

Student name: \_\_\_\_\_ Date: \_\_\_\_\_ [tab-a020]

**[Exercise]**

- Fill again the table of splittings on the simulator but changing the order of the two larger constants, that is,  $a_H^{2,2',6,6'} = 2 \cdot a_H^{4,4'}$ . Simulate the new spectrum (simulation 2).
- Measure the heights of the central lines of each quintete and the total length of the spectrum.
- Complete the Table the intensities measured for both spectra.
- Enclosed the result in the laboratory notebook.

**Intensities Table 3. Biphenyl anion radical [a020].**

Simulation 1 ( $a_H^{4,4'} = 2 \cdot a_H^{2,2',6,6'}$ )

L (spectrum) = ..... mT.

Intensities of the central lines of the <b>nine</b> quintets									
	Peak-1	Peak-2	Peak-3	Peak-4	Peak-5	Peak-6	Peak-7	Peak-8	Peak-9
Pixels									
Normalized <sup>a</sup>									
Theoretical <sup>b</sup>									

Simulation 2 ( $a_H^{2,2',6,6'} = 2 \cdot a_H^{4,4'}$ )

L (spectrum) = ..... mT.

Intensities of the central lines of the <b>eleven</b> quintets											
	Peak-1	Peak-2	Peak-3	Peak-4	Peak-5	Peak-6	Peak-7	Peak-8	Peak-9	Peak-10	Peak-11
Pixels											
Normalized <sup>a</sup>											
Theoretical <sup>c</sup>											

<sup>a</sup> Normalize the intensities so that the smallest one will worth the unit.

<sup>b</sup> Theoretical intensities given in section 8.1.10.

<sup>c</sup> Deduce the theoretical intensities and write them down.