ПРИЛОЖЕНИЕ 1

Значения констант, приведённых и используемых в параграфе 3.1

$$q_1=\frac{1-2\nu}{2\nu};\quad q_{00}=2-q_1^{-1};\quad q_{02}=\frac{r_1^2\cdot r_2^2}{r_2^2-r_1^2};\quad q_2=1-\frac{2}{q_{02}\ln r_1/r_2};$$

$$q_{01}=1-2\nu;\quad q_3=\frac{1+\nu}{3};\quad q_0^{'}=\ln r\frac{q_3}{\nu}-\frac{2q_3}{q_{01}}\left(\ln r+\frac{1}{2}\right);$$

$$q_4=\left(\frac{2}{q_{01}^3}-\frac{1}{\nu}\right)q_3;\quad q_5=\frac{4\nu-1}{2\nu};\quad q_6=\frac{4\nu(5\nu-1)}{q_{01}};\ q_7=\ln\frac{r_1}{r_2}\frac{q_{02}}{q_{01}}.$$

$$q_8^{'}=\frac{6\nu-1}{2\nu}\ln r+\frac{3}{2};\ q_9^{'}=\ln r\frac{1-4\nu}{2\nu}-\frac{1}{2};\ q_{16}=q_3\left(\frac{\ln r}{r}-\frac{2}{q_{01}}\left(\ln r+\frac{1}{2}\right)\right);$$

$$q_{04}=-\ln rq_5-\frac{1}{2};\ q_8=\frac{2}{r_1^2}+\ln r_1+\frac{1}{2};\ q_9=\frac{2(1-3\nu)}{q_{01}};$$

$$q_{10}=\left(\ln r_i+\frac{1}{2}\right)\frac{2q_3}{q_{01}};\ q_{11}=\left(2-3\nu-\frac{2(1-3\nu)}{4\nu-1}\right)\Big/4\nu; \qquad (n.1.1)$$

$$q_{12}=q_{10}\left((1-3\nu)\frac{q_1}{q_5}+q_3\right);\ q_{13}=(1-3\nu)\frac{q_1}{q_5};$$

$$q_{14}=(1-3\nu)\frac{q_1}{q_5}+q_8+\frac{q_{01}}{r_1^2};\ q_{15}=\ln\frac{rq_{01}}{4\nu};\ q_{17}=\frac{r}{2}\ln rq_5.$$

$$\gamma_3=\sqrt{\frac{\gamma_{40}^0-q_1q_7q_6-q_5}{8q_1q_7}};\quad \gamma_4=\sqrt{\frac{-\gamma_{40}^0-q_1q_7q_6-q_5}{8q_1q_7}};\quad \gamma_{40}^0=4q_1q_7\sqrt{q_{01}}.$$

$$\gamma_5=\sqrt{\left(-q_{11}-\sqrt{q_{11}^2-\frac{1}{2\nu}}\right):2};\quad \gamma_6=\sqrt{\left(-q_{11}+\sqrt{q_{11}^2-\frac{1}{2\nu}}\right):2};$$

$$\gamma_{10}=\gamma_5\left\{-\gamma_{83}\left(q_{21}\gamma_{66}-q_{20}\gamma_{78}\right)+\gamma_{85}\left(q_{21}\gamma_{60}-q_{20}\gamma_{72}\right)\right\};$$

$$\gamma_{11}=-\gamma_{83}\gamma_5\left[\gamma_{67}q_{21}-q_{20}\gamma_{79}\right]+\gamma_{85}\gamma_5\left[q_{21}\gamma_{61}-q_{20}\gamma_{73}\right];$$

$$\gamma_{13} = -\gamma_{83}\left(\gamma_{78}\gamma_{94} - \gamma_{66}\gamma_{94}\frac{2}{r}\right) + \gamma_{85}\left(\gamma_{94}\gamma_{73} - \gamma_{94}\frac{2}{r}\gamma_{60}\right) +$$

$$+ \gamma_{103}\left(\gamma_{50}\gamma_{66}q_{21}\gamma_5 + q_{20}\gamma_{54}\gamma_{72}\gamma_5 + \gamma_{60}\gamma_{79} + \gamma_{61}\gamma_{78} - \gamma_{72}\gamma_{67} - \gamma_{73}\gamma_{66} -\right.$$

$$\left. - q_{20}\gamma_5\gamma_{50}\gamma_{78} - q_{21}\gamma_5\gamma_{54}\gamma_{60}\right); \qquad \gamma_{12} = \gamma_{103}\left(\gamma_{60}\gamma_{78} - \gamma_{72}\gamma_{66}\right);$$

$$\gamma_{14} = -\gamma_{83}\left(q_{20}\gamma_5\gamma_{54}\gamma_{94}\frac{2}{r} + \gamma_{89}\gamma_{66}q_{21}\gamma_5 + \gamma_{78}\gamma_{95} + \gamma_{79}\gamma_{94} - \gamma_{89}\gamma_{78}q_{20}\gamma_5 -\right.$$

$$\left. - q_{21}\gamma_5\gamma_{54}\gamma_{94} - \gamma_{66}\gamma_{99} - \gamma_{67}\gamma_{94}\frac{2}{r}\right) + \gamma_{85}\left(q_{20}\gamma_5\gamma_{50}\frac{2}{r}\gamma_{94} + \gamma_{96}\gamma_{72} + q_{21}\gamma_5\gamma_{60}\gamma_{89} -\right.$$

$$\left. - q_{20}\gamma_5\gamma_{89}\gamma_{72} - q_{21}\gamma_5\gamma_{50}\gamma_{94} - \gamma_{94}\gamma_{61}\frac{2}{r} - \gamma_{99}\gamma_{60}\right) + \gamma_{86}\gamma_{72}\gamma_{94} + \gamma_{103}\left(\gamma_{50}\gamma_{67} + \gamma_{66}\gamma_{62}\right)\times$$

$$\times q_{21}\gamma_5 + q_{20}\gamma_5\left(\gamma_{54}\gamma_{73} + \gamma_{61}\gamma_{79} - \gamma_{73}\gamma_{67} - q_{20}\gamma_5\gamma_{50}\gamma_{79} - q_{21}\gamma_5\gamma_{54}\gamma_{61}\right) +$$

$$+ \gamma_{104}\left(\gamma_{50}\gamma_{66}q_{21}\gamma_5 + q_{20}\gamma_5\gamma_{54}\gamma_{72} + \gamma_{60}\gamma_{79} + \gamma_{61}\gamma_{78} - \gamma_{72}\gamma_{67} - \gamma_{73}\gamma_{66} -\right.$$

$$\left. - q_{20}\gamma_5\gamma_{50}\gamma_{78} - q_{21}\gamma_5\gamma_{54}\gamma_{60}\right);$$

$$\gamma_{15} = -\gamma_{83}\left(q_{20}\gamma_5\gamma_{54}\gamma_{99} + \gamma_{89}\gamma_{67}q_{21}\gamma_5 + \gamma_{79}\gamma_{95} + \gamma_{78}\gamma_{96} - \gamma_{89}\gamma_{79}q_{20}\gamma_5 -\right.$$

$$\left. - q_{21}\gamma_5\gamma_{54}\gamma_{95} - \gamma_{66}\gamma_{100} - \gamma_{67}\gamma_{99}\right) - \gamma_{84}\left(\gamma_{78}\gamma_{94} - \gamma_{66}\gamma_{94}\frac{2}{r}\right) + \gamma_{85}\times$$

$$\times\left(q_{20}\gamma_5\gamma_{50}\gamma_{99} + \gamma_{94}\gamma_{74}\gamma_{73}\gamma_{96} + \gamma_{72}\gamma_{97} + q_{21}\gamma_5\gamma_{61}\gamma_{89} - q_{20}\gamma_5\gamma_{89}\gamma_{73} -\right.$$

$$\left. - q_{21}\gamma_5\gamma_{50}\gamma_{95} - \gamma_{99}\gamma_{61} - \gamma_{100}\gamma_{60}\right) + \gamma_{103}\left(\gamma_{51}\gamma_{60}q_5\gamma_5 + \gamma_5 q_{20}\gamma_{72}\gamma_{55} +\right.$$

$$\left. + \gamma_{60}\gamma_{80} + \gamma_{78}\gamma_{62} - \gamma_{72}\gamma_{68} - \gamma_{74}\gamma_{66} - q_{20}\gamma_5\gamma_{51}\gamma_{78} - q_{21}\gamma_5\gamma_{55}\gamma_{60}\right) +$$

$$+ \gamma_{104}\left(\gamma_{50}\gamma_{68}q_{21}\gamma_5 + q_{20}\gamma_5\gamma_{54}\gamma_{73} + \gamma_{61}\gamma_{79} - \gamma_{73}\gamma_{67} - q_{20}\gamma_5\gamma_{50}\gamma_{79} -\right.$$

$$\left. - q_{21}\gamma_5\gamma_{54}\gamma_{61}\right) + \gamma_{105}\left[\gamma_{50}\gamma_{66}q_{21}\gamma_5 + q_{20}\gamma_5\gamma_{54}\gamma_{72} + \gamma_{60}\gamma_{79} + \gamma_{61}\gamma_{78} -\right.$$

$$\left. - \gamma_{72}\gamma_{67} - \gamma_{73}\gamma_{66} - q_{20}\gamma_5\gamma_{50}\gamma_{78} - q_{21}\gamma_5\gamma_{54}\gamma_{60}\right];$$

$$\gamma_{16} = -\gamma_{83}\left(q_{20}\gamma_5\left(\gamma_{54}\gamma_{100} + \gamma_{55}\gamma_{94}\frac{2}{r}\right) + \gamma_{90}\gamma_{66}q_{21}\gamma_5 + \gamma_{78}\gamma_{97} + \gamma_{79}\gamma_{96} +\right.$$

$$\left. + \gamma_{80}\gamma_{94} - \gamma_{90}\gamma_{78}q_{20}\gamma_5 - q_{21}\gamma_5\left(\gamma_{54}\gamma_{96} + \gamma_{55}\gamma_{94}\right) - \gamma_{66}\gamma_{101} - \gamma_{67}\gamma_{100} -\right.$$

$$-\gamma_{68}\gamma_{94}\frac{2}{r}\Big)-\gamma_{84}\Big(q_{20}\gamma_5\gamma_{54}\gamma_{94}\frac{2}{r}+\gamma_{89}\gamma_{66}q_{21}\gamma_5+\gamma_{78}\gamma_{95}+\gamma_{79}\gamma_{94}-$$

$$-\gamma_{89}\gamma_{78}-q_{21}\gamma_5\gamma_{54}\gamma_{94}-\gamma_{66}\gamma_{99}-\gamma_{67}\gamma_{94}\frac{2}{r}\Big)+\gamma_{85}\big(q_{20}\gamma_5\big(\gamma_{50}\gamma_{100}+$$

$$+\gamma_{51}\frac{2}{r}\gamma_{94}\Big)+\gamma_{94}\gamma_{75}+\gamma_{95}\gamma_{74}+q_{21}\gamma_5\gamma_{60}\gamma_{90}-q_{20}\gamma_5\gamma_{90}\gamma_{72}-q_{21}\gamma_5\times$$

$$\times\big(\gamma_{50}\gamma_{96}+\gamma_{51}\gamma_{94}\big)-\gamma_{101}\gamma_{60}-\gamma_{100}\gamma_{61}-\gamma_{62}\gamma_{94}\frac{2}{r}\Big)+\gamma_{103}\big(\gamma_{50}\gamma_{68}+$$

$$+\gamma_{51}\gamma_{67}\big)q_{21}\gamma_5+q_{20}\gamma_5\big(\gamma_{54}\gamma_{74}+\gamma_{55}\gamma_{73}\big)+\gamma_{60}\gamma_{81}+\gamma_{61}\gamma_{80}+\gamma_{62}\gamma_{79}+$$

$$+\gamma_{63}\gamma_{78}-\gamma_{72}\gamma_{69}-\gamma_{73}\gamma_{68}-\gamma_{74}\gamma_{67}-\gamma_{75}\gamma_{66}-q_{20}\gamma_5\gamma_{50}\gamma_{80}-q_{21}\gamma_5\times$$

$$\times\big(\gamma_{54}\gamma_{62}+\gamma_{55}\gamma_{61}\big)\big)+\gamma_{104}\big(\gamma_{51}\gamma_{66}q_{21}\gamma_5+q_{20}\gamma_5\gamma_{55}\gamma_{72}+\gamma_{60}\gamma_{80}+$$

$$+\gamma_{62}\gamma_{78}-\gamma_{72}\gamma_{68}-\gamma_{74}\gamma_{66}-q_{20}\gamma_5\gamma_{51}\gamma_{78}-q_{21}\gamma_5\gamma_{55}\gamma_{60}\big);$$

$$\gamma_{18}=-\gamma_{83}\big[q_{21}\gamma_6\big(\gamma_{54}\gamma_{96}+\gamma_{55}\gamma_{94}\big)+q_{20}\gamma_6\gamma_{90}\gamma_{78}+\gamma_{66}\gamma_{101}+$$

$$+\gamma_{67}\gamma_{100}+\gamma_{68}\frac{2}{r}\gamma_{94}-\gamma_{78}\gamma_{97}-\gamma_{79}\gamma_{96}-\gamma_{80}\gamma_{94}-\frac{2}{r}\gamma_{94}\gamma_{55}q_{20}\gamma_6-$$

$$-\gamma_{100}q_{20}\gamma_6\gamma_{54}-q_{21}\gamma_6\gamma_{66}\gamma_{90}\big]-\gamma_{84}\Big[q_{21}\gamma_6\gamma_{54}\gamma_{94}+\gamma_{89}\gamma_{78}+\gamma_{67}\frac{2}{r}\gamma_{94}+$$

$$+\gamma_{66}\gamma_{99}-\gamma_{78}\gamma_{95}-\gamma_{79}\gamma_{94}-\frac{2}{r}\gamma_{94}q_{20}\gamma_6\gamma_{54}-q_{21}\gamma_6\gamma_{66}\gamma_{89}\Big]+\gamma_{85}\times$$

$$\times\Big[\big(\gamma_{50}\gamma_{96}+\gamma_{51}\gamma_{95}\big)q_1\gamma_6+\gamma_{94}\frac{2}{r}\gamma_{62}+\gamma_{99}\gamma_{60}+q_{20}\gamma_6\gamma_{90}\gamma_{72}-\gamma_{94}\gamma_{74}-$$

$$-\gamma_{97}\gamma_{72}-q_{21}\gamma_6\gamma_{90}\gamma_{60}-q_{20}\gamma_6\Big(\gamma_{50}\gamma_{100}+\gamma_{51}\frac{2}{r}\gamma_{94}\Big)\Big]-\gamma_{103}\big[q_{21}\gamma_6\times$$

$$\times\big(\gamma_{50}\gamma_{68}+\gamma_{51}\gamma_{67}\big)+q_{20}\gamma_6\big(\gamma_{54}\gamma_{74}+\gamma_{55}\gamma_{73}\big)+\gamma_{60}\gamma_{81}+\gamma_{61}\gamma_{80}+$$

$$+\gamma_{62}\gamma_{79}+\gamma_{63}\gamma_{78}-\gamma_{66}\gamma_{75}-\gamma_{67}\gamma_{74}-\gamma_{68}\gamma_{73}-\gamma_{69}\gamma_{72}-q_{21}\gamma_6\big(\gamma_{54}\gamma_{62}+$$

$$+\gamma_{55}\gamma_{61})-q_{20}\gamma_6(\gamma_{50}\gamma_{80}+\gamma_{51}\gamma_{79})]-\gamma_{104}[q_{21}\gamma_6\gamma_{51}\gamma_{66}+q_{20}\gamma_6\gamma_{55}\gamma_{72}+$$

$$+\gamma_{60}\gamma_{80}+\gamma_{62}\gamma_{78}-\gamma_{66}\gamma_{74}-\gamma_{68}\gamma_{72}-q_{21}\gamma_6\gamma_{55}\gamma_{60}-q_{20}\gamma_6\gamma_{51}\gamma_{78}];$$

$$\gamma_{19}=-\gamma_{83}[q_{21}\gamma_6\gamma_{54}\gamma_{95}+q_{20}\gamma_6\gamma_{89}\gamma_{79}+\gamma_{66}\gamma_{100}-\gamma_{78}\gamma_{96}-$$

$$-\gamma_{99}\gamma_{54}q_{20}\gamma_6-q_{21}\gamma_6\gamma_{67}\gamma_{89}]-\gamma_{84}\left(\gamma_{66}\frac{2}{r}\gamma_{94}-\gamma_{78}\gamma_{94}\right)+\gamma_{85}\times$$

$$\times[\gamma_{50}q_{21}\gamma_6\gamma_{95}+q_{20}\gamma_6\gamma_{89}\gamma_{73}-\gamma_{95}\gamma_{73}-q_{20}\gamma_6\gamma_{89}\gamma_{61}-q_{21}\gamma_6\gamma_{50}\gamma_{99}]-$$

$$-\gamma_{103}[q_{21}\gamma_6\gamma_{51}\gamma_{66}+q_{20}\gamma_6\gamma_{55}\gamma_{72}+\gamma_{60}\gamma_{80}+\gamma_{62}\gamma_{78}-\gamma_{66}\gamma_{74}-\gamma_{68}\gamma_{72}-$$

$$-q_{21}\gamma_6\gamma_{60}\gamma_{55}-q_{20}\gamma_6\gamma_{51}\gamma_{78}]-\gamma_{104}[q_{21}\gamma_6\gamma_{50}\gamma_{67}+q_{20}\gamma_6\gamma_{54}\gamma_{73}+$$

$$+\gamma_{61}\gamma_{79}-\gamma_{67}\gamma_{73}-q_{21}\gamma_6\gamma_{54}\gamma_{61}-q_{20}\gamma_6\gamma_{50}\gamma_{79}]+$$

$$+\gamma_{84}\left[\gamma_{66}\frac{2}{r}\gamma_{94}-\gamma_{78}\gamma_{94}\right]+\gamma_{86}\left[\gamma_{50}q_{21}\gamma_6\gamma_{94}+\gamma_{94}\frac{2}{r}\gamma_{60}\right]-$$

$$-\gamma_{105}(q_{21}\gamma_6\gamma_{50}\gamma_{66}+q_{20}\gamma_6\gamma_{54}\gamma_{72}+\gamma_{60}\gamma_{79}+\gamma_{61}\gamma_{78}-\gamma_{66}\gamma_{73}-$$

$$-\gamma_{67}\gamma_{72}-q_{21}\gamma_6\gamma_{54}\gamma_{60}-q_{20}\gamma_6\gamma_{50}\gamma_{78});$$

$$\gamma_{20}=q_{20}(\gamma_6-\gamma_5);\qquad \gamma_{21}=a_{22}q_{21}(\gamma_5-\gamma_6);$$

$$\gamma_{22}=-\gamma_{83}(\gamma_{20}\gamma_{78}+\gamma_{21}\gamma_{66})+\gamma_{85}(\gamma_{20}\gamma_{72}+\gamma_{21}\gamma_{60});$$

$$\gamma_{23}=-\gamma_{103}(\gamma_{20}\gamma_{78}+\gamma_{21}\gamma_{66});\qquad \gamma_{24}=\gamma_{103}\gamma_{20}\gamma_{72};$$

$$\gamma_{25}=-\gamma_6q_{20}(\gamma_{78}\gamma_{83}-\gamma_{72}\gamma_{85})-q_{21}\gamma_6(\gamma_{60}\gamma_{85}-\gamma_{66}\gamma_{83});$$

$$\gamma_{26}=-q_{20}\gamma_6-\gamma_{79}\gamma_{83}+q_{21}\gamma_{67}\gamma_{83}+q_{20}\gamma_6\gamma_{73}\gamma_{85}-q_{21}\gamma_6\gamma_{60}\gamma_{85};$$

$$\gamma_{27}=-\gamma_{103}(\gamma_{78}\gamma_{60}-\gamma_{66}\gamma_{77});$$

$$\gamma_{28}=-\gamma_{83}\left(\gamma_{66}\frac{2}{r}\gamma_{94}-\gamma_{78}\gamma_{94}\right)+\gamma_{85}\left(\gamma_{50}\gamma_{94}+\frac{2}{r}\gamma_{94}\gamma_{60}-\gamma_{94}\gamma_{72}\right)-$$

$$-\gamma_{103}(q_{21}\gamma_6\gamma_{50}\gamma_{66}+q_{20}\gamma_6\gamma_{54}\gamma_{72}-q_{21}\gamma_6\gamma_{60}-q_{20}\gamma_6\gamma_{50}\gamma_{78});$$

$$\gamma_{29}=-\gamma_{83}\left(\gamma_{54}\gamma_{94}+\gamma_{66}\gamma_{99}+\gamma_{67}\frac{2}{r}\gamma_{94}+q_{20}\gamma_6\gamma_{89}\gamma_{78}-\gamma_{78}\gamma_{95}-\right.$$

$$-\gamma_{79}\gamma_{94}-q_{20}\gamma_6\frac{2}{r}\gamma_{94}\gamma_{54}-q_{21}\gamma_6\gamma_{66}\gamma_{89}\Big)+\gamma_{85}\Big(\gamma_{94}\frac{2}{r}\gamma_{61}+\gamma_{99}\gamma_{60}+$$

$$+\gamma_{89}\gamma_{72}-\gamma_{94}\gamma_{73}-\gamma_{95}\gamma_{72}-q_{21}\gamma_6\gamma_{89}\gamma_{60}-q_{20}\gamma_6\gamma_{50}\frac{2}{r}\gamma_{94}\Big)-$$

$$-\gamma_{103}\big(q_{21}\gamma_6\gamma_{67}\gamma_{50}+q_{20}\gamma_6\gamma_{54}\gamma_{73}+\gamma_{60}\gamma_{79}+\gamma_{61}\gamma_{79}-\gamma_{67}\gamma_{73}-$$

$$-q_{21}\gamma_6\gamma_{54}\gamma_{61}-q_{20}\gamma_6\gamma_{50}\gamma_{79}\big)-\gamma_{104}\big(\gamma_{50}\gamma_{66}q_{21}\gamma_6+q_{20}\gamma_6\gamma_{55}\gamma_{72}\big)-$$

$$-\gamma_{105}\big(\gamma_{60}\gamma_{78}-\gamma_{66}\gamma_{72}\big);\quad \gamma_{50}=\gamma_{47}\big(q_{13}q_1\big(\ln r_1-\gamma_3^2\big)\gamma_{48}+\gamma_3^2\ln r_1q_6\big);$$

$$\gamma_{30}=q_1q_{13}\ln r_1q_{01};\quad \gamma_{31}=q_1q_{13}(q_{01}+q_6q_7\ln r_1);\quad \gamma_{39}=q_{01}q_{02}\ln\frac{r_2}{r_1};$$

$$\gamma_{37}=\frac{1}{\gamma_{46}}\left[\frac{2\gamma_5\gamma_3\gamma_{44}}{\gamma_5^2-\gamma_3^2}+\frac{2\gamma_6\gamma_3\gamma_{45}}{\gamma_6^2-\gamma_3^2}-\frac{\gamma_5\gamma_{44}}{\gamma_5-\gamma_3}-\frac{\gamma_6\gamma_{45}}{\gamma_6-\gamma_3}\right]\frac{1}{4v};$$

$$\gamma_{38}=\frac{1}{\gamma_{46}}\left[\frac{2\gamma_5\gamma_4\gamma_{44}}{\gamma_5^2-\gamma_4^2}+\frac{2\gamma_6\gamma_4\gamma_{45}}{\gamma_6^2-\gamma_4^2}-\frac{\gamma_5\gamma_{44}}{\gamma_5-\gamma_4}-\frac{\gamma_6\gamma_{45}}{\gamma_6-\gamma_4}\right]\frac{1}{4v};$$

$$\gamma_{41}=\gamma_4^3-\gamma_3^2\gamma_4;\quad \gamma_{42}=\gamma_3^3-\gamma_4^2\gamma_1;\qquad \gamma_{44}=\gamma_6^3-\gamma_5^2\gamma_6;$$

$$\gamma_{43}=2\gamma_3^3(\gamma_3^2\gamma_4-\gamma_4^3)+2\gamma_4^3(\gamma_3\gamma_4^2-\gamma_3^3);\quad \gamma_{45}=\gamma_5^3-\gamma_6^2\gamma_5;$$

$$\gamma_{46}=2\gamma_5^3(\gamma_5^2\gamma_6-\gamma_6^3)+2\gamma_6^3(\gamma_5\gamma_6^2-\gamma_6^3);\quad \gamma_{48}=-q_{02}+q_6q_7\gamma_3^2+4q_7\gamma_3^4;$$

$$\gamma_{47}=\frac{1}{2v\gamma_{46}}\left[\frac{\gamma_5\gamma_{44}}{\gamma_5^2-\gamma_3^2}+\frac{\gamma_6\gamma_{45}}{\gamma_6^2-\gamma_3^2}-\frac{\gamma_{44}}{2(\gamma_5-\gamma_3)}-\frac{\gamma_{45}}{2(\gamma_6-\gamma_3)}\right];$$

$$\gamma_{49}=\frac{1}{2v}\left[\frac{\gamma_5\gamma_{44}}{\gamma_5^2-\gamma_4^2}+\frac{\gamma_6\gamma_{45}}{\gamma_6^2-\gamma_4^2}-\frac{\gamma_{44}}{2(\gamma_5-\gamma_4)}-\frac{\gamma_{45}}{2(\gamma_6-\gamma_4)}\right]\frac{1}{\gamma_{46}};$$

$$\gamma_{51}=\gamma_{47}\gamma_3^2\big((1-3v)q_1-\gamma_3^2q_{13}\big)\ln r_1;\ \gamma_{53}=-q_{02}+q_6q_7\gamma_4^2+4q_7\gamma_4^4;$$

$$\gamma_{54}=\gamma_{49}\big(q_{13}q_1(\ln r_1-\gamma_3^2)\gamma_{53}+\gamma_3^2\ln r_1q_6\big);\quad \gamma_{57}=\frac{r}{2}\frac{q_1}{q_5};$$

$$h_1=\ln r_1+1/2;\quad h_2=\ln r_1+1;\quad \gamma_{55}=\gamma_{49}\gamma_4^2\big((1-3v)q_1-\gamma_4^2q_{13}\big)\ln r_1;$$

$$\gamma_{58} = -q_9\left[\frac{\gamma_5\gamma_{44}}{\gamma_5-\gamma_3}+\frac{\gamma_6\gamma_{45}}{\gamma_6-\gamma_3}-\frac{2\gamma_5\gamma_3\gamma_{44}}{\gamma_5^2-\gamma_3^2}-\frac{2\gamma_6\gamma_3\gamma_{45}}{\gamma_6^2-\gamma_3^2}\right]\frac{1}{4\nu};$$

$$\gamma_{60} = \gamma_{57}\{q_1(\ln r_1-\gamma_3^2)\gamma_{48}\}; \qquad \gamma_{61} = \gamma_{57}\gamma_{58}q_{13}q_1(\ln r_1-\gamma_3^2)\gamma_{48};$$

$$\gamma_{62} = \gamma_{57}\{\gamma_3^2(1-3\nu)q_1\ln r_1-\gamma_3^4\ln r_1 q_{13}-\ln r_1(q_5\gamma_3-\gamma_3^3)\}-q_{15}(1-\gamma_3^2)\gamma_{48};$$

$$\gamma_{63} = q_{17}\gamma_3^2+\gamma_{57}\{q_1(\ln r_1-\gamma_3^2)+q_8\gamma_{48}\}; \qquad \gamma_{72} = \gamma_{60}\frac{2}{r};$$

$$\gamma_{66} = \gamma_{57}\{q_1(\ln r_1-\gamma_4^2)\gamma_{53}\}; \qquad \gamma_{67} = \gamma_{57}\gamma_{65}q_{13}q_1(\ln r_1-\gamma_4^2)\gamma_{53};$$

$$\gamma_{68} = \gamma_{57}\{\gamma_4^2(1-3\nu)q_1-\gamma_4^4 q_{13}-(q_5\gamma_4-\gamma_4^3)\}\ln r_1-q_{15}(1-\gamma_4^2)\gamma_{53};$$

$$\gamma_{71} = \left(\frac{2\gamma_5\gamma_3}{\gamma_5^2-\gamma_3^2}-\frac{\gamma_5}{\gamma_5-\gamma_3}+\frac{2\gamma_6\gamma_3}{\gamma_6^2-\gamma_3^2}-\frac{\gamma_6}{\gamma_6-\gamma_3}\right)\frac{1}{4\nu}\frac{1}{\gamma_{46}};$$

$$\gamma_{73} = \gamma_{61}\frac{2}{r}+\gamma_{71}q_1q_{13}(\ln r_1-\gamma_3^2)\gamma_{48}; \qquad \gamma_{75} = \frac{q_1}{q_5}\left(q_1(\ln r_1-\gamma_3^2)+q_8\gamma_{48}\right);$$

$$\gamma_{74} = \frac{q_1}{q_5}\frac{\gamma_{62}+q_{15}(1-\gamma_3^2)\gamma_{48}}{\gamma_{57}}+\gamma_{71}\left(\gamma_3^2(1-3\nu)q_1\ln r_1-q_{13}\ln r_1\right);$$

$$\gamma_{77} = \left(\frac{2\gamma_5\gamma_4}{\gamma_5^2-\gamma_4^2}-\frac{\gamma_5}{\gamma_5-\gamma_4}+\frac{2\gamma_6\gamma_4}{\gamma_6^2-\gamma_4^2}-\frac{\gamma_6}{\gamma_6-\gamma_4}\right)\frac{1}{4\nu}\frac{1}{\gamma_{46}};$$

$$\gamma_{78} = \frac{2}{r}\gamma_{66}; \qquad \gamma_{79} = \gamma_{67}\frac{2}{r}+\gamma_{77}q_1q_{13}(\ln r_1-\gamma_4^2)\gamma_{53};$$

$$\gamma_{80} = \frac{2}{r}(\gamma_{68}+q_{15}(1-\gamma_4^2)\gamma_{53}); \qquad \gamma_{81} = \frac{q_1}{q_5}(q_1(\ln r_1-\gamma^2)+q_8\gamma_{53});$$

$$\gamma_{83} = \frac{1}{\gamma_{53}}q_{04}\gamma_{48}; \qquad \gamma_{84} = -q_{05}\gamma_3+(\ln r+1)\gamma_3^3+\frac{1}{\gamma_3}\frac{2}{r^2}\gamma_{48};$$

$$\gamma_{85} = \frac{1}{\gamma_4}q_{04}\gamma_{53}; \qquad \gamma_{86} = -q_{05}\gamma_4+(\ln r+1)\gamma_4^3+\frac{1}{\gamma_4}\frac{2}{r^2}\gamma_{53};$$

$$\gamma_{87} = -\frac{1}{2\nu\gamma_{46}}\left[\frac{\gamma_{44}\gamma_5}{\gamma_5^2-\gamma_3^2}+\frac{\gamma_{45}\gamma_6}{\gamma_6^2-\gamma_3^2}\right];$$

$$\gamma_{88} = -\frac{1}{2\nu\gamma_{46}}\left[\frac{\gamma_{44}\gamma_5}{\gamma_5^2-\gamma_4^2}+\frac{\gamma_{45}\gamma_6}{\gamma_6^2-\gamma_4^2}\right]; \quad ak = a_1\cdot k_1 - a_2\cdot k_2;$$

$$\gamma_{89} = \frac{akq_8}{\gamma_{43}}\left\{\frac{1}{\gamma_3}\gamma_{41}\gamma_{48}(\ln r_1-\gamma_3^2)\gamma_{87}+\gamma_{88}\frac{\gamma_{42}}{\gamma_3}\gamma_{53}(\ln r_1-\gamma_4^2)\right\}q_1q_{13};$$

$$\gamma_{90} = \frac{akq_8}{\gamma_{43}}\left\{\frac{\gamma_{41}}{\gamma_3}(\ln r_1-\gamma_3^2)+\frac{\gamma_{42}}{\gamma_4}(\ln r_1-\gamma_4^2)\right\}q_1q_{13};$$

$$\gamma_{91} = \frac{1}{\gamma_{43}}\left(\frac{\gamma_{41}}{\gamma_3}+\frac{\gamma_{42}}{\gamma_4}\right); \quad \gamma_{92} = \left(\frac{\gamma_{44}}{\gamma_5}+\frac{\gamma_{45}}{\gamma_6}\right)\frac{1}{\gamma_{46}}; \quad \gamma_{93} = -4q_9\gamma_{92}\gamma_{91}q_8;$$

$$\gamma_{94} = \gamma_{57}\left[q_1\frac{akq_8}{\gamma_{43}}\left\{\frac{\gamma_{41}}{\gamma_3}\gamma_{48}(\ln r_1-\gamma_3^2)+\frac{\gamma_{42}}{\gamma_4}\gamma_{53}(\ln r_1-\gamma_4^2)\right\}+\right.$$

$$\left.+2\gamma_{91}q_8(a_1-a_2)q_{01}q_1\ln r_1\right];$$

$$\gamma_{95} = \gamma_{57}akq_8\left[\gamma_{92}\gamma_{91}\frac{q_6q_9}{\nu}q_1q_{01}q_{13}\ln r_1-\frac{\gamma_{58}}{\gamma_3}\frac{\gamma_{41}}{\gamma_{43}}q_1q_{13}(\ln r_1-\gamma_3^2)\times\right.$$

$$\times(q_6q_7\gamma_3^2+4q_7\gamma_3^4)-\frac{\gamma_{65}}{\gamma_3}\frac{\gamma_{42}}{\gamma_{43}}q_1q_{13}(\ln r_1-\gamma_4^2)q_7(q_6\gamma_4^2+4\gamma_4^4)+$$

$$\left.+\gamma_{93}q_1q_{13}\ln r_1q_{01}(a_1k_1^2-a_2k_2^2)\right];$$

$$\gamma_{96} = \gamma_{57}\left[\gamma_{93}q_1q_{13}(q_{01}+q_6q_7\ln r_1)(a_2k_2^2-a_1k_1^2)+2\gamma_{91}q_8q_1q_{01}\times\right.$$

$$\left.\times(a_2k_2^2-a_1k_1^2)\right]+2\gamma_{91}q_8(a_1-a_2)q_{01}q_{15};$$

$$\gamma_{97} = \gamma_{57}\left[q_9\gamma_{92}\frac{\gamma_{91}}{\nu}(a_2k_2^2-a_1k_1^2)q_1q_{13}(q_{01}+q_6q_7\ln r_1)+\right.$$

$$\left.+\ln r_1q_8\frac{ak}{\gamma_{43}}\left[(q_5\gamma_3-\gamma_3^3)\gamma_{41}/\gamma_3-(q_5\gamma_4-\gamma_4^3)\gamma_{42}/\gamma_4\right]+\right.$$

$$+\gamma_{93}q_1q_{13}(q_{01}+q_6q_7\ln r_1)(a_2k_2^4-a_1k_1^4)\Big]+$$

$$+\frac{akq_8}{\gamma_{43}}\left((1-\gamma_3^2)\frac{\gamma_{41}\gamma_{48}}{\gamma_3^2}+(1-\gamma_4^2)\frac{\gamma_{42}}{\gamma_4^2}\gamma_{53}\right);$$

$$\gamma_{99}=\frac{\gamma_{44}+\gamma_{45}}{\gamma_{46}}\frac{q_8}{4\nu}2ak\gamma_{91}\gamma_{30}-q_1q_{13}ak\left[\frac{\gamma_{41}q_8\gamma_{37}}{\gamma_{43}}(q_6q_7\gamma_3^2+4q_7\gamma_3^4)\times\right.$$

$$\left.\times(\ln r_1-\gamma_3^2)+\frac{\gamma_{42}q_8\gamma_{38}}{\gamma_{43}}(q_6q_7\gamma_4^2+4q_7\gamma_4^4)(\ln r_1-\gamma_4^2)\right]+\gamma_{95}\frac{2}{r};$$

$$\gamma_{100}=-4\gamma_{92}\gamma_{91}\frac{q_8}{4\nu}(a_1k_1^2-a_2k_2^2)\gamma_{30}+\gamma_{96}\frac{2}{r};\ \gamma_{103}=\gamma_{91}q_8q_{04}q_{01}2(a_1-a_2);$$

$$\gamma_{101}=\left[\gamma_{97}-\frac{akq_8}{\gamma_{43}}\left((1-\gamma_3^2)\frac{\gamma_{41}\gamma_{48}}{\gamma_3^2}+(1-\gamma_4^2)\frac{\gamma_{43}\gamma_{53}}{\gamma_4^2}\right)\right]\frac{2}{r}+$$

$$+\frac{\gamma_{44}\gamma_{45}}{\gamma_{46}}\frac{q_8}{2\nu}\gamma_{31}\gamma_{91}(a_2k_2^3-a_1k_1^3)-\frac{q_1q_{13}}{4\nu}\frac{ak\gamma_{41}q_8q_{01}}{\gamma_{43}}\times$$

$$\times\left(\gamma_{37}(\ln r_1-\gamma_3^2)+\gamma_{38}(\ln r_1-\gamma_4^2)\right);$$

$$\gamma_{104}=-q_{04}\left((1-\gamma_3^2)\frac{\gamma_{48}\gamma_{41}}{\gamma_3^2}+(1-\gamma_4^2)\frac{\gamma_{53}\gamma_{42}}{\gamma_4^2}\right)\frac{akq_8}{\gamma_{43}};$$

$$\gamma_{105}=\left(-\frac{q_{16}}{\ln r_2/r_1}+2\gamma_{91}q_8\frac{2}{r^2}q_{01}\right)(a_1-a_2);\qquad \delta_0=2\gamma_{91}q_8q_{01};$$

$$\delta_1=\frac{\gamma_{41}ak}{\gamma_3\gamma_{43}};\ \delta_2=\frac{\gamma_{42}ak}{\gamma_4\gamma_{43}};\qquad \delta_{13}=-\left(q_{01}+k_2^2q_7q_6\ln r_1\right)q_1q_{13};$$

$$\delta_7=\frac{\gamma_{24}}{\gamma_{22}}\gamma_{53}q_1q_{13}\left(\ln r_1-\gamma_4^2\right);\qquad \delta_9=\frac{\gamma_{24}}{\gamma_{22}}\ln r_1\left(\gamma_4^3q_6+4\gamma_4^5\right);$$

$$\delta_8=\frac{\gamma_{24}}{\gamma_{22}}\ln r_1\left(\gamma_4^3(1-3\nu)q_1-\gamma_4^5q_{13}\right)+q_1q_{13}\left(\ln r_1-\gamma_4^2\right)\frac{\gamma_{42}ak}{\gamma_{43}\gamma_4}q_8\gamma_{53};$$

$$\delta_{10}=\frac{\gamma_{24}}{\gamma_{22}}\left(q_{14}\gamma_{53}-q_1q_{13}\left(\ln r_1-\gamma_4^2\right)\right);\ \delta_{11}=-q_1q_{13}\left(q_{01}+k_1^2q_6q_7\ln r_1\right);$$

$$\delta_{12}=q_8\left[q_{01}q_{14}+q_1q_{13}\left(\ln r_1\left(1-4q_7k_1^4\right)+k_1^4q_6q_7\right)-(1-3\nu)q_1k_1^2\ln r_1\right];$$

$$\delta_{14}=q_8\left[-(1-3\nu)q_1k_2^2\ln r_1\right];q_{01}q_4+q_1q_{13}\left(\ln r_1\left(1-4q_7k_2^4\right)+k_2^4q_6q_7\right)-$$

$$\delta_{15}=\frac{a_1k_1\gamma_{91}q_8}{2\nu};\quad \delta_{16}=\frac{\gamma_{91}a_2k_2q_8}{2\nu};\ q_{21}=\frac{q_1q_9}{q_5}+1;\ q_{20}=\frac{r}{2}\frac{q_1q_3}{q_5};$$

$$q_{01}=1-2\nu;\ q_{02}=\frac{r_1^2r_2^2}{r_1^2-r_2^2};\quad q_{03}=\frac{\ln r_1+1/2}{\ln r_2/r_1};\ q_{04}=-\ln rq_5-\frac{1}{2};$$

$$q_{05}=\frac{6\nu-1}{2\nu}\ln r+\frac{3}{2};\quad q_7=-\ln r\,q_5;\quad q_8=\frac{6\nu-1}{2\nu}\ln r+\frac{3}{2};$$

$$q_{16}=q_3\left(\frac{\ln r}{r}-\frac{2}{q_{01}}\left(\ln r+\frac{1}{2}\right)\right);\ q_{18}=\frac{r}{2}\frac{\ln r}{\ln r_2/r_1}q_3;$$

$$\delta_{12}^0=-q_9\frac{\gamma_3^2}{2\nu\gamma_{46}}\left(\frac{\gamma_5\gamma_{44}}{\gamma_5^2-\gamma_3^2}+\frac{\gamma_6\gamma_{45}}{\gamma_6^2-\gamma_3^2}\right);\quad \delta_{27}=q_9\frac{\gamma_5^2}{\gamma_{22}};$$

$$\delta_{14}^0=-q_9\frac{\gamma_4^2}{2\nu\gamma_{46}}\left(\frac{\gamma_5\gamma_{44}}{\gamma_5^2-\gamma_4^2}+\frac{\gamma_6\gamma_{45}}{\gamma_6^2-\gamma_4^2}\right);\quad \delta_{28}=q_9\frac{\gamma_6^2}{\gamma_{22}};$$

$$\delta_{17}=\left(\ln r_1-\gamma_3\right)q_1\gamma_{48}\gamma_3\frac{\gamma_{23}}{\gamma_{22}};\quad \delta_{18}=\gamma_3\frac{\gamma_{23}}{\gamma_{22}}\left(q_8\gamma_{48}-q_1\left(\ln r_1-\gamma_3\right)\right);$$

$$\delta_{19}=\gamma_{41}ak\gamma_{48}q_8/\gamma_{43};\qquad \delta_{20}=\ln r_1\gamma_3^2\left(q_5-\gamma_3^2\right)\gamma_{23}/\gamma_{22};$$

$$\delta_{21}=\ln r_1\gamma_3\left(q_5-\gamma_3^2\right)q_8\gamma_{41}ak/\gamma_{43};\ \delta_{24}=\frac{\gamma_{42}}{\gamma_{43}}ak\gamma_{53}q_8;$$

$$\delta_{22}=\left(\ln r_1-\gamma_4\right)q_1\gamma_{53}\gamma_4\gamma_{24}/\gamma_{22};\ \delta_{23}=\gamma_4\left(q_8\gamma_{53}-q_1\left(\ln r_1-\gamma_4\right)\right);$$

$$\delta_{25}=\ln r_1\gamma_4^2\left(q_5-\gamma_4^2\right)\frac{\gamma_{23}}{\gamma_{22}};\quad \delta_{26}=\ln r_1\gamma_4\left(q_5-\gamma_4^2\right)q_8\frac{\gamma_{42}ak}{\gamma_{43}};$$

$$\delta_{29} = -q_9 \frac{\gamma_{28}}{\gamma_{22}} - \frac{\gamma_{44}\gamma_5^2}{4\nu\gamma_{46}}\left(\frac{\delta_3}{\gamma_5-\gamma_3} + \frac{\delta_7}{\gamma_5-\gamma_4}\right) -$$

$$- 4\nu\gamma_5\gamma_{44}q_{01}q_1q_{13}(\delta_{15}+\delta_{16});$$

$$\delta_{30} = -q_9 \frac{\gamma_{29}}{\gamma_{22}} + \frac{\gamma_5^2\gamma_{44}}{4\nu\gamma_{46}}\left(\frac{\delta_8}{\gamma_5-\gamma_4} + \frac{\delta_4}{\gamma_5-\gamma_3}\right);$$

$$\delta_{31} = -q_9\gamma_{19} - \left(\frac{\delta_{15}\delta_{11}}{\gamma_5} + \frac{\delta_{16}\delta_{13}}{\gamma_5}\right)4\nu;$$

$$\delta_{32} = -q_9\gamma_{18} - \frac{\gamma_5^2\gamma_{44}}{4\nu\gamma_{46}}\left(\frac{\delta_5}{\gamma_5-\gamma_3} + \frac{\delta_9}{\gamma_5-\gamma_4}\right);$$

$$\delta_{33} = -\gamma_5\gamma_{44}\left(\delta_{16}4\nu\delta_{14} - \frac{\delta_{10}\gamma_5}{(\gamma_5-\gamma_4)4\nu\gamma_{46}}\right);$$

$$\delta_{34} = -q_9 \frac{\gamma_{13}}{\gamma_{22}} - \frac{\gamma_{45}\gamma_6^2}{4\nu\gamma_{46}}\left(\frac{\delta_3}{\gamma_6-\gamma_3} + \frac{\delta_7}{\gamma_6-\gamma_4}\right);$$

$$\delta_{35} = -q_9 \frac{\gamma_{14}}{\gamma_{22}} - \left(\frac{\delta_8}{\gamma_6-\gamma_4} + \frac{\delta_4}{\gamma_6-\gamma_3}\right)\frac{\gamma_6\gamma_{45}}{4\nu\gamma_{46}};$$

$$\delta_{36} = -q_9\gamma_{15} - 4\nu\left(\frac{\delta_{15}\delta_{11}}{\gamma_5} + \frac{\delta_{16}\delta_{13}}{\gamma_6}\right);$$

$$\delta_{37} = -q_9q_8 - \frac{\gamma_6\gamma_{45}}{4\nu\gamma_{46}}\left(\frac{\delta_5}{\gamma_6-\gamma_3} + \frac{\delta_9}{\gamma_6-\gamma_4}\right);$$

$$\delta_{38} = -\gamma_6\gamma_{44}4\nu(\delta_{16}\delta_{14} + \delta_{15}\delta_{12}) - \delta_{10}\frac{\gamma_6^2\gamma_{45}}{(\gamma_6-\gamma_4)4\nu\gamma_{46}};$$

$$\delta_{39} = 2k_1\gamma_{92}\delta_{15}4\nu; \qquad \delta_{40} = \delta_{39}q_{01}q_{13}q_1; \quad \delta_{41} = 2\gamma_{91}q_1\ln r_1q_8q_{01};$$

$$\delta_{42} = -2\gamma_{91}k_1^2q_1q_8(\ln r_1q_7q_6 + q_{01}); \quad \delta_{47} = -2\gamma_{91}q_8(\ln r_1q_7q_6 + q_{01})q_1k_2^2;$$

$$\delta_{43} = 2\gamma_{91}q_8\left(q_8q_{01} + q_1\ln r_1 + k_1^4q_6q_7 - k_1^2\ln r_1q_5\right) - \frac{q_{10}}{\ln r_2/r_1};$$

$$\delta_{44} = 2k_2\gamma_{92}\delta_{16}4v; \qquad \delta_{45} = \delta_{44}\frac{\delta_{40}}{\delta_{39}};\ \delta_{46} = 2\gamma_{91}q_8q_1\ln r_1q_{01};$$

$$\delta_{48} = 2\gamma_{91}q_8\left(q_{01} + q_1\ln r_1 + k_2q_6q_7 - k_2\ln r_1q_5\right) - \frac{q_{10}}{\ln r_2/r_1};$$

$$\delta_{50} = \delta_{17}c_8 + \delta_3\delta_{12}^0; \qquad \delta_{51} = \delta_{12}^0\delta_4 + \delta_{20} + 3c_1\delta_3\delta_{12}^0/2 + c_9\delta_{17};$$

$$\delta_{52} = c_{10}\delta_{17} + \delta_3\delta_{12}c_3 + \left(\delta_{12}^0\delta_4 + \delta_{20}\right)c_1 + \delta_{18} + \delta_{21};$$

$$\delta_{53} = \delta_{17}c_{11} - \delta_3\delta_{12}^0c_4 - c_2\left(\delta_{12}^0\delta_4 + \delta_{20}\right) + \frac{c_1}{2}\left(\delta_{18} + \delta_{21}\right) + \delta_5 + \delta_{19};$$

$$\delta_{54} = \delta_{22}c_8 + \delta_7\delta_{14}^0; \qquad \delta_{55} = \delta_{14}^0\delta_8 + \delta_{25} + \delta_{14}^0\delta_7\frac{3c_1}{8} + \delta_{22}c_8;$$

$$\delta_{56} = \delta_{22}c_{10} + \delta_{14}^0\delta_7c_3 + c_1\left(\delta_{14}^0\delta_8 + \delta_{25}\right)c_1 + \delta_{23} + \delta_{26};$$

$$\delta_{57} = \delta_{24} + \delta_9\delta_{14}^0 + \delta_{22}c_{11} - \delta_{14}^0\delta_7c_4 - \left(\delta_{14}^0\delta_8 + \delta_{25}\right)c_2 +$$

$$+\frac{c_1}{2}\left(\delta_{23} + \delta_{26}\right) + \delta_{14}^0\delta_9 + \delta_{24}; \quad \delta_{58} = c_1\gamma_{25} + \gamma_{26};$$

$$\delta_{59} = \gamma_{26}\frac{c_1}{2} - \gamma_{25}c_2; \quad \delta_{62} = -\frac{q_9\gamma_{27}}{\gamma_{22}}c_9 + \delta_{29}c_5 + \frac{3c_1}{2}\delta_{30} + \delta_{31};$$

$$\delta_{60} = \delta_{29} - \frac{q_9\gamma_{27}}{\gamma_{22}}\frac{5c_1}{2}; \quad \delta_{61} = -\frac{q_9\gamma_{27}}{\gamma_{22}}c_8 + 2c_1\delta_{29} + \delta_{30};$$

$$\delta_{63} = -\frac{q_9\gamma_{27}c_{10}}{\gamma_{22}} + \delta_{29}c_6 + \delta_{30}c_3 + \delta_{31}c_1 + \delta_{32}; \qquad \delta_{65} = c_1\gamma_{10} + \gamma_{11};$$

$$\delta_{64} = \delta_{33} + \delta_{32}c_1/2 - c_2\delta_{31} - \delta_{30}c_4 - \delta_{29}c_7 - c_{11}q_9\gamma_{27}/\gamma_{22};$$

$$\delta_{66} = \gamma_{11}\frac{c_1}{2} - \gamma_{10}c_2; \quad \delta_{68} = -\frac{q_9\gamma_{12}}{\gamma_{22}}c_8 + 2c_1\delta_{34} + \delta_{30};$$

$$\delta_{67} = \delta_{34} - \frac{q_9\gamma_{12}}{\gamma_{22}};\quad \delta_{69} = -\frac{q_9\gamma_{12}}{\gamma_{22}}c_9 + \delta_{34}c_5 + \frac{3c_1}{2}\delta_{35} + \delta_{36};$$

$$\delta_{70} = -\frac{q_9\gamma_{12}c_{10}}{\gamma_{22}} + \delta_{34}c_6 + \delta_{35}c_3 + \delta_{36}c_1 + \delta_{37};$$

$$\delta_{71} = \delta_{38} + \delta_{37} - c_2\delta_{36} - \delta_{35}c_4 - \delta_{34}c_7 - c_{11}\frac{q_9\gamma_{17}}{\gamma_{22}};$$

$$\delta_{72} = \delta_{40}2c_1 + \delta_{41};\qquad \delta_{73} = \delta_{40}c_5 + \delta_{41}\frac{3c_1}{2} + \delta_{11}\delta_{39};$$

$$\delta_{74} = \delta_{42} + \delta_{11}\delta_{39}c_1 + \delta_{41}c_3 + \delta_{40}c_6;\qquad \delta_{76} = \delta_{45}2c_1 + \delta_{46};$$

$$\delta_{75} = -\delta_{40}c_7 - \delta_{41}c_4 - c_2\delta_{11}\delta_{39} + \frac{c_1}{2}\delta_{42} + \delta_{12}\delta_{39};$$

$$\delta_{77} = \delta_{45}c_5 + \delta_{46}\frac{3c_1}{2} + \delta_{44}\delta_{13};\quad \delta_{78} = \delta_{45}c_6 + \delta_{46}c_1 + \delta_{44}\delta_{13}c_1 + \delta_{47};$$

$$\delta_{79} = \frac{1}{\gamma_{22}}\left(\gamma_{27}2c_1 + \gamma_{28}\right) - \frac{\gamma_5\gamma_{44}}{4v\gamma_{46}}\left(\frac{\delta_3}{\gamma_5 - \gamma_3} + \frac{\delta_7}{\gamma_5 - \gamma_4}\right);$$

$$\delta_{80} = \frac{1}{\gamma_{22}}\left(\gamma_{27}c_5 + \frac{3c_1}{2}\gamma_{28} + \gamma_{29}\right) - \frac{\gamma_5\gamma_{44}}{4v\gamma_{46}}\left(\frac{\delta_3}{\gamma_5 - \gamma_3}\frac{3c_1}{2} + \right.$$

$$\left. + \frac{\delta_4}{\gamma_5 - \gamma_3} + \frac{\delta_8}{\gamma_5 - \gamma_4} + \frac{3c_1}{2}\frac{\delta_7}{\gamma_5 - \gamma_4}\right) - \frac{\gamma_{44}}{\gamma_{46}}q_1q_{13}q_{01}(\delta_{15} - \delta_{16});$$

$$\delta_{81} = \gamma_{18} + \frac{1}{\gamma_{22}}\left(\gamma_{27}c_6 + \gamma_{28}c_3 + \gamma_{29}c_1\right);$$

$$\delta_{82} = \gamma_{18} + \gamma_{19}\frac{c_1}{2} - \left(\gamma_{27}c_7 + \gamma_{28}c_4 + \gamma_{29}c_2\right)\Big/\gamma_{22} - \frac{\gamma_5\gamma_{44}}{4v\gamma_{46}}\times$$

$$\times\left(\delta_5 - c_2\delta_4 - \delta_3c_4 - \delta_7c_4 - c_2\delta_8 + \delta_9\right) - \gamma_{44}q_1q_{13}q_{01}c_2\left(\delta_{15} - \delta_{16}\right)/\gamma_{46};$$

$$\delta_{83} = \left(\frac{\gamma_{13}}{\gamma_{22}} + \frac{\gamma_{12}}{\gamma_{22}} 2c_1\right) - \frac{\gamma_6\gamma_{45}}{4v\gamma_{46}}\left(\frac{\delta_3}{\gamma_6 - \gamma_3} + \frac{\delta_7}{\gamma_6 - \gamma_4}\right);$$

$$\delta_{84} = \frac{1}{\gamma_{22}}\left(\gamma_{12}c_5 + \frac{3c_1}{2}\gamma_{13} + \gamma_{14}\right) - \frac{\gamma_6\gamma_{45}}{4v\gamma_{46}}\left(\frac{\delta_3}{\gamma_6 - \gamma_3}\frac{3c_1}{2} +\right.$$

$$\left. + \frac{\delta_4}{\gamma_6 - \gamma_3} + \frac{\delta_8}{\gamma_6 - \gamma_4} + \frac{3c_1}{2}\frac{\delta_7}{\gamma_6 - \gamma_4}\right) - \frac{\gamma_{45}}{\gamma_{46}} q_1 q_{13} q_{01}(\delta_{15} - \delta_{16});$$

$$\delta_{85} = \gamma_{16} + \frac{1}{\gamma_{22}}\left(\gamma_{12}c_6 + \gamma_{13}c_3 + \gamma_{14}c_1\right);$$

$$\delta_{86} = \gamma_{16} + \gamma_{15}\frac{c_1}{2} - \left(c_{12}c_7 + c_4\gamma_{13} + c_2\gamma_{14}\right) \Big/ \gamma_{22} - \frac{\gamma_6\gamma_{45}}{4v\gamma_{46}} \times$$

$$\times\left(\delta_5 - c_2\delta_4 - (\delta_3 + \delta_7)c_4 - \delta_8 c_2 + \delta_9\right) + \frac{\gamma_{45}}{\gamma_{46}} q_1 q_{13} q_{01} c_2 (\delta_{15} - \delta_{16});$$

$$\delta_{87} = \left(\frac{\delta_6}{\gamma_5 - \gamma_3} + \frac{\delta_{10}}{\gamma_5 - \gamma_4}\right)\frac{\gamma_5\gamma_{44}}{4v\gamma_{46}} + \frac{\gamma_{44}}{\gamma_{46}}\left(\delta_{16}\delta_{13} - \delta_{15}\delta_{11}\right);$$

$$\delta_{88} = \left[\left(\frac{\delta_6}{\gamma_6 - \gamma_3} + \frac{\delta_{10}}{\gamma_6 - \gamma_4}\right)\frac{\gamma_5}{4v} + \delta_{16}\delta_{13} - \delta_{15}\delta_{11}\right]\frac{\gamma_{44}}{\gamma_{46}};$$

$$\delta_{89} = \delta_3\frac{3c_1}{2} + \delta_4; \quad \delta_{90} = \delta_3 c_3 + \delta_4 c_1; \quad \delta_{91} = \delta_5 - c_2\delta_4 - c_4\delta_3;$$

$$\delta_{92} = \delta_7\frac{3c_1}{2} + \delta_8; \quad \delta_{93} = \delta_7\delta_3 + \delta_8 c_1; \; \delta_{94} = \delta_9 - c_2\delta_8 - c_4\delta_7;$$

$$\delta_{95} = q_1 q_{13} q_{01} c_1 / 2; \qquad \delta_{96} = \gamma_{92}\delta_{15} q_1 q_{13} q_{01}; \quad \delta_{98} = \gamma_{92}\delta_{16} q_{01} q_1 q_{13};$$

$$\delta_{97} = \gamma_{92}\delta_{15} c_1 q_1 q_{13} q_{01} / 2; \qquad \delta_{99} = \gamma_{92}\delta_{16} c_1 q_{01} q_1 q_{13} / 2.$$

ПРИЛОЖЕНИЕ 2

Значения констант, приведённых и используемых в параграфе 3.2

$$\gamma_6 = q_4\gamma_1^2 - 4v\gamma_1^4 - \frac{q_{01}}{2};\ \gamma_7 = q_4\gamma_2^2 - 4\gamma_2^4 - \frac{q_{01}}{2};$$

$$\gamma_8 = \frac{2\gamma_1}{\gamma_1^2 - a_{01}^2} + \frac{1}{\gamma_1 - a_{01}};\ \gamma_9 = \frac{2\gamma_2}{\gamma_2^2 - a_{01}^2} + \frac{1}{\gamma_2 - a_{01}};$$

$$\gamma_{10} = -q_{01}a_{01}^3\left(\frac{2q_2}{q_{01}} - 1\right)\frac{1}{\gamma_{43}}\left(\gamma_8\gamma_{41} + \gamma_9\gamma_{42}\right) - q_{11}a_{01};$$

$$\gamma_{11} = -\frac{q_3 v}{q_{01}^2} - \frac{1}{\gamma_{43}}\left(\frac{2q_2}{q_{01}} - 1\right)\left(\gamma_8\gamma_{41} + \gamma_9\gamma_{42}\right)a_{01}^2 q_3 / q_{01};$$

$$\gamma_{12} = \left[\frac{\gamma_{41}}{\gamma_1 - a_{01}}\gamma_6 + \frac{\gamma_{42}}{\gamma_2 - a_{01}}\gamma_7 - \left(\frac{\gamma_{41}2\gamma_1}{\gamma_1^2 - a_{01}^2} + \frac{2\gamma_2\gamma_{42}}{\gamma_2^2 - a_{01}^2}\right)\times\right.$$

$$\left.\times\left(q_4 a_{01}^2 - \frac{4va_{01} - q_4}{2}\right)\right]\frac{1}{\gamma_{43}}\left(\frac{r}{2q_2} - q_{13}\right);$$

$$\gamma_{13} = -\frac{q_3}{q_{01}}a_{01}^2\gamma_{12};\quad \gamma_{14} = -q_{13}\gamma_6;\quad \gamma_{14}^* = q_{10}a_{01}^3\gamma_{12};$$

$$\gamma_{15}^* = q_{10}a_{01}^3\gamma_{12} + \frac{q_3}{q_{01}}a_{01}^2\frac{4vq_2}{q_{01}r}\frac{1}{\gamma_{43}}\left[\gamma_{41}\left(\frac{1}{\gamma_1(\gamma_1 - a_{01})} + \right.\right.$$

$$\left.\left. + \frac{2}{a_{01}(\gamma_1^2 - a_{01}^2)}\right)\gamma_{41} + \gamma_{42}\left(\frac{1}{\gamma_2(\gamma_2 - a_{01})} + \frac{2}{a_{01}(\gamma_2^2 - a_{01}^2)}\right)\right];$$

$$\gamma_{15} = \frac{r}{2q_2};\quad \gamma_{16} = -\frac{4vq_2}{q_{01}^2 r\gamma_1};\quad \gamma_{17} = -q_{13}\gamma_7;$$

$$\gamma_{18} = q_{11}\gamma_1 + \frac{a_{01}^2 - a_0^2}{2a_{01}}\left(\frac{2a_{01}a_0}{a_0^2 - a_{01}^2} - \frac{a_{01}}{a_0 - a_{01}}\right);$$

$$\gamma_{19}=\frac{q_{10}a_{01}^2\left(a_{01}^2-a_0^2\right)}{2(a_0-a_{01})\gamma_{43}}\left(\gamma_{15}-q_{13}\right)\left[\frac{\gamma_{41}}{\gamma_1-a_{01}}\gamma_6+\right.$$

$$\left.+\frac{\gamma_{42}\gamma_7}{\gamma_2-a_{01}}-\left(\frac{2\gamma_1\gamma_{41}}{\gamma_1^2-a_{01}^2}+\frac{2\gamma_2\gamma_{42}}{\gamma_2^2-a_{01}^2}\right)\left(q_4a_{01}^2-4\nu a_{01}^4-\frac{q_{01}}{2}\right)\right];$$

$$\gamma_{20}=-\frac{q_{10}a_{01}^2(a_{01}+a_0)}{\gamma_{43}}\left\{\gamma_{41}\left[\left(\frac{\gamma_{41}}{\gamma_1-a_{11}}-\frac{2a_{01}\gamma_1}{\gamma_1^2-a_{01}}\right)\times\right.\right.$$

$$\times\left(1+\frac{\nu q_1}{q_{01}^2-q_2}\left(\frac{q_4}{\gamma_1^2}-4\nu-\frac{q_{01}}{2\gamma_1^4}\right)\right)+\frac{2\nu q_2}{q_{01}^2}\left(\frac{1}{\gamma_1(\gamma_1-a_{01})}-\right.$$

$$\left.\left.-\frac{2\gamma_1}{a_{01}(\gamma_1^2-a_{01}^2)}\right)\right]+\gamma_{42}\left[\left(\frac{\gamma_2}{\gamma_2-a_{01}}-\frac{2a_{01}\gamma_2}{\gamma_2^2-a_{01}}\right)\times\right.$$

$$\times\left(1+\frac{\nu q_1}{q_{01}^2-q_2}\left(\frac{q_4}{\gamma_2^2}-4\nu-\frac{q_{01}}{2\gamma_2^4}\right)\right)+$$

$$\left.\left.+\frac{2\nu q_2}{q_{01}^2}\left(\frac{1}{\gamma_2(\gamma_2-a_{01})}-\frac{2\gamma_2}{a_{01}(\gamma_2^2-a_{01}^2)}\right)\right]\right\};$$

$$\gamma_{23}=-\gamma_{11}\gamma_{14}\gamma_2-\gamma_1\gamma_{13}q_{12}+\gamma_{11}\gamma_1\gamma_{17}+\gamma_{13}\gamma_2q_{12};$$

$$\gamma_{24}=-\gamma_{10}\gamma_{14}\gamma_2+q_{12}\gamma_{17}q_{11}a_{01}^2-\gamma_1\gamma_{14}^*q_{12}-q_{11}a_{01}^2\gamma_{14}q_{12}+$$

$$+\gamma_{10}\gamma_{17}\gamma_1+\gamma_{14}^*q_{12}\gamma_2;$$

$$\gamma_{25}=-\gamma_{10}\gamma_{15}\gamma_2+\gamma_{14}\gamma_{22}\gamma_{11}-\gamma_2\gamma_{11}\gamma_{15}+q_{12}\gamma_{21}\gamma_{13}-$$

$$-\gamma_{11}\gamma_{17}\gamma_{21}-\gamma_{11}\gamma_1\gamma_{15}-q_{12}\gamma_{13}\gamma_{22};$$

$$\gamma_{26}=\gamma_{11}\gamma_{15}\gamma_{22}-\gamma_{11}\gamma_{15}\gamma_{21};$$

$$\gamma_{27}=\gamma_{10}\gamma_{22}\gamma_{14}+q_{12}(\gamma_{21}\gamma_{14}^*-\gamma_{15}^*\gamma_1)-q_{11}a_{01}^2q_{12}\gamma_{15}-$$

$$-\gamma_{10}\gamma_{17}\gamma_2+\gamma_{15}^*q_{12}\gamma_2;$$

$$\gamma_{28}=\gamma_{13}\gamma_{19}\gamma_2;\qquad\gamma_{29}=\gamma_{19}\gamma_{17}q_{11}a_{01}^2+\gamma_{14}\gamma_{19}\gamma_2-\gamma_1\gamma_{20}\gamma_{13};$$

$$\gamma_{30}=-\gamma_{18}\gamma_{14}\gamma_2-q_{11}a_{01}^2\gamma_{14}\gamma_{20}+\gamma_{18}\gamma_{17}\gamma_1-\gamma_{19}\gamma_{22}\gamma_{13};$$

$$\gamma_{31} = -\gamma_1\gamma_{14}^*\gamma_{20} - q_{11}a_{01}^2\gamma_{14}\gamma_{20} + \gamma_{18}\gamma_1\gamma_{17};$$
$$\gamma_{34} = \gamma_{11}\gamma_{14}\gamma_{20} + \gamma_{11}\gamma_{19}\gamma_1 - q_{12}\gamma_{20}\gamma_{13};$$
$$\gamma_{35} = \gamma_{10}\gamma_{14}\gamma_{20} + q_{12}\gamma_{19}q_{11}a_{01}^2 + \gamma_{13}q_{11}a_{01}^2\gamma_{18} -$$
$$-\gamma_{18}q_{11}a_{01}^2\gamma_{14} + \gamma_{10}\gamma_{19}\gamma_1 - \gamma_{14}^*q_{12}\gamma_{20}.$$

$$\gamma_{41} = \gamma_2^3 - \gamma_1^2\gamma_2; \qquad \gamma_{42} = \gamma_1^3 - \gamma_2^2\gamma_1; \qquad \gamma_{50} = \frac{\gamma_{28}}{\gamma_{23}}a_{01};$$
$$\gamma_{43} = 2\gamma_1^3(\gamma_1^2\gamma_2 - \gamma_2^3) + 2\gamma_2^3(\gamma_1\gamma_2^2 - \gamma_1^3); \qquad \gamma_{51} = \frac{\gamma_{29}}{\gamma_{23}}a_{01};$$
$$\gamma_{44} = q_{01}a_0^2 - 4va_0^4 - \frac{q_{01}}{2}; \qquad \gamma_{45} = q_4a_{01}^2 - 4va_0^4 - \frac{q_{01}}{2};$$
$$\gamma_{52} = \frac{\gamma_{30}}{\gamma_{23}}a_{01}; \quad \gamma_{53} = \frac{\gamma_{31}}{\gamma_{23}}a_{01} + \frac{r_1^2}{16(a_0 - a_{01})};$$
$$\gamma_{54} = -a_0a_{01}(a_0 + a_{01}); \qquad \gamma_{55} = \frac{a_0^3 - a_{01}}{a_0 - a_{01}}; \qquad \gamma_{56} = \frac{r_1^2a_0a_{01}}{a_0 - a_{01}};$$
$$\gamma_{57} = -q_{10}\frac{a_{01}^3}{\gamma_{23}}\gamma_{28} - \frac{q_3}{q_{01}}\frac{a_{01}(a_{01}^2 - a_0^2)}{a_0 - a_{01}};$$
$$\gamma_{58} = -q_{10}\frac{a_{01}^3}{\gamma_{23}}\gamma_{29} + \frac{a_{01}^2(a_{01}^2 - a_0^2)}{(a_0 - a_{01})} - \frac{q_3}{q_{01}}\left(\frac{a_{01}a_0^2}{a_0 - a_{01}} - \frac{\gamma_{28}}{\gamma_{23}}\right);$$
$$\gamma_{59} = -q_9a_{01}\frac{\gamma_{28}}{\gamma_{23}} - q_{10}a_{01}^3\frac{\gamma_{30}}{\gamma_{23}} + \frac{a_{01}^2a_0^2}{(a_0 - a_{01})} +$$
$$+\frac{q_3}{q_1}\left[\frac{1}{2a_{01}(a_0 - a_{01})}\left(\frac{r_1^2}{8}a_{01}^2 - 2(a_{01}^2 - a_0^2)\right) - \frac{\gamma_{29}}{\gamma_{23}}\right];$$
$$\gamma_{60} = -q_9a_{01}\frac{\gamma_{29}}{\gamma_{23}} - q_{10}a_{01}^3\frac{\gamma_{31}}{\gamma_{23}} + \frac{a_{01}^2}{2(a_0 - a_{01})} +$$

$$+\frac{q_3}{q_{01}}\left(\frac{\gamma_{30}}{\gamma_{23}}-\frac{a_0^2}{2a_{01}(a_0-a_{01})}\right);\qquad \gamma_{63}=q_{10}(a_{01}+a_0)a_0^3+\frac{q_3}{q_{01}}\frac{4a_0^3}{a_{01}};$$

$$\gamma_{61}=-q_9a_{01}\frac{\gamma_{30}}{\gamma_{23}}-\frac{q_3}{q_{01}}\left(\frac{\gamma_{31}}{\gamma_{23}}-\frac{r_1^2}{16(a_0-a_{01})a_{01}}\right);\quad \gamma_{62}=-q_9a_{01}\frac{\gamma_{31}}{\gamma_{23}};$$

$$\gamma_{64}=-q_{10}a_0^3+\frac{2a_0^5}{a_0-a_{01}}-\frac{q_3}{q_{01}}\frac{a_0^34}{a_{01}(a_0^2-a_{01}^2)};$$

$$\gamma_{65}=-a_0-q_{10}\frac{a_0^3}{a_0-a_{01}}\frac{r_1^2}{8}-\frac{q_3}{q_{01}}\frac{a_0}{a_{01}(a_0^2-a_{01}^2)}\times$$

$$\times\left(\frac{r_1^2}{4}+2(a_{01}^2-a_0^2)\right);\ \gamma_{66}=-q_9a_{01}-\frac{a_0^3}{a_0^2-a_{01}^2}-\frac{q_3}{q_{01}}\frac{2a_0^3}{a_{01}(a_0^2-a_{01}^2)};$$

$$\gamma_{67}=\frac{a_0}{a_0^2-a_{01}^2}\frac{r_1^2}{8}-\frac{q_3}{q_{01}}\frac{a_0r_1^2}{8a_{01}(a_0^2-a_{01}^2)};$$

$$\gamma_{68}=\frac{2\gamma_1\gamma_{41}}{(\gamma_1^2-a_0^2)\gamma_{43}}+\frac{2\gamma_2\gamma_{42}}{(\gamma_2^2-a_0^2)\gamma_{43}};\ \gamma_{69}=\frac{2\gamma_1\gamma_{41}}{(\gamma_1^2-a_{01}^2)\gamma_{43}}+\frac{2\gamma_2\gamma_{42}}{(\gamma_2^2-a_{01}^2)\gamma_{43}};$$

$$\gamma_{70}=-\frac{\gamma_{41}}{\gamma_{43}}\left(\frac{\gamma_{57}}{\gamma_1-a_{01}}+\frac{\gamma_{63}}{\gamma_1-a_0}\right);$$

$$\gamma_{71}=\frac{\gamma_{32}}{\gamma_{23}}-\frac{\gamma_{41}}{\gamma_{43}}\left(\frac{\gamma_{58}}{\gamma_1-a_{01}}+\frac{\gamma_{64}}{\gamma_1-a_0}\right);\qquad \gamma_{72}=\frac{\gamma_{34}}{\gamma_{23}}-\frac{\gamma_{42}}{\gamma_{43}}\left(\frac{\gamma_{58}}{\gamma_2-a_{01}}+\frac{\gamma_{64}}{\gamma_2-a_0}\right);$$

$$\gamma_{73}=-\frac{\gamma_{42}}{\gamma_{43}}\left(\frac{\gamma_{57}}{\gamma_2-a_{01}}+\frac{\gamma_{63}}{\gamma_2-a_0}\right);\quad \gamma_{74}=\frac{\gamma_{34}}{\gamma_{23}}-\frac{\gamma_{42}}{\gamma_{43}}\left(\frac{\gamma_{58}}{\gamma_2-a_{01}}+\frac{\gamma_{64}}{\gamma_2-a_0}\right);$$

$$\gamma_{75}=\frac{\gamma_{35}}{\gamma_{23}}-\frac{\gamma_{42}}{\gamma_{43}}\left(\frac{\gamma_{59}}{\gamma_2-a_{01}}+\frac{\gamma_{65}}{\gamma_2-a_0}\right);\qquad \gamma_{76}=-\frac{\gamma_{41}}{\gamma_{43}}\left(\frac{\gamma_{57}}{\gamma_1-a_{01}}+\frac{\gamma_{63}}{\gamma_1-a_0}\right);$$

$$\gamma_{77}=-\frac{\gamma_{41}}{\gamma_{43}}\left(\frac{\gamma_{58}}{\gamma_1-a_{01}}+\frac{\gamma_{64}}{\gamma_1-a_0}\right)+\frac{\gamma_{32}}{\gamma_{23}};\quad \gamma_{79}=-\frac{\gamma_{41}}{\gamma_{43}}\left(\frac{\gamma_{60}}{\gamma_1-a_{01}}+\frac{\gamma_{66}}{\gamma_1-a_0}\right);$$

$$\gamma_{78}=-\frac{\gamma_{41}}{\gamma_{43}}\left(\frac{\gamma_{59}}{\gamma_1-a_{01}}+\frac{\gamma_{65}}{\gamma_1-a_0}\right)+\frac{\gamma_{33}}{\gamma_{23}};\qquad \gamma_{84}=\left(\frac{\gamma_6}{\gamma_1^2}\frac{q_1}{q_2}-2q_2\right);$$

$$\gamma_{80}=-\frac{\gamma_{42}}{\gamma_{43}}\left(\frac{\gamma_{57}}{\gamma_2-a_{01}}+\frac{\gamma_{63}}{\gamma_2-a_0}\right);\ \gamma_{85}=\left(\frac{\gamma_7}{\gamma_2^2}\frac{q_1}{q_2}-2q_2\right);$$

$$\gamma_{81}=-\frac{\gamma_{42}}{\gamma_{43}}\left(\frac{\gamma_{58}}{\gamma_2-a_{01}}+\frac{\gamma_{64}}{\gamma_2-a_0}\right)+\frac{\gamma_{34}}{\gamma_{23}};\quad \gamma_{86}=\frac{q_1}{q_2}\gamma_{44}-2q_2;$$

$$\gamma_{82}=-\frac{\gamma_{42}}{\gamma_{43}}\left(\frac{\gamma_{59}}{\gamma_2-a_{01}}+\frac{\gamma_{65}}{\gamma_2-a_0}\right)+\frac{\gamma_{35}}{\gamma_{23}};\qquad \gamma_{87}=\frac{q_1}{q_2}\gamma_{45}-2q_2;$$

$$\gamma_{83}=-\frac{\gamma_{42}}{\gamma_{43}}\left(\frac{\gamma_{60}}{\gamma_2-a_{01}}+\frac{\gamma_{66}}{\gamma_2-a_0}\right);\qquad \gamma_{88}=-\gamma_{84}\gamma_{57}\frac{\gamma_{41}}{\gamma_1-a_{01}};$$

$$\gamma_{89}=\gamma_{84}\left(\frac{\gamma_{32}}{\gamma_{23}}-\frac{\gamma_{41}\gamma_{58}}{\gamma_1-a_{01}}\right);\quad \gamma_{90}=-\gamma_{85}\gamma_{63}\frac{\gamma_{42}}{\gamma_2-a_{01}};\quad \gamma_{92}=\gamma_{68}\gamma_{86}\gamma_{63};$$

$$\gamma_{91}=\gamma_{85}\left(\frac{\gamma_{34}}{\gamma_{23}}-\frac{\gamma_{42}\gamma_{63}}{\gamma_2-a_{01}}\right);\qquad \gamma_{93}=\gamma_{68}\gamma_{64}\gamma_{86}+2q_3/a_0;$$

$$\gamma_{94}=\gamma_{69}\gamma_{57}\gamma_{87}-\frac{q_3}{a_{01}}\frac{\gamma_{28}}{\gamma_{23}};\quad \gamma_{95}=\gamma_{69}\gamma_{58}\gamma_{87}-\frac{q_3}{a_{01}}\left(\frac{\gamma_{29}}{\gamma_{23}}+\frac{a_{01}+a_0}{a_{01}}\right);$$

$$\gamma_{96}=\left[\frac{\gamma_1 q_1}{q_2}\left(\frac{q_4}{\gamma_1^2}-4v+\frac{q_{01}}{2\gamma_1^4}\right)-\frac{2q_2}{\gamma_1}\right]\left[\frac{\gamma_{41}\gamma_{57}}{\gamma_1-a_{01}}-\frac{\gamma_{41}\gamma_{63}}{\gamma_1-a_0}\right];$$

$$\gamma_{97}=\left[\frac{\gamma_2 q_1}{q_2}\left(\frac{q_4}{\gamma_2^2}-4v+\frac{q_{01}}{2\gamma_2^4}\right)-\frac{2q_2}{\gamma_2}\right]\left[\frac{\gamma_{42}\gamma_{57}}{\gamma_2-a_{01}}-\frac{\gamma_{41}\gamma_{63}}{\gamma_2-a_0}\right];$$

$$\gamma_{98}=a_{01}\gamma_{69}\left(\frac{q_4}{a_{01}^2}-4v-\frac{q_{01}}{2a_{01}^4}\right)\gamma_{57}\frac{q_1}{q_2}-\frac{2q_2}{a_{01}}\gamma_{69}-q_3\frac{\gamma_{28}}{\gamma_{23}};$$

$$\gamma_{99}=\gamma_{68}\left(\left(\frac{q_4}{a_0}-4va_0-\frac{q_{01}}{2a_0^2}\right)\gamma_{63}\frac{q_1}{q_2}-\frac{2q_2}{a_0}\right).$$

ПРИЛОЖЕНИЕ 3

Значения констант, приведённых и используемых в параграфе 3.4

$$\gamma_{14} = -q_4 \ln\frac{r_1}{r_2}\cdot\frac{\gamma_1\gamma_2}{\gamma_2-\gamma_1}; \qquad \gamma_{15} = \frac{\gamma_7}{\gamma_9}\cdot\frac{2\gamma_3}{\gamma_3^2-\gamma_1^2}+\frac{\gamma_8}{\gamma_9}\cdot\frac{2\gamma_4}{\gamma_4^2-\gamma_1^2};$$

$$\gamma_{16} = \frac{\gamma_7}{\gamma_9}\cdot\frac{2\gamma_3}{\gamma_3^2-\gamma_2^2}+\frac{\gamma_8}{\gamma_9}\cdot\frac{2\gamma_4}{\gamma_4^2-\gamma_2^2}; \quad \gamma_{17} = \frac{\gamma_7\gamma_{14}(2\gamma_3-\gamma_1-\gamma_2)}{\gamma_9(\gamma_3-\gamma_1)(\gamma_3-\gamma_2)};$$

$$\gamma_{18} = \frac{\gamma_8\gamma_{14}(2\gamma_4-\gamma_1-\gamma_2)}{\gamma_9(\gamma_4-\gamma_1)(\gamma_4-\gamma_2)}; \qquad \gamma_{19} = \gamma_{10}\left(-\frac{\gamma_1}{2\nu}+\gamma_1{}^3+\frac{1}{2\gamma_1}\right);$$

$$\gamma_{21} = \gamma_{10}\left(-\frac{\gamma_2}{2\nu}+\gamma_2{}^3+\frac{1}{2\gamma_2}\right); \qquad \gamma_{22} = \gamma_{10}\left(-\frac{\gamma_3}{2\nu}+\gamma_3{}^3+\frac{1}{2\gamma_2}\right);$$

$$\gamma_{23} = \gamma_{10}\left(-\frac{\gamma_4}{2\nu}+\gamma_4{}^3+\frac{1}{2\gamma_4}\right); \quad \gamma_{24} = \gamma_1\left(\frac{3}{2}+\ln r_1\ \frac{6\nu-1}{2\nu}-\left(\ln r_1\ +\frac{1}{2}\right)\gamma_1^2\right);$$

$$\gamma_{25} = \gamma_2\omega_2\frac{q_3}{\gamma_2-\gamma_1}-q_6\left(\ln r_1\ \frac{1-4\nu}{2\nu}-\frac{1}{2}\right)(1-\gamma_1^2)\gamma_{14}\gamma_{15}\gamma_{19};$$

$$\gamma_{26} = -q_6\left(\frac{2}{r_1}\gamma_{14}\gamma_{15}\gamma_9-\gamma_{24}\gamma_{14}\gamma_5\right); \quad \gamma_{27} = \gamma_2\left(\frac{3}{2}+\ln r_1\ \frac{6\nu-1}{2\nu}-\left(\ln r_1\ +\frac{1}{2}\right)\gamma_2^2\right);$$

$$\gamma_{29} = -q_6\left(2\gamma_{14}\gamma_{15}\gamma_{21}/r_1-\gamma_{27}\gamma_{14}\gamma_{16}\right); \quad \omega_2 = \frac{1+2\nu}{4\nu-1}\ln r_1\ +\frac{1}{4\nu-1};$$

$$\gamma_{28} = \gamma_1\omega_2\frac{q_3}{\gamma_2-\gamma_1}-q_6\left(\ln r_1\ \frac{1-4\nu}{2\nu}-\frac{1}{2}\right)(1-\gamma_2^2)\gamma_{14}\gamma_{15}\gamma_{21};$$

$$\gamma_{30} = \left(\ln r_1\ \frac{1-4\nu}{2\nu}-\frac{1}{2}\right)(1-\gamma_3^2); \quad \gamma_{31} = \gamma_3\left(\frac{3}{2}+\ln r_1\ \frac{6\nu-1}{2\nu}-\left(\ln r_1\ +\frac{1}{2}\right)\gamma_3^2\right);$$

$$\gamma_{32}=\frac{2}{r_1}\gamma_{17}\gamma_{22}-\gamma_{17}\gamma_{31};\quad \gamma_{33}=\left(\ln r_1\ \frac{1-4\nu}{2\nu}-\frac{1}{2}\right)\left(1-\gamma_4^2\right);$$

$$\gamma_{34}=\gamma_4\left(\frac{3}{2}+\ln r_1\ \frac{6\nu-1}{2\nu}-\left(\ln r_1\ +\frac{1}{2}\right)\gamma_4^2\right);\ \gamma_{42}=\gamma_3\gamma_{22}\gamma_{30};\quad \gamma_{45}=\gamma_4\gamma_{33}\gamma_{23};$$

$$\gamma_{35}=-\frac{\gamma_1\gamma_{25}}{q_6}+\frac{q_3}{1-2\nu}\left(1-4\gamma_1^2\right)\gamma_1\ \frac{1/2-\ln r_2}{\gamma_2-\gamma_1}-\frac{q_3\gamma_1\gamma_2}{\gamma_2-\gamma_1};$$

$$\gamma_{36}=\frac{q_3}{1-2\nu}\left(1-4\gamma_1^2\right)\gamma_1\ \frac{\ln r_2\ -1/2}{\gamma_2-\gamma_1}\cdot\frac{a_0^2}{\gamma_1^{\,2}-a_{01}^2};$$

$$\gamma_{37}=-\frac{\gamma_1\gamma_{26}}{q_6}+\frac{\gamma_1\gamma_{14}\gamma_{15}\gamma_{19}}{r_1^2}+\frac{1}{2}\ln r_1\left(\frac{1}{\nu}\gamma_1^2-4\gamma_1^4-1\right);$$

$$\gamma_{39}=\frac{q_3}{1-2\nu}\left(1-4\gamma_2^2\right)\gamma_2\ \frac{\ln r_2\ -1/2}{\gamma_2-\gamma_1}\cdot\frac{a_0^2}{\gamma_2^{\,2}-a_{01}^2};$$

$$\gamma_{38}=-\frac{\gamma_2\gamma_{28}}{q_6}+\frac{q_3}{1-2\nu}\left(1-4\gamma_2^2\right)\gamma_2^2\ \frac{1/2-\ln r_2}{\gamma_2-\gamma_1}-\frac{q_3\gamma_1\gamma_2}{\gamma_2-\gamma_1};$$

$$\gamma_{41}=-\frac{\gamma_2\gamma_{39}}{q_6}+\frac{\gamma_2\gamma_{14}\gamma_{15}\gamma_{21}}{r_1^2}+\gamma_{14}\gamma_{16}\frac{1}{2}\ln r_1\left(\frac{1}{\nu}\gamma_2^2-4\gamma_2^4-1\right);$$

$$\gamma_{43}=\gamma_3\left(\frac{2}{r_1}\gamma_{22}-\gamma_{31}\right)+\frac{\gamma_3\gamma_{22}}{r_1^2}+\frac{1}{2}\ln r_1\left(\frac{1}{\nu}\gamma_3^2-4\gamma_3^4-1\right);\ \gamma_{48}=a_0^4\left(\frac{2}{a_{01}}+1\right);$$

$$\gamma_{46}=\gamma_4\left(\frac{2}{r_1}\gamma_{23}-\gamma_{34}\right)+\frac{\gamma_4\gamma_{23}}{r_1^2}+\frac{1}{2}\ln r_1\left(\frac{1}{\nu}\gamma_4^2-4\gamma_4^4-1\right);\quad \gamma_{49}=\frac{a_0^2-2a_0^4}{2a_{01}};$$

$$\gamma_{50}=\frac{\gamma_{11}}{\gamma_{13}(\gamma_5+\gamma_3)}+\frac{\gamma_{12}}{\gamma_{13}(\gamma_6+\gamma_3)};\quad \gamma_{51}=\frac{\gamma_{11}}{\gamma_{13}(\gamma_5+\gamma_4)}+\frac{\gamma_{12}}{\gamma_{13}(\gamma_6+\gamma_4)};\quad \gamma_{52}=\frac{\gamma_{11}}{\gamma_{13}(\gamma_5+\gamma_1)}+\frac{\gamma_{12}}{\gamma_{13}(\gamma_6+\gamma_1)};$$

$$\gamma_{47}=\frac{a_0^2}{2a_{01}}\left(1-4a_{01}^2\right)-4a_0^2a_{01};\ \gamma_{53}=\frac{\gamma_{11}}{\gamma_{13}(\gamma_5+\gamma_2)}+\frac{\gamma_{12}}{\gamma_{13}(\gamma_6+\gamma_2)};$$

$$\gamma_{54}=\gamma_{46}\left[\frac{\gamma_{11}}{\gamma_{13}(\gamma_5+a_{01})}+\frac{\gamma_{12}}{\gamma_{13}(\gamma_6+a_{01})}\right];\qquad \gamma_{66}=\gamma_{42}\gamma_{64}-q_6\gamma_{22}\gamma_{30};$$

$$\gamma_{55}=\gamma_{52}\gamma_{35}+\gamma_{38}\gamma_{53}+\frac{\gamma_{49}}{r_1^2};\quad \gamma_{56}=\gamma_{17}\gamma_{50}\gamma_{43}+\gamma_{18}\gamma_{51}\gamma_{46};\quad \gamma_{57}=\gamma_{17}\gamma_{42}\gamma_{50}+\gamma_{18}\gamma_{45}\gamma_{51};$$

$$\gamma_{60}=\gamma_{52}\gamma_{35}+\gamma_{38}\gamma_{53}-2\gamma_{45}\gamma_{46}a_{01}\gamma_{54}+\gamma_3\gamma_{17}\gamma_{50}\gamma_{42}+\gamma_{51}\gamma_{18}\gamma_4\gamma_{45};$$

$$\gamma_{64}=\frac{\gamma_5\gamma_{11}}{\gamma_{13}(\gamma_5-\gamma_3)}\left(1-\frac{4\gamma_3}{\gamma_5+\gamma_3}\right)+\frac{\gamma_6\gamma_{12}}{\gamma_{13}(\gamma_6-\gamma_3)}\left(1-\frac{4\gamma_3}{\gamma_6+\gamma_3}\right);\ \gamma_{67}=\gamma_{66}\gamma_{45}-q_6\gamma_{23}\gamma_{33};$$

$$\gamma_{69}=\frac{\gamma_5\gamma_{11}}{\gamma_{13}(\gamma_5-\gamma_1)}\left(1-\frac{4\gamma_1}{\gamma_5+\gamma_1}\right)+\frac{\gamma_6\gamma_{12}}{\gamma_{13}(\gamma_6-\gamma_1)}\left(1-\frac{4\gamma_1}{\gamma_6+\gamma_1}\right);$$

$$\gamma_{70}=\frac{\gamma_5\gamma_{11}}{\gamma_{13}(\gamma_5-\gamma_2)}\left(1-\frac{4\gamma_2}{\gamma_5+\gamma_2}\right)+\frac{\gamma_6\gamma_{12}}{\gamma_{13}(\gamma_6-\gamma_2)}\left(1-\frac{4\gamma_2}{\gamma_6+\gamma_2}\right);$$

$$\gamma_{71}=\frac{\gamma_5\gamma_{11}}{\gamma_{13}(\gamma_5-a_{01})}+\frac{\gamma_6\gamma_{12}}{\gamma_{13}(\gamma_6-a_{01})};\ \gamma_{72}=\frac{\gamma_5\gamma_{11}}{\gamma_{13}({\gamma_5}^2-{a_{01}}^2)}+\frac{\gamma_6\gamma_{12}}{\gamma_{13}(\gamma_6-{a_{01}}^2)};$$

$$\gamma_{73}=\gamma_{17}\gamma_{42}\gamma_{64}+\gamma_{18}\gamma_{45}\gamma_{66};\quad \gamma_{74}=\gamma_{17}\gamma_{64}\gamma_{43}+\gamma_{66}\gamma_{18}\gamma_{46};$$

$$\gamma_{75}=\gamma_{35}\gamma_{69}+\gamma_{38}\gamma_{70}+\gamma_{25}+\gamma_{28}-q_6(\gamma_{18}\gamma_{23}\gamma_{33}+\gamma_{17}\gamma_{22}\gamma_{30})-$$
$$-2q_3\gamma_{45}(\gamma_{71}-4a_{01}\gamma_{72})/(1-2\nu);\qquad \gamma_{99}=\gamma_{67}-2\gamma_{41}\gamma_{51}\gamma_4;$$

$$\gamma_{81}=\Big[\big((1-\gamma_3^2)\gamma_{17}\gamma_{22}+(1-\gamma_4^2)\gamma_{18}\gamma_{23}+(1-\gamma_1^2)\gamma_{14}\gamma_{15}\gamma_{19}+$$
$$+(1-\gamma_2^2)\gamma_{14}\gamma_{15}\gamma_{21}\big)(1-2\nu)/(2\nu)+q_3\Big]\ln r;$$

$$\gamma_{84}=\frac{1-2\nu}{2\nu}\ln r(1-\gamma_3^2)\gamma_{22};\quad \gamma_{84}=-\frac{1-4\nu}{2\nu}\ln r\gamma_3^2;\ \gamma_{86}=\frac{1-2\nu}{2\nu}\ln r(1-\gamma_4^2)\gamma_{23};$$

$$\gamma_{87}=-\frac{1-4\nu}{2\nu}\ln r\gamma_4^2;\quad \gamma_{98}=\gamma_5\gamma_{46}\gamma_{54}\frac{q_3}{1-2\nu};\quad \chi_7^{(0)}=\gamma_{57}\gamma_6(\gamma_{67}-2\gamma_{51}\gamma_{45}\gamma_4);$$

$$\gamma_{88}=\gamma_{67}+2\gamma_{51}\gamma_{45}\gamma_4;\quad \gamma_{89}=\gamma_{66}+2\gamma_{50}\gamma_{45}\gamma_3;\ \gamma_{90}=-\gamma_{84}\gamma_{88}+\gamma_{86}\gamma_{89};$$

$$\gamma_{98}^{(0)}=\gamma_6\gamma_{46}\gamma_{54}q_3/(1-2\nu);\ \chi_1^{(0)}=\gamma_{50}\gamma_{42}\gamma_3\gamma_{67}+\gamma_6\gamma_{50}\gamma_{47}(\gamma_{67}-2\gamma_{51}\gamma_{45}\gamma_4);$$

$$\chi_8^{(0)} = -\gamma_{73}\gamma_{51}\gamma_{45}(\gamma_4+\gamma_6);\quad \chi_9^{(0)} = \gamma_6\left(\gamma_{56}(\gamma_{67}-\gamma_{51}\gamma_{45}(\gamma_4+\gamma_6))+\gamma_{57}(\gamma_{68}-2\gamma_{59})\right);$$

$$\chi_{10}^{(0)} = \gamma_{73}(\gamma_{59}+\gamma_6\gamma_{51}\gamma_{46})+\gamma_{74}(\gamma_4\gamma_{51}\gamma_{45}+\gamma_6\gamma_{51}\gamma_{46});$$

$$\chi_{11}^{(0)} = \gamma_6\left(\gamma_{57}\gamma_{97}/\gamma_{55}+\gamma_{56}\left(\gamma_{68}-2\gamma_{59}\right)\right)-(\gamma_4+\gamma_6)\gamma_{45}\gamma_{51}\gamma_{75};$$

$$\chi_{16}^{(0)} = \gamma_{98}^{(0)}\left(\gamma_{84}(\gamma_{68}-2\gamma_{59})+\gamma_{99}\gamma_{22}/2\right);\quad \chi_{31}^{(0)} = (\gamma_6+\gamma_4)\gamma_{45}\gamma_{51}\gamma_{86};$$

$$\chi_{17}^{(0)} = \gamma_{85}(\gamma_{68}-2\gamma_{59})\gamma_{98}+(\gamma_6+\gamma_4)\gamma_{45}\gamma_{51}\gamma_{78};\ \chi_{32}^{(0)} = (\gamma_6+\gamma_4)\gamma_{45}\gamma_{51}\gamma_{87};$$

$$\chi_{33}^{(0)} = \gamma_{86}(\gamma_{59}+\gamma_6\gamma_{46}\gamma_{51})+(\gamma_6+\gamma_4)\gamma_{45}\gamma_{51}\gamma_{22}/2;$$

$$\chi_{34}^{(0)} = \gamma_{87}(\gamma_{59}+\gamma_6\gamma_{46}\gamma_{51});\quad \chi_{38}^{(0)} = (\gamma_{65}+2\gamma_6\gamma_{42}\gamma_{50})\gamma_{86};$$

$$\chi_1 = \gamma_{50}\gamma_{42}\gamma_3\gamma_{67}+\gamma_5\gamma_{50}\gamma_{42}(\gamma_{67}-2\gamma_{51}\gamma_{45}\gamma_4);$$

$$\chi_7 = \gamma_{57}\gamma_5(\gamma_{67}-2\gamma_{51}\gamma_{45}\gamma_4);\ \chi_8 = -\gamma_{73}\gamma_{51}\gamma_{45}(\gamma_4+\gamma_5);$$

$$\chi_9 = \gamma_5\left(\gamma_{56}(\gamma_{67}-\gamma_{51}\gamma_{45}(\gamma_4+\gamma_5))+\gamma_{57}(\gamma_{68}-2\gamma_{59})\right);$$

$$\chi_{16} = \gamma_{98}\left(\gamma_{84}(\gamma_{68}-2\gamma_{59})+\gamma_{99}\gamma_{22}/2\right);\ \chi_{17} = \gamma_{85}(\gamma_{68}-2\gamma_{59})\gamma_{98}+(\gamma_5+\gamma_4)\gamma_{45}\gamma_{51}\gamma_{78};$$

$$\chi_{24} = 2\gamma_{50}\gamma_{42}\gamma_3-\gamma_{66};\quad \chi_{25} = 2\gamma_{58}-\gamma_{65};\ \chi_{28} = \gamma_{22}\chi_{24}/2+\gamma_{86}(2\gamma_{58}-\gamma_{65});$$

$$\chi_{11} = \gamma_5\left(\gamma_{57}\gamma_{97}/\gamma_{55}+\gamma_{56}\left(\gamma_{68}-2\gamma_{59}\right)\right)-(\gamma_4+\gamma_5)\gamma_{45}\gamma_{51}\gamma_{75};$$

$$\chi_{27} = \gamma_{87}\chi_{24};\quad \chi_{29} = \gamma_{86}(2\gamma_3\gamma_{50}-\gamma_{64})/\left(r_1^2\right)+\gamma_{22}(2\gamma_{58}-\gamma_{65})/2;$$

$$\chi_{31} = (\gamma_5+\gamma_4)\gamma_{45}\gamma_{51}\gamma_{86};\quad \chi_{32} = (\gamma_5+\gamma_4)\gamma_{45}\gamma_{51}\gamma_{87};\ \chi_{38} = (\gamma_{65}+2\gamma_5\gamma_{42}\gamma_{50})\gamma_{86};$$

$$\chi_{33} = \gamma_{86}(\gamma_{59}+\gamma_5\gamma_{46}\gamma_{51})+(\gamma_5+\gamma_4)\gamma_{45}\gamma_{51}\gamma_{22}/2;\quad \chi_{34} = \gamma_{87}(\gamma_{59}+\gamma_5\gamma_{46}\gamma_{51});$$

$$\chi_{50} = \gamma_5\gamma_{57}\gamma_{88}\gamma_{24}+\gamma_{84}\chi_7;\quad \chi_{51} = \gamma_{84}\chi_8+\gamma_{85}\chi_7+\gamma_5\gamma_{57}\chi_{27}+\gamma_{73}\chi_{31};$$

$$\chi_{52} = \gamma_{73}\chi_{32}+\gamma_5(\gamma_{88}\gamma_{56}\chi_{24}+\gamma_{57}\chi_{28})+\gamma_{22}\chi_7/2+\chi_8\gamma_{85}+\gamma_{84}\chi_9;$$

$$\chi_{53} = \gamma_{84}\chi_{10}+\gamma_{85}\gamma_9+\gamma_{22}\chi_8/2+\gamma_5(\gamma_{56}\chi_{27}+\gamma_{57}\gamma_{87}\chi_{25})+\gamma_{73}\chi_{33}+\gamma_{74}\chi_{31};$$

$$\chi_{54} = \gamma_{75}\chi_{31} + \gamma_{74}\gamma_{32} + \gamma_{22}\chi_9 / 2 + \gamma_5(\gamma_{57}\chi_{29} + \gamma_{56}\chi_{28} + \gamma_{55}\gamma_{88}\chi_{24}) +$$
$$+ \gamma_{73}\chi_{34} + \gamma_{85}\chi_{10} + \gamma_{84}\chi_{11} + \gamma_{60}\chi_{38} - \gamma_{84}\gamma_{88}\gamma_{60} - \gamma_{81}\chi_1;$$

$$\chi_{61} = \gamma_{84}^2\gamma_{98}\gamma_{99}; \quad \chi_{62} = 2\gamma_{84}\gamma_{85}\gamma_{98}\gamma_{99}; \quad \chi_{63} = \gamma_{22}\chi_{98}\gamma_{84}\gamma_{99};$$

$$\chi_{65} = \gamma_{22}\gamma_{98}^{(0)}\gamma_{99}\gamma_{84} / 2 + \gamma_{85}\gamma_{99} + \gamma_{84}\chi_{16}^{(0)};$$

$$\chi_{64} = \frac{\gamma_{22}}{2}\gamma_{98}\gamma_{99}\chi_{85} + \gamma_{85}\chi_{16} + \gamma_{84}(\chi_{17} + \gamma_{62}\chi_{88}) - \gamma_{62}\chi_{38} - \frac{q_3}{1-2\nu} + \gamma_5\gamma_{46}\gamma_{54}\gamma_{88}\chi_{24} - \gamma_{78}\chi_{31};$$

$$\chi_{66} = \frac{\gamma_{22}}{2}\gamma_{98}^{(0)}\gamma_{99}\chi_{85} + \gamma_{85}\chi_{16}^{(0)} + \gamma_{84}\chi_{17}^{(0)} + \gamma_{84}\gamma_{88}\gamma_{62} - \gamma_{62}\chi_{38}^{(0)} -$$
$$- \frac{q_3}{1-2\nu}\gamma_6\gamma_{46}\gamma_{54}\gamma_{88}\chi_{24} - \gamma_{78}\chi_{31}^{(0)}.$$

$$\chi_{70} = \gamma_{88}\gamma_6\gamma_{57}\chi_{24} + \chi_7^{(0)}\gamma_{84}; \quad \chi_{71} = \gamma_{84}\chi_8^{(0)} + \gamma_{85}\chi_7^{(0)} + \gamma_6\gamma_{57}\chi_{27} + \chi_{31}^{(0)}\gamma_{73};$$

$$\chi_{72} = \gamma_{73}\chi_{32}^{(0)} + \gamma_6(\chi_{24}\gamma_{56}\gamma_{88} + \gamma_{57}\chi_{28})\gamma_{22}\chi_7^{(0)} / 2 + \gamma_{85}\chi_8^{(0)} + \chi_9^{(0)}\gamma_{84};$$

$$\chi_{73} = \gamma_{84}\chi_{10}^{(0)} + \gamma_{85}\chi_9^{(0)} + \gamma_{22}\chi_8^{(0)} / 2 + \gamma_6(\gamma_{56}\chi_{27} + \chi_{25}\gamma_{87}\gamma_{57}) + \gamma_{73}\chi_{33}^{(0)} + \gamma_{74}\chi_{31}^{(0)};$$

$$\chi_{74} = \gamma_{75}\chi_{31}^{(0)} + \gamma_{74}\chi_{32}^{(0)} + \gamma_{22}\chi_9^{(0)} / 2 + \gamma_6(\gamma_{57}\chi_{29} + \chi_{24}\gamma_{88}\gamma_{55}) + \gamma_{73}\chi_{34}^{(0)} +$$
$$+ \gamma_{22}\chi_9^{(0)} / 2 + \gamma_{85}\chi_{10}^{(0)} + \gamma_{84}\chi_{11}^{(0)} + \gamma_{60}\chi_{38}^{(0)} - \gamma_{84}\gamma_{88}\gamma_{60} - \chi_1^{(0)}\gamma_{81};$$

$$\chi_{79} = \gamma_{73}\gamma_{86} / r_1^2; \quad \chi_{80} = \gamma_{86}\gamma_{42}\gamma_{73} / \gamma_{90}; \quad \chi_{81} = \gamma_{43}\gamma_{17} + \gamma_{42}\gamma_{87}\gamma_{73} / \gamma_{90};$$

$$\chi_{82} = \gamma_{43}\gamma_{86}\gamma_{73} / \gamma_{90}; \quad \chi_{83} = \gamma_{17} / r_1^2 + \gamma_{87}\gamma_{43}\gamma_{73} / \gamma_{90}; \quad \chi_{87} = \gamma_{86}\gamma_{22}\gamma_{30}\gamma_3\gamma_{73} / \gamma_{90};$$

$$\chi_{84} = \gamma_{45}\gamma_{67}\gamma_{73} / \gamma_{90}; \quad \chi_{85} = \gamma_{46}\chi_{86}; \quad \chi_{86} = \gamma_{67}\gamma_{73} / \gamma_{90};$$

$$\chi_{88} = \gamma_3\gamma_{22}\gamma_{30}\gamma_{87}\gamma_{73} / \gamma_{90}; \quad \chi_{89} = \gamma_3\left(\gamma_{89}\gamma_{73}\left(2\gamma_{22} / r_1 - \gamma_{31}\right) / \gamma_{90} - \gamma_{17}\gamma_{22}\gamma_{30}\right);$$
$$\chi_{90} = \gamma_{67}\gamma_{23}\gamma_{33}\gamma_4\gamma_{73} / \gamma_{90}; \quad \chi_{91} = \gamma_4\gamma_{67}\left(2\gamma_{23} / r_1 - \gamma_{34}\right)\gamma_{73} / \gamma_{90};$$

$$\chi_{92} = \gamma_4\chi_{33}\gamma_{23}\gamma_{18}; \quad \chi_{93} = \gamma_4\gamma_{18}\left(2\gamma_{23} / r_1 - \gamma_{34}\right); \quad \chi_{94} = 2\gamma_{50}\gamma_{42}\gamma_{17}\gamma_3;$$

$$\chi_{95} = 2\gamma_{50}\gamma_3\chi_{80}; \quad \chi_{96} = 2\gamma_3\gamma_{50}\chi_{81}; \quad \chi_{97} = 2\gamma_{50}\chi_{82}\gamma_3; \quad \chi_{98} = 2\gamma_{50}\chi_{83}\gamma_3;$$

$$\chi_{99} = 2\gamma_{50}\gamma_3\chi_{79}; \quad \chi_{100} = 2\gamma_{51}\gamma_{45}\gamma_{18}\gamma_4; \quad \chi_{101} = -2\gamma_4\gamma_{51}\chi_{84};$$

$$\chi_{102} = 2\gamma_{51}\chi_{18}\gamma_4\gamma_{46}; \quad \chi_{103} = -2\gamma_{51}\chi_{85}\gamma_4; \quad \chi_{104} = 2\gamma_{18}\gamma_4\gamma_{51}/r_1^2;$$

$$\chi_{105} = -2\gamma_{51}\gamma_4\gamma_{86}; \quad \chi_{106} = \gamma_1\gamma_{52}\chi_{35}; \quad \chi_{107} = \gamma_{38}\chi_{53}\gamma_2;$$

$$\chi_{108} = 2\gamma_5\gamma_{46}q_3/(1-2\nu); \; c_5 = -2c_2 + c_1^2; \quad c_6 = c_1(c_1^2/2 - 3c_2);$$

$$c_7 = 2(c_1^2 - c_2); \quad c_8 = 5c_1/2; \quad c_9 = -c_1c_2/2;$$

$$\delta_1 = \gamma_{14}\gamma_{15}\gamma_{19}\gamma_1; \quad \delta_2 = \gamma_{14}\gamma_{15}\gamma_{21}\gamma_2; \quad \delta_3 = \gamma_3\gamma_{17}\gamma_{22};$$

$$\delta_4 = -\gamma_{22}\gamma_{87}\gamma_3\gamma_{73}/\gamma_{90}; \quad \delta_5 = \gamma_3\gamma_{22}\gamma_{86}\gamma_{73}/\gamma_{90}; \quad \delta_6 = \gamma_3\gamma_{86}\gamma_{22}\gamma_{73}/\gamma_{90};$$

$$\delta_7 = -\gamma_{86}\gamma_3\gamma_{73}/\gamma_{90}; \quad \delta_8 = -\gamma_3\gamma_{87}\gamma_{73}/\gamma_{90}; \quad \delta_9 = \gamma_4\gamma_{67}\gamma_{73}/\gamma_{90};$$

$$\delta_{10} = \gamma_{45}\gamma_1\frac{a_0^2}{\gamma_1^2 - a_{01}^2}; \quad \delta_{11} = \gamma_{45}\gamma_2\frac{a_0^2}{\gamma_2^2 - a_{01}^2}; \quad \delta_{12} = \gamma_{44}a_{01} - \frac{a_0^2}{a_{01}};$$

$$\delta_{13} = 1/(\gamma_{90}(\gamma_5 - \gamma_6)); \quad \delta_{14} = 2c_1\chi_{50} + \chi_{51}; \; \delta_{15} = c_5\chi_{50} + \chi_{51}c_{10} + \chi_{52};$$

$$\delta_{18} = c_{10}\chi_{61} + \chi_{62}; \quad \delta_{16} = -2c_1c_2\chi_{50} + \chi_{51}c_{11} + \chi_{52}c_1 + \chi_{53};$$

$$\delta_{17} = \chi_{50}c_2^2 + \chi_{51}c_9 - \chi_{52}c_2 + \chi_{53}c_1/2 + \chi_{54}; \; \delta_{19} = c_{11}\chi_{61} + \chi_{62}c_1 + \chi_{63};$$

$$\delta_{20} = c_9\chi_{61} - \chi_{62}c_2 + \chi_{63}c_1/2 + \chi_{64}; \quad \delta_{21} = 2c_1\chi_{70} + \chi_{51};$$

$$\delta_{22} = c_5\chi_{70} + \chi_{71}c_{10} + \chi_{72}; \quad \delta_{23} = -2c_1c_2\chi_{70} + \chi_{71}c_{11} + \chi_{72}c_1 + \chi_{73};$$

$$\delta_{24} = c_2{}^2\chi_{70} + \chi_{71}c_9 - \chi_{72}c_2 + \chi_{73}c_1/2 + \chi_{74}; \; \delta_{25} = c_{11}\chi_{61} + \chi_{62}c_1 + \chi_{65};$$

$$\delta_{26} = c_9\chi_{61} - \chi_{62}c_2 + \chi_{65}c_1/2 + \chi_{66}; \quad \delta_{27} = 2c_1\gamma_{17}\gamma_{42} + \chi_{80};$$

$$\delta_{28} = c_5\gamma_{17}\gamma_{42} + \chi_{80}c_{10} + \chi_{81}; \; \delta_{29} = -2c_1c_2\gamma_{17}\gamma_{42} + \chi_{80}c_{11} + \chi_{81}c_1 + \chi_{82};$$

$$\delta_{30} = c_2{}^2\gamma_{17}\gamma_{42} + \chi_{80}c_9 - \chi_{81}c_2 + \chi_{82}c_1/2 + \chi_{83}; \; \delta_{31} = \gamma_{18}\gamma_{45}2c_1 - \chi_{84};$$

$$\delta_{32} = \gamma_{18}\gamma_{45}c_5 - \chi_{44}c_{10} + \gamma_{18}\gamma_{46}; \; \delta_{33} = -\gamma_{18}\gamma_{45}2c_1c_2 - \chi_{84}c_{11} + \gamma_{18}\gamma_{46}c_1 - \chi_{85};$$

$$\delta_{34} = \gamma_{18}\gamma_{45}c_2{}^2 - \chi_{84}c_9 - \gamma_{18}\gamma_{46}c_2 - \chi_{85}c_1/2 + \gamma_{18}/r_1^2;$$

$$\delta_{35} = q_6(2c_1\chi_{87} + \chi_{88}) + \gamma_3(\chi_{94}c_7 + 2c_1\chi_{95} + \chi_{96});$$

$$\delta_{36} = \gamma_3(c_6\chi_{94} + \chi_{95}c_5 + \chi_{96}c_{10} + \chi_{97}) + q_6(\chi_{87}c_5 + \chi_{88}c_{10});$$

$$\delta_{37} = \gamma_3(-c_1^2 c_2 \chi_{94} - 2\chi_{95} c_1 c_2 + \chi_{96} c_{11} + \chi_{97} c_1 + \chi_{98}) + \\ + q_6(-2\chi_{87} c_1 c_2 + \chi_{88} c_{11} + \chi_{89});$$

$$\delta_{38} = \gamma_3(c_9 c_2 \chi_{94} + \chi_{95} {c_2}^2 + \chi_{96} c_9 - \chi_{97} c_2 + \chi_{98} c_1/2 + \chi_{99}) + \\ + q_6(\chi_{90} {c_2}^2 - \chi_{91} c_2 + \chi_{92} c_1/2);$$

$$\delta_{39} = \gamma_4(c_7 \chi_{100} + 2\chi_{101} c_1 + \chi_{102}) - 2q_6 \chi_{90} c_1;$$

$$\delta_{40} = \gamma_4(c_6 \chi_{100} + \chi_{101} c_5 + \chi_{102} c_{10} + \chi_{103}) - q_6(\chi_{90} c_5 + \chi_{91});$$

$$\delta_{41} = \gamma_4(-c_1^2 c_2 \chi_{100} - 2\chi_{101} c_1 c_2 + \chi_{102} c_{11} + \chi_{103} c_1 + \chi_{104}) - \\ - q_6(-2\chi_{90} c_1 c_2 + \chi_{91} c_1 + \chi_{92});$$

$$\delta_{42} = \gamma_4(c_9 c_2 \chi_{100} + \chi_{101} {c_2}^2 + \chi_{102} c_9 - \chi_{103} c_2 + \chi_{104} c_1/2 + \chi_{105}) - \\ - q_6(\chi_{90} {c_2}^2 - \chi_{91} c_2 + \chi_{92} c_1/2);$$

$$\delta_{44} = c_7 \chi_{50} + 2\chi_{51} c_1 + \chi_{52}; \quad \delta_{45} = c_6 \chi_{50} + \chi_{51} c_5 + \chi_{52} c_{10} + \chi_{53};$$

$$\delta_{43} = c_8 \chi_{50} + \chi_{51}; \quad \delta_{46} = -{c_1}^2 c_2 \chi_{50} - 2\chi_{51} c_1 c_2 + \chi_{52} c_{11} + \chi_{53} c_1 + \chi_{54};$$

$$\delta_{47} = \chi_{50} c_2 c_9 + \chi_{51} c_2^2 + \chi_{52} c_9 - \chi_{53} c_2 + \chi_{54} c_1/2; \quad \delta_{48} = 2c_1 \chi_{61} + \chi_{62};$$

$$\delta_{49} = c_5 \chi_{61} + \chi_{62} c_{10} + \chi_{63}; \quad \delta_{50} = -2c_1 c_2 \chi_{61} + \chi_{62} c_{11} + \chi_{63} c_1 + \chi_{64};$$

$$\delta_{51} = {c_2}^2 \chi_{61} + \chi_{62} c_9 - \chi_{63} c_2 + \chi_{64} c_1/2; \quad \delta_{52} = \chi_{71} + \chi_{70} c_8;$$

$$\delta_{53} = \chi_{70} c_7 + 2\chi_{71} c_1 + \chi_{72}; \quad \delta_{54} = c_6 \chi_{70} + \chi_{71} c_5 + \chi_{72} c_{10} + \chi_{73};$$

$$\delta_{58} = c_5 \chi_{61} + \chi_{62} c_{10} + \chi_{65}; \quad \delta_{59} = -2c_1 c_2 \chi_{61} + \chi_{62} c_{11} + \chi_{65} c_1 + \chi_{66};$$

$$\delta_{55} = -{c_1}^2 c_2 \chi_{70} - 2\chi_{71} c_1 c_2 + \chi_{72} c_{11} + \chi_{73} c_1 + \chi_{74};$$

$$\delta_{56} = \chi_{70} c_2 c_9 + \chi_{71} c_2^2 + \chi_{72} c_9 - \chi_{73} c_2 + \chi_{74} c_1/2;$$

$$\delta_{60} = {c_2}^2 \chi_{61} + \chi_{62} c_9 - \chi_{65} c_2 + \chi_{66} c_1/2;$$

$$\delta_{61} = q_6 \chi_{87} + \gamma_3(\chi_{94} c_8 + \chi_{95}); \quad \delta_{62} = \gamma_4(c_8 \chi_{100} + \chi_{101}) - q_6 \chi_{90}.$$