In the following, we use the notation and equation numbers of the paper "S.-J. Matsubara-Heo, N.Takayama, Algorithms for Pfaffian Systems and Cohomology Intersection Numbers of Hypergeometric Integrals, proceedings of ICMS 2020". In loc. cit., some equations are wrong due to an error in the previous version of the file "saito-b.rr".

2021/10/03 Henrik Munch in Padova University kindly pointed out a mistake in the previous version of Errata-en.pdf. Equation (32) in loc. cit. is correct but what is incorrect is Equation (31). We would like to thank him.

1 Equation (31)

P_4 should be

$$P_4 = \begin{pmatrix} 0 & \frac{\beta_2}{z_4-1} \\ \frac{-\beta_3}{z_4} & \frac{(\beta_2+\beta_3)z_4+\beta_1-\beta_3}{z_4^2-z_4} \end{pmatrix}.$$

2 Example 3, 4

P_1 should be

$$P_1 = \begin{pmatrix} \frac{\beta_4 z_1+\beta_2+\beta_3-\beta_4-\beta_5}{z_1^2-z_1} & \frac{\beta_3\beta_1+\beta_3\beta_2-\beta_4\beta_3}{\beta_1 z_1^2-\beta_1 z_1} & \frac{\beta_2^2+(-\beta_4-\beta_5-1)\beta_2}{\beta_1 z_1^2-\beta_1 z_1} \\ \frac{(\beta_2+\beta_3-\beta_5)\beta_1}{\beta_3 z_1-\beta_3} & \frac{\beta_1 z_1+\beta_2-\beta_4}{z_1^2-z_1} & \frac{\beta_2^2+(-\beta_4-\beta_5-1)\beta_2}{\beta_3 z_1^2-\beta_3 z_1} \\ \frac{(-\beta_2-\beta_3+\beta_5)\beta_1}{\beta_2 z_1-\beta_2} & \frac{-\beta_3\beta_1-\beta_3\beta_2+\beta_4\beta_3}{\beta_2 z_1-\beta_2} & \frac{-\beta_2+\beta_4+\beta_5+1}{z_1-1} \end{pmatrix},$$

or, setting $(\beta_1, \beta_2, \beta_3, \beta_4, \beta_5) = (-\gamma_1, -\gamma_2, -\gamma_3, -c_1, -c_2)$,

$$P_1 = \begin{pmatrix} \frac{-c_1 z_1-\gamma_2-\gamma_3+c_1+c_2}{z_1^2-z_1} & \frac{-\gamma_3\gamma_1-\gamma_3\gamma_2+c_1\gamma_3}{\gamma_1 z_1^2-\gamma_1 z_1} & \frac{-\gamma_2^2+(c_1+c_2-1)\gamma_2}{\gamma_1 z_1^2-\gamma_1 z_1} \\ \frac{(-\gamma_2-\gamma_3+c_2)\gamma_1}{\gamma_3 z_1-\gamma_3} & \frac{-\gamma_1 z_1-\gamma_2+c_1}{z_1^2-z_1} & \frac{-\gamma_2^2+(c_1+c_2-1)\gamma_2}{\gamma_3 z_1^2-\gamma_3 z_1} \\ \frac{(\gamma_2+\gamma_3-c_2)\gamma_1}{\gamma_2 z_1-\gamma_2} & \frac{\gamma_3\gamma_1+\gamma_3\gamma_2-c_1\gamma_3}{\gamma_2 z_1-\gamma_2} & \frac{\gamma_2-c_1-c_2+1}{z_1-1} \end{pmatrix}.$$

The normalized cohomology intersection matrix $\frac{1}{(2\pi\sqrt{-1})^2} I_{ch}$ should be given by

$$\begin{bmatrix} r_{11} & \frac{\beta_4+\beta_5}{(\beta_2-\beta_4-\beta_5)\beta_5\,\beta_4} & \frac{\beta_1\,\beta_4\,z_1+\beta_2\,\beta_4\,z_1-{\beta_4}^2 z_1-\beta_4\,\beta_5\,z_1-\beta_5\beta_3}{(\beta_2-\beta_4-\beta_5+1)(\beta_2-\beta_4-\beta_5)\beta_5\,\beta_4} \\ \frac{\beta_4+\beta_5}{(\beta_2-\beta_4-\beta_5)\beta_5\,\beta_4} & r_{22} & -\frac{\beta_1\,\beta_4\,z_1-\beta_5\,\beta_2-\beta_5\,\beta_3+\beta_5\,\beta_4+{\beta_5}^2}{(\beta_2-\beta_4-\beta_5+1)(\beta_2-\beta_4-\beta_5)\beta_5\,\beta_4} \\ \frac{\beta_1\,\beta_4\,z_1+\beta_2\,\beta_4\,z_1-{\beta_4}^2 z_1-\beta_4\,\beta_5\,z_1-\beta_5\,\beta_3}{(\beta_2-\beta_4-\beta_5-1)(\beta_2-\beta_4-\beta_5)\beta_5\,\beta_4} & -\frac{\beta_1\,\beta_4\,z_1-\beta_5\,\beta_2-\beta_5\,\beta_3+\beta_5\,\beta_4+{\beta_5}^2}{(\beta_2-\beta_4-\beta_5-1)(\beta_2-\beta_4-\beta_5)\beta_5\,\beta_4} & r_{33} \end{bmatrix},$$

where we set

$$r_{11} := -\frac{\beta_1\,\beta_2\,\beta_4+\beta_1\,\beta_3\,\beta_4+\beta_1\,\beta_3\,\beta_5+\beta_4\,{\beta_2}^2+\beta_2\,\beta_3\,\beta_4-\beta_2\,{\beta_4}^2-\beta_2\,\beta_4\,\beta_5-\beta_3\,{\beta_4}^2-\beta_5\,\beta_4\,\beta_3}{\beta_5\,\beta_4\,(\beta_2-\beta_4-\beta_5)\,(\beta_2+\beta_3-\beta_5)\,\beta_1},$$

$$r_{22} := -\frac{\beta_1\,\beta_2\,\beta_5+\beta_1\,\beta_3\,\beta_4+\beta_1\,\beta_3\,\beta_5-\beta_1\,\beta_4\,\beta_5-\beta_1\,{\beta_5}^2+\beta_5\,{\beta_2}^2+\beta_2\,\beta_3\,\beta_5-\beta_2\,\beta_4\,\beta_5-\beta_2\,{\beta_5}^2}{\beta_3\,(\beta_1+\beta_2-\beta_4)\,(\beta_2-\beta_4-\beta_5)\,\beta_5\,\beta_4},$$

$$r_{33} := -\frac{\alpha_0 z_1^2-2\,\beta_1\,\beta_3\,\beta_4\,\beta_5\,z_1+\alpha_2}{(\beta_2-\beta_4-\beta_5-1)\,(\beta_2-\beta_4-\beta_5+1)\,\beta_2\,(\beta_2-\beta_4-\beta_5)\,\beta_5\,\beta_4},$$

$$\alpha_0 := {\beta_1}^2\beta_2\,\beta_4 - {\beta_1}^2\beta_4\,\beta_5 + \beta_1\,{\beta_2}^2\beta_4 - \beta_1\,\beta_2\,{\beta_4}^2 - 2\,\beta_1\,\beta_2\,\beta_4\,\beta_5 + \beta_1\,{\beta_4}^2\beta_5 + \beta_1\,\beta_4\,{\beta_5}^2,$$

and

$$\alpha_2 := {\beta_2}^2\beta_3\,\beta_5 + \beta_2\,{\beta_3}^2\beta_5 - 2\,\beta_5\,\beta_4\,\beta_3\,\beta_2 - \beta_2\,\beta_3\,{\beta_5}^2 - {\beta_3}^2\beta_4\,\beta_5 + \beta_3\,{\beta_4}^2\beta_5 + \beta_3\,\beta_4\,{\beta_5}^2.$$

$(1,1)$-entry is the same as the paper. However, other entries are also modified slightly.

3 Example 5

We can fully compute P_2, P_3 in a few minutes and the formulas are much simpler. The $(1,1)$-entry of P_2 is

$$\frac{(b_2x_2^2 + 8b_1 - 4b_2 - 8b_3 + 4)x_3^2 + b_2x_2^4 + (8b_1 - 8b_2 - 4b_3 + 4)x_2^2 - 32b_1 + 16b_2 + 16b_3 - 16}{(x_2(x_2-2)(x_2+2)(x_3^2 + x_2^2 - 4)},$$

which is same as equation (46). However, other entries are slightly different.