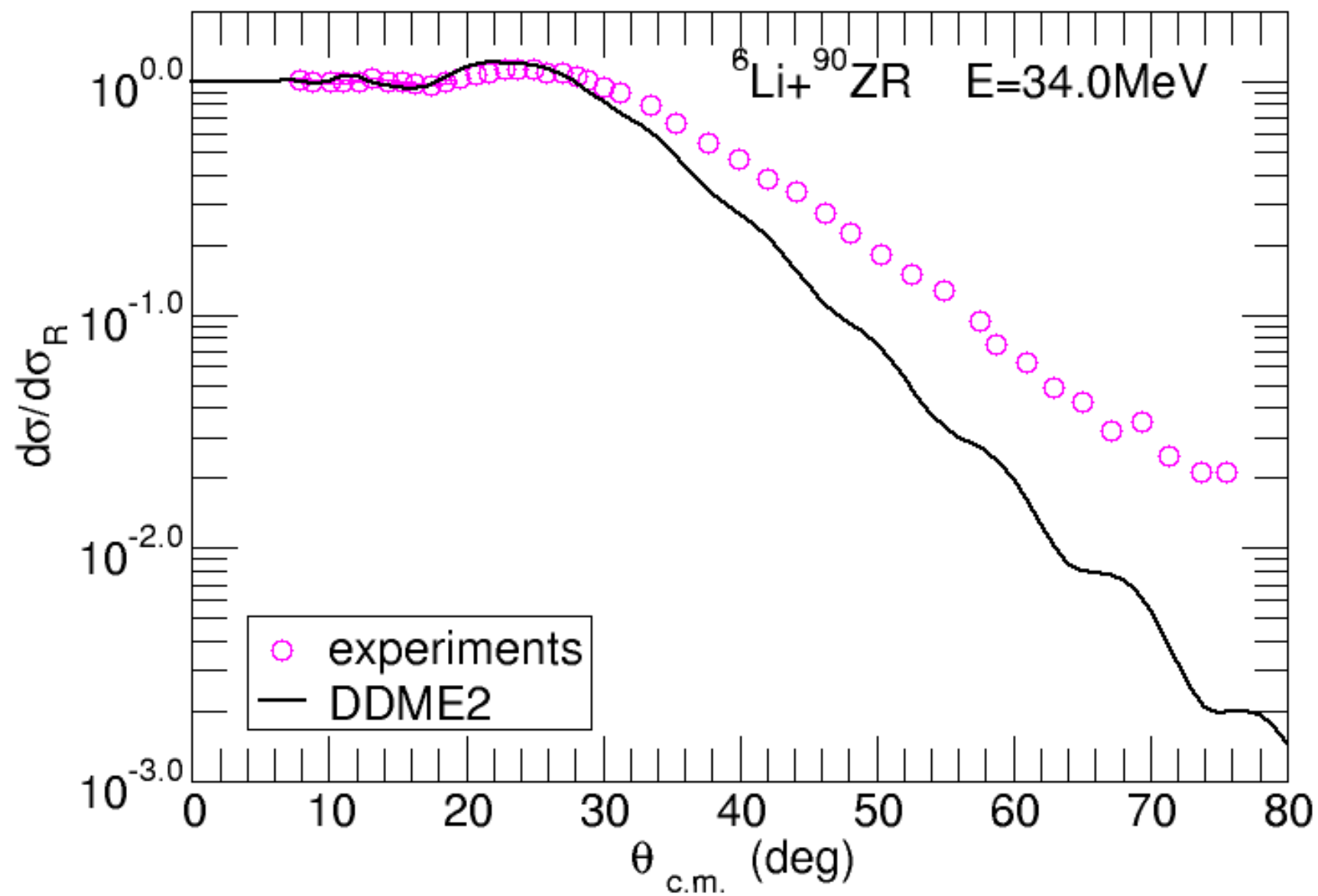


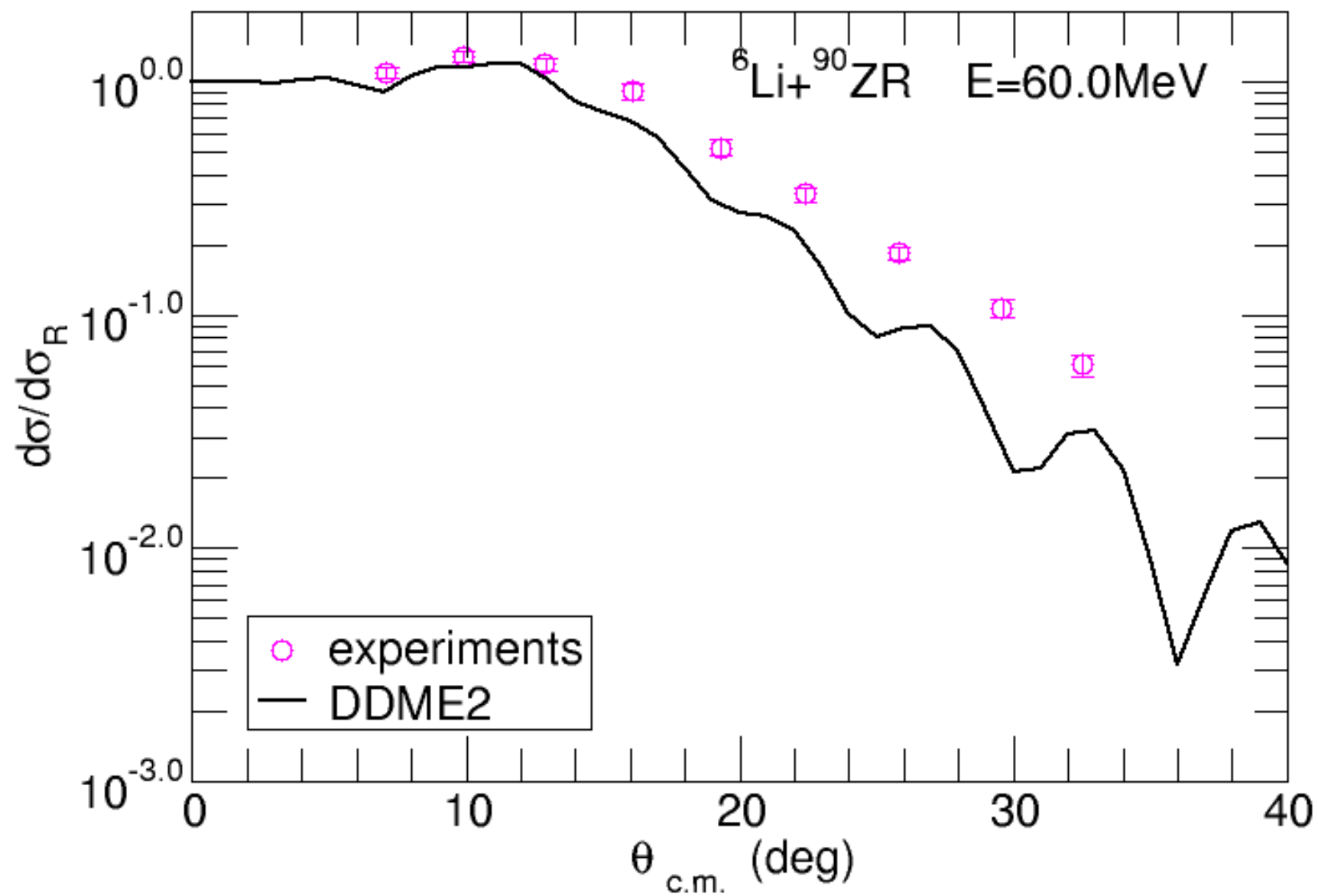


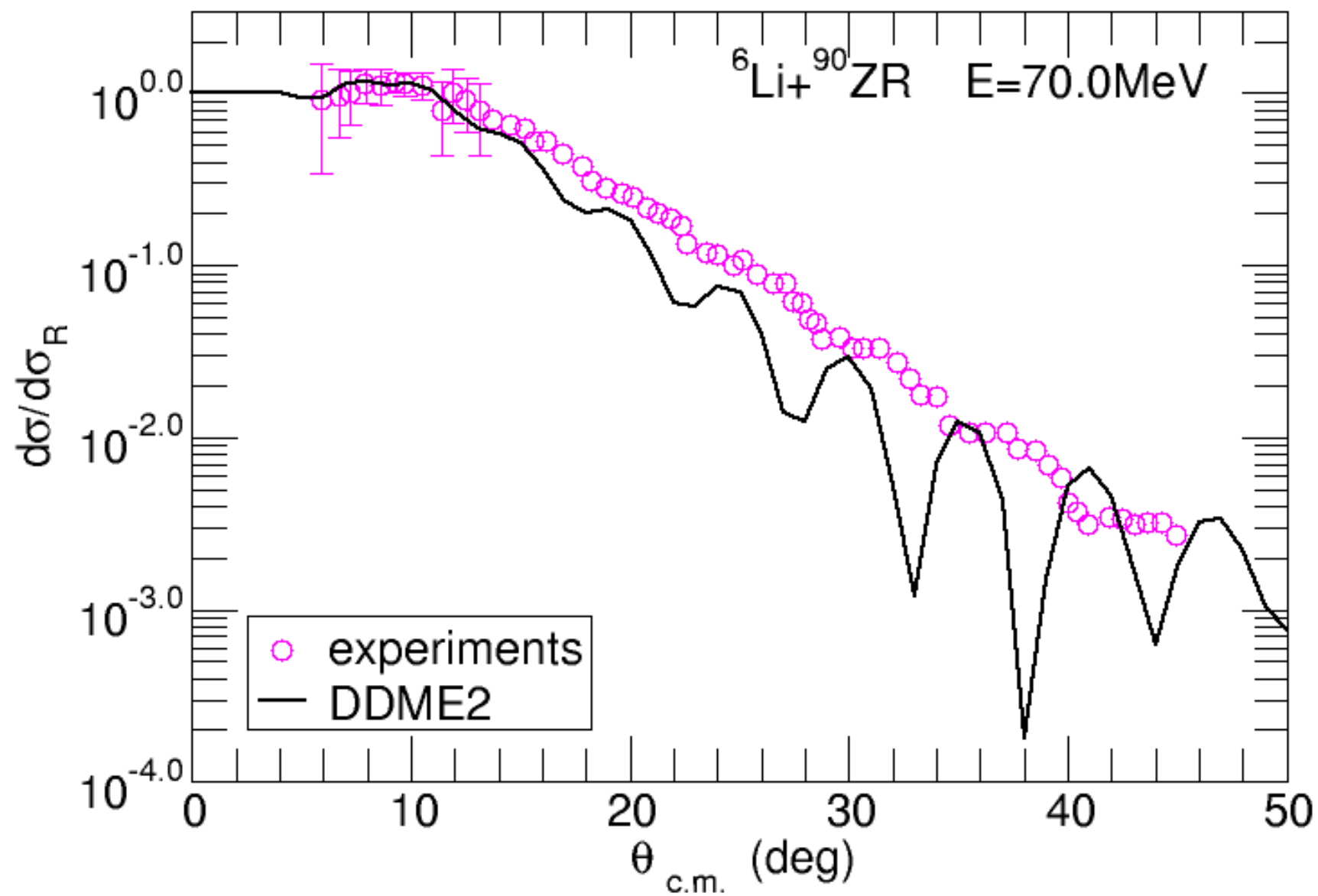


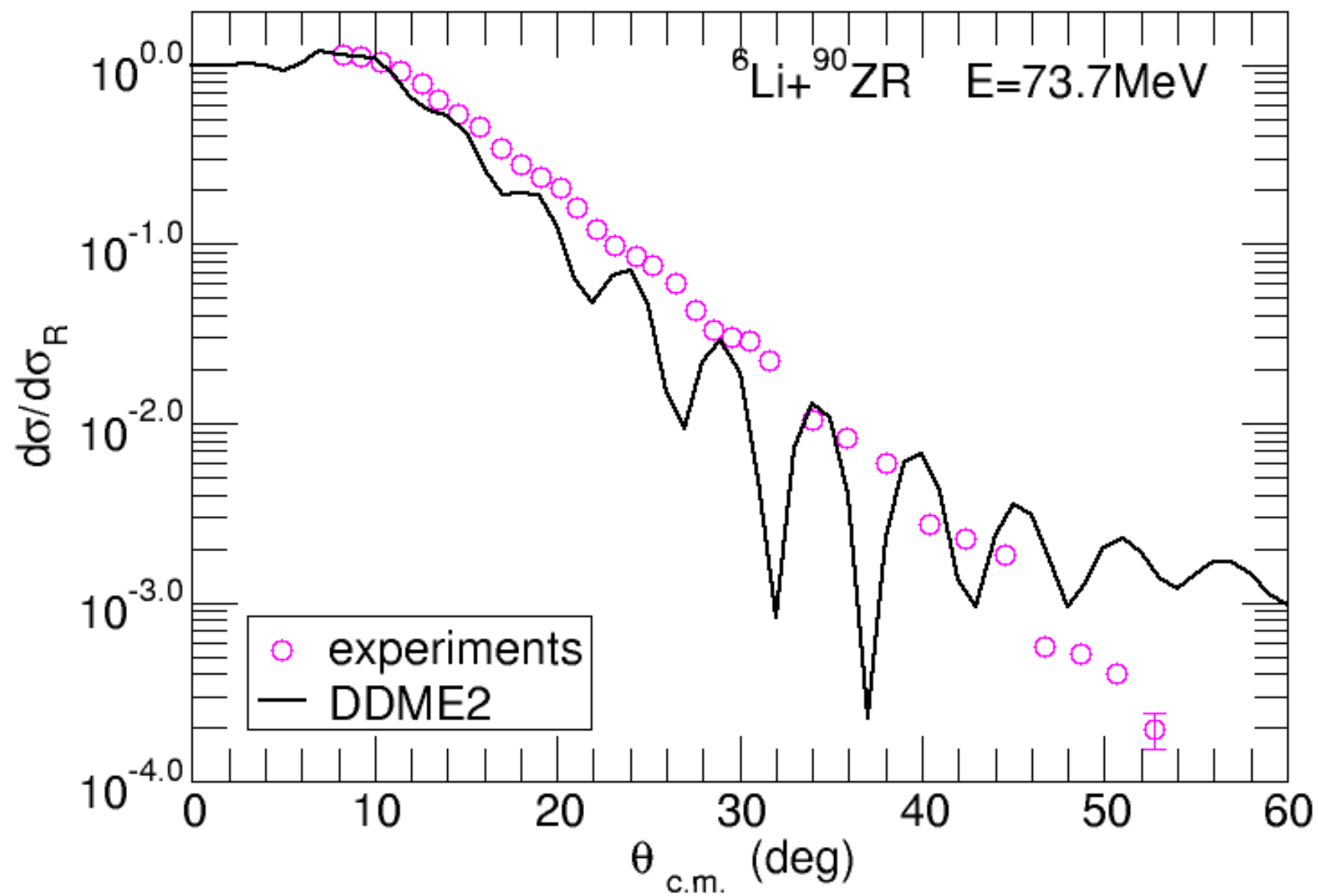


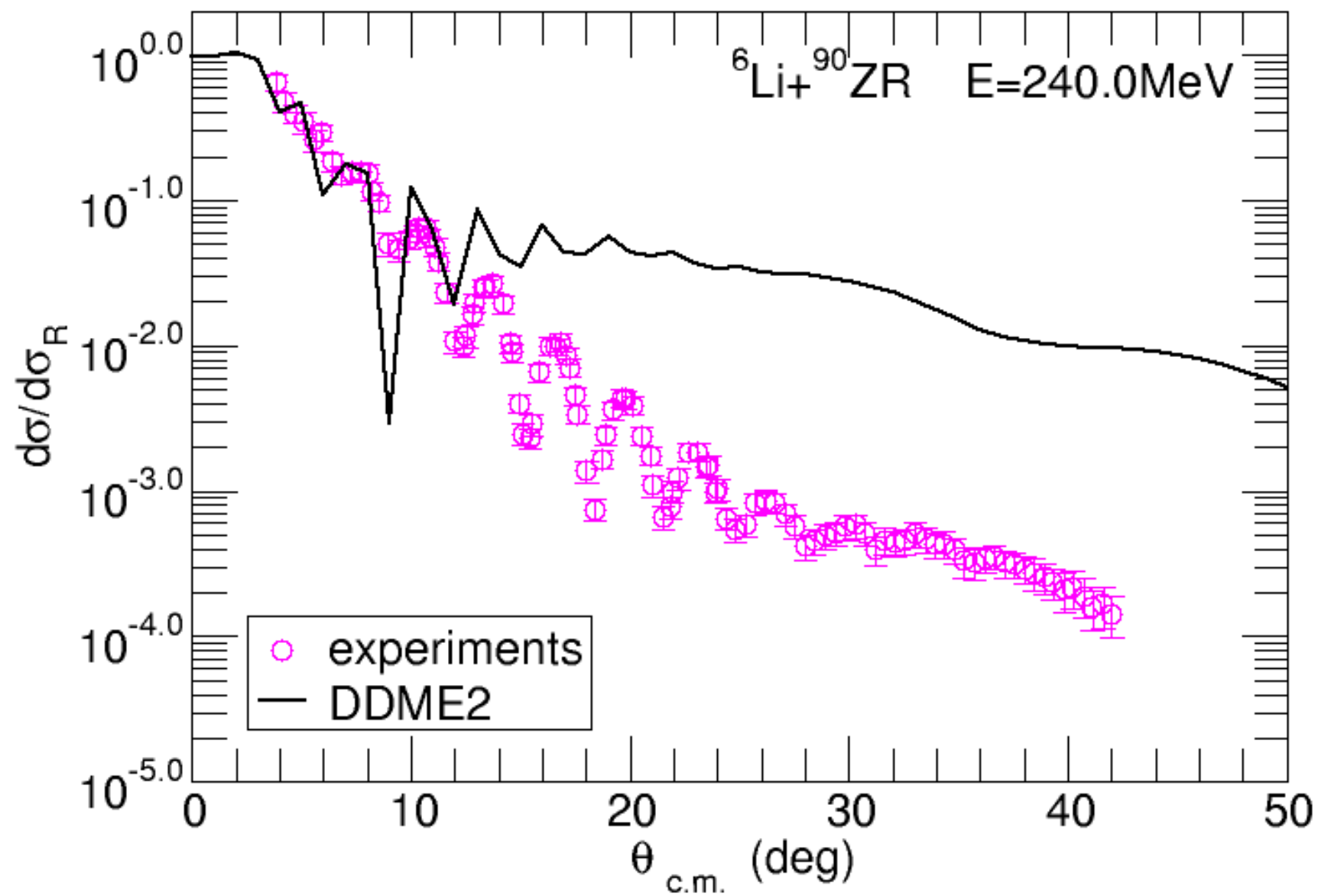












Li6+P208

