jv_spec.dat is divided in 3 main parts:
I. Cross-sections and quantum yields for photolysis
II. Declaration of pressure-dependencies
III. Scattering

•I. Cross-sections and quantum yields

The section begins by giving the number of species for photolysis, the number of wavelengths used and the column indexes where are the values for the wavelenghts we are interested in:

```
NW-JValues   29    7    1    7     NJVAL, NWWW, NW1:NW2
```

w-beg, w-end and w-eff are the values of the different wavelengths windows considered:

```
w-beg (nm)    289.00    298.25    307.45    312.45    320.30    345.00    412.45
w-end (nm)    298.25    307.45    312.45    320.30    345.00    412.45    850.00
w-eff (nm)      294.      303.      310.      316.      333.      380.      574.
```

Parameter values for Earth:

```
SOL#/cm2/s 5.882E+14 7.686E+14 5.046E+14 8.906E+14 3.854E+15 1.548E+16 2.131E+17
Raylay cm2 6.131E-26 5.422E-26 4.923E-26 4.514E-26 3.643E-26 2.087E-26 3.848E-27
BCarb m2/g     10.08      9.96      9.87      9.79      9.58      9.00      6.50
```

Then the values for each specie follow. The columns in the table are as follows:
Name of specie / temperature / values for different wavelengths.

The name should correspond to the last column of ratj.d.
The first three species should be O2, O3 and O3_1d.
Values for O2, O3 and O3_1d are given for three different temperatures, values for other species are only given for two different temperatures.

At the end of the species list, it should appear the lines:

```
Q1A-Ac 240 1.000E+00 1.207E+00 4.133E+00 2.498E+01 9.452E+01 1.000E+02 1.000E+02
Q1A-Ac 300 1.006E+00 1.223E+00 2.411E+00 6.656E+00 1.969E+01 2.100E+01 2.100E+01
Q1B-Ac 240 1.028E+00 1.066E+01 5.202E+01 2.632E+02 2.760E+03 3.210E+03 3.210E+03
Q1B-Ac 300 8.792E-01 4.897E+00 1.617E+01 5.268E+01 3.023E+02 3.420E+02 3.420E+02
```

Q1A-Ac and Q1B-Ac are not chemical species. They are factors for the pressure-dependency scheme for AcetA and AcetB (from FAST-JX v6.4). They are not counted for in NJVAL.

•II. Pressure-dependency declaration.

Some species have J values depending on pressure. 4 different schemes are currently in use in GEOS-Chem. See more details in JRATET.f.

For each specie with a pressure-dependency, you need to give:
the name of the specie, the pressure-dependency type (integer from 1 to 4), the coefficient values for different wavelengths.

GEOS-Chem uses a formatted read to read these lines so the number of spaces is important.
The format used is:
`FORMAT(A7,2x,I1,7E10.3)`

Pressure-dependency types (see details in JRATET.f):
---
1. Scheme used for MeCOVi, EtCOMe and MeCOCHO.
2. Scheme used for AcetA.
3. Scheme used for AcetB.
4. Only for dicarbonyl chemistry. See with May Fu (cetmfu@polyu.edu.hk) for more information.

•III. Scattering

This part is self-explained. A header for each column is written at the beginning of the section.