

p. 25 line 15

$$\begin{aligned}
\alpha_1^\pm &= \frac{1}{2(1-l_2)^2 H_3^2 c^\pm l_1^2 \left(1 - 4rq^{\pm 2} (1-l_2) l_1 (l_2 - l_1)\right)} \\
&\times \left(\alpha^{\pm 2} H_3^2 l_1^2 (1-l_2)^2 \left(-12rq^{\pm 2} l_1 (1-l_2) (l_2 - l_1) - 1\right) + \alpha^\pm H_3 c^\pm (1-l_2) l_1 \left(4rq^{\pm 2} (1-l_2)^2 (l_2 - l_1) l_1 \left(-20l_1 q^\pm + 11\right) + \right. \right. \\
&+ 16q^{\pm 2} l_1^2 (1-l_1) (l_2 - l_1) + 2q^\pm l_1 (l_2 - l_1) + 5(1-2l_2) \Big) + 12rq^{\pm 2} c^{\pm 2} (1-l_2)^3 (l_2 - l_1) l_1 \left(-10q^{\pm 2} l_1^2 + 15q^\pm l_1 - 3\right) + \\
&+ 12q^{\pm 3} c^{\pm 2} l_1^3 \left(-4l_1^3 + 3l_1^2 (3+l_2) + l_1 \left((1-l_2)^2 + 6(1-l_2) - 12\right) + (5-l_2) l_2\right) - \\
&- 18q^{\pm 2} c^{\pm 2} l_1^2 \left(2l_1^2 (3-l_2) + l_1 \left(2(1-l_2)^2 + (1-l_2) - 8\right) + l_2 (5-l_2)\right) + 18q^\pm c^{\pm 2} l_1 (1+l_2) (l_2 - l_1) - \\
&- 6c^{\pm 2} \left(3(1-l_2)^2 - 3(1-l_2) + 1\right) \Big) \\
\gamma_1^\pm &= \frac{1}{12c^\pm H_3 l_1 (1-l_2) \left(1 - 4rq^{\pm 2} l_1 (1-l_2) (l_2 - l_1)\right)} \times \left((144rq^\pm H_3 l_1^2 (1-l_2)^2 (l_1 - l_2) - 12H_3 l_1 (1-l_2)) \beta + \right. \\
&+ \left((8H_3^3 l_1^2 c^\pm (1-l_2)^2 (l_1^3 - l_2^3) + 24H_3^3 l_1^3 c^\pm (1-l_2)^2 (l_1 - l_2)) rq^\pm - 2H_3^3 l_1 c^\pm (1-l_2) (l_1^2 - l_2^2) \right) \alpha + \\
&+ \left(384l_1^2 c^\pm q^{\pm 3} r (1-l_2)^2 (l_1 - l_2) - 240l_1 c^\pm q^{\pm 2} r (1-l_2)^2 (l_1 - l_2) + 48l_1^2 c^\pm q^{\pm 2} (l_1^2 - l_1 (1+l_2) + l_2) + \right. \\
&+ 24c^\pm (q^\pm l_1 (l_2 - l_1) + 1 + 2l_2) \Big) \beta + \left(40H_3^2 c^{\pm 2} (1-l_2)^2 \left(q^{\pm 3} l_1^2 (l_1^3 - l_2^3) - q^{\pm 2} l_1 (l_1^3 - l_2^3) \right) + 120H_3^2 c^{\pm 2} (1-l_2)^2 \times \right. \\
&\times q^{\pm 3} l_1^3 (l_2^2 - l_2 l_1) - 96H_3^2 c^{\pm 2} q^{\pm 2} (1-l_2)^2 l_1^2 (l_2^2 - l_2 l_1) + 4H_3^2 c^{\pm 2} q^\pm (1-l_2)^2 (l_2 l_1^2 - l_1^3) \Big) r + (12l_1^4 - \\
&- 4l_1^3 (5 + 7l_2) + 4l_1^2 (11(1-l_2)^2 - 3 - 21l_2) + 4l_1 (7(1-l_2)^3 - 22(1-l_2)^2 + 21(1-l_2) - 12) - \\
&- 4l_2 (7(1-l_2)^2 - 4(1-l_2) + 3) \Big) H_3^2 c^{\pm 2} q^{\pm 2} l_1^2 + (20l_1^3 (1-l_2) - 12l_1^2 (3 - 2l_2) - 4l_1 (5(1-l_2)^3 - \\
&- 11(1-l_2)^2 + 6(1-l_2) - 6) H_3^2 c^{\pm 2} q^\pm l_1 + (l_1^2 (1 - 4l_2) - l_2^2 (1 - 4l_2)) H_3^2 c^{\pm 2} \Big)
\end{aligned}$$

$$\begin{aligned}\gamma_2^\pm = & \frac{1}{12c^\pm H_3 l_1 (1-l_2) (1-4rq^{\pm 2} l_1 (1-l_2) (l_2-l_1))} \times \left((216rq^\pm H_3 l_1^2 (1-l_2)^2 (l_1-l_2) - 18H_3 l_1 (1-l_2)) \beta + \right. \\ & + \left((24H_3 l_1^2 c^\pm (1-l_2)^2 (l_1^3-l_2^3) + 72H_3 l_1^3 c^\pm (1-l_2)^2 (l_1-l_2)) rq^\pm - 6H_3 l_1 c^\pm (1-l_2) (l_1^2-l_2^2) \right) \alpha + \\ & + \left(192l_1^2 c^\pm q^{\pm 3} r (1-l_2)^2 (l_1-l_2) - 48l_1 c^\pm q^{\pm 2} r (1-l_2)^2 (l_1-l_2) + 96l_1^2 c^\pm q^{\pm 2} (l_1^2-l_1(1+l_2)+l_2) + \right. \\ & + \left. 12c^\pm (2q^\pm l_1 (l_2-l_1) + 1 + 2l_2) \right) \beta + \left(56H_3^2 c^{\pm 2} (1-l_2)^2 \left(q^{\pm 3} l_1^2 (l_1^3-l_2^3) - q^{\pm 2} l_1 \left(\frac{13}{7} l_1^3 - l_2^3 \right) \right) + 168H_3^2 c^{\pm 2} (1-l_2)^2 \times \right. \\ & \times \left. q^{\pm 3} l_1^3 (l_2^2-l_2 l_1) - 96H_3^2 c^{\pm 2} q^{\pm 2} (1-l_2)^2 l_1^2 \left(\frac{5}{2} l_2^2 - l_2 l_1 \right) - 4H_3^2 c^{\pm 2} q^\pm (1-l_2)^2 (l_2 l_1^2 - l_1^3) \right) r + (12l_1^4 - \\ & - 4l_1^3 (7+5l_2) + 4l_1^2 (19(1-l_2)^2 + 3+15l_2) + 4l_1 (17(1-l_2)^3 - 38(1-l_2)^2 + 15(1-l_2) - 12) - \\ & - 4l_2 (17(1-l_2)^2 - 2(1-l_2) + 3)) H_3^2 c^{\pm 2} q^{\pm 2} l_1^2 + (52l_1^3 (1-l_2) - 12l_1^2 (9-8l_2) - 4l_1 (13(1-l_2)^3 - \\ & - 19(1-l_2)^2 - 6(1-l_2) - 6) H_3^2 c^{\pm 2} q^\pm l_1 + (l_1^2 (5-8l_2) - l_2^2 (5-8l_2)) H_3^2 c^{\pm 2} \Big)\end{aligned}$$

$$\begin{aligned}\beta_1^\pm = & \frac{1}{720c^\pm (1-4rq^{\pm 2} l_1 (1-l_2) (l_2-l_1))} \times \left((-360 + 4320l_1 (1-l_2) (l_1-l_2) rq^{\pm 2}) \beta^2 + \right. \\ & + \left(480H_3^2 c^\pm rq^{\pm 2} l_1 (1-l_2) (l_1^3-l_2^3) + 1440H_3^2 c^\pm rq^{\pm 2} l_1^2 (1-l_2) (l_2^2-l_2 l_1) - 120H_3^2 c^\pm (l_1^2-2l_2+l_2^2) \right) \beta + \\ & + \left((12l_1 (l_1^5-l_2^5) + 60l_1^2 (l_2^4-l_2 l_1^3) + 120l_1^3 (l_1 l_2^2-l_2^3)) q^{\pm 2} + (14l_2 l_1^4 - 20l_2^3 l_1^2 + 6l_2^5) q^\pm \right) H_3^4 c^{\pm 2} (1-l_2) r + \\ & + \left(-6l_1^6 + 30l_1^5 + 20l_1^4 (-3 + (1-l_2)^2) + 60l_1^3 l_2 (2-l_2) - 2l_1^2 (7(1-l_2)^4 - 30(1-l_2)^2 + 15) + \right. \\ & - \left. 2l_1 l_2 (2-l_2) (7(1-l_2)^2 - 3) \right) H_3^4 c^{\pm 2} q^\pm l_1 + \left(-7l_1^4 + 10l_1^2 l_2 (2-l_2) + l_2 (2-l_2) (7(1-l_2)^2 - 3) \right) H_3^4 c^{\pm 2} \Big)\end{aligned}$$

$$\tilde{\alpha}^\pm(1-l_2, 1-l_1, \frac{1}{r}) = \alpha^\pm(l_1, l_2, r),$$

$$\tilde{\alpha}_1^\pm(1-l_2, 1-l_1, \frac{1}{r}) = \alpha_1^\pm(l_1, l_2, r),$$

$$\tilde{\gamma}_1^\pm(1-l_2, 1-l_1, \frac{1}{r}) = \gamma_1^\pm(l_1, l_2, r),$$

$$\tilde{\gamma}_2^\pm(1-l_2, 1-l_1, \frac{1}{r}) = \gamma_2^\pm(l_1, l_2, r)$$

p. 26 line 16

Delete: The analytical expressions for the coefficients are available on request from Oxana Kurkina (oksana.kurkina@mail.ru)

p. 29 line 30

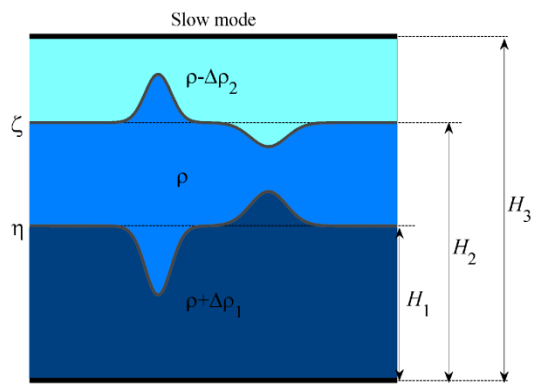
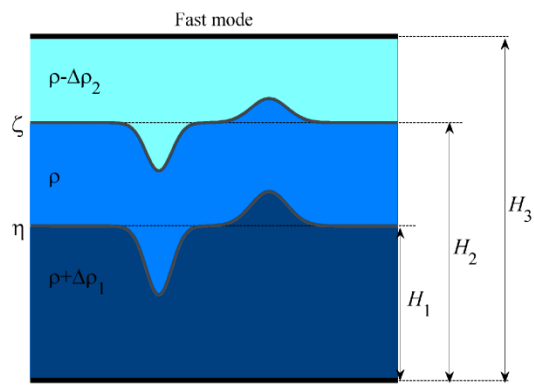
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p. 30 line 25

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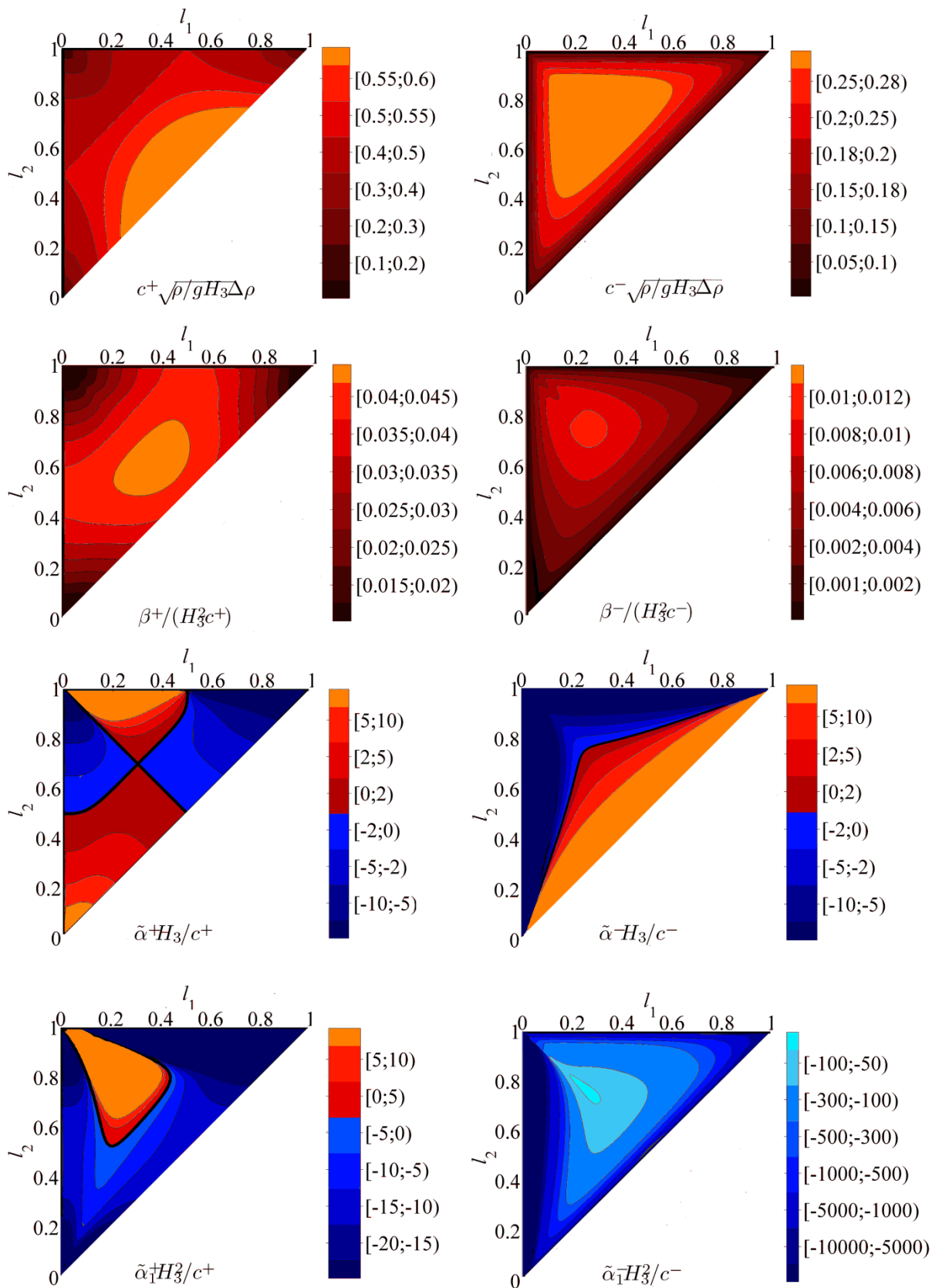
p. 32

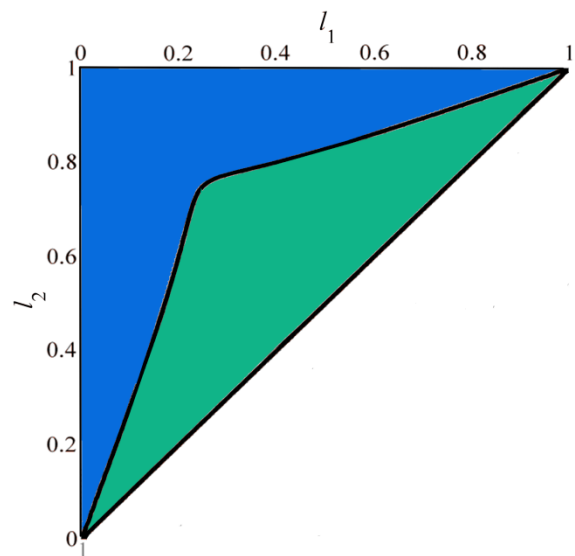
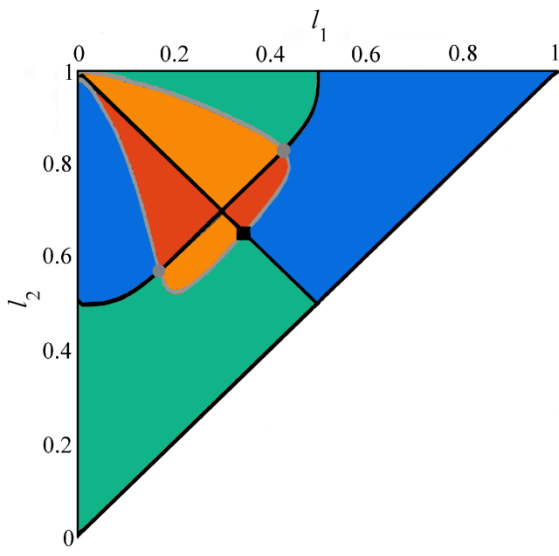
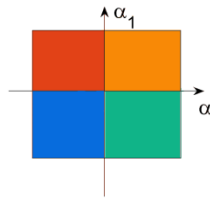
Substitute for



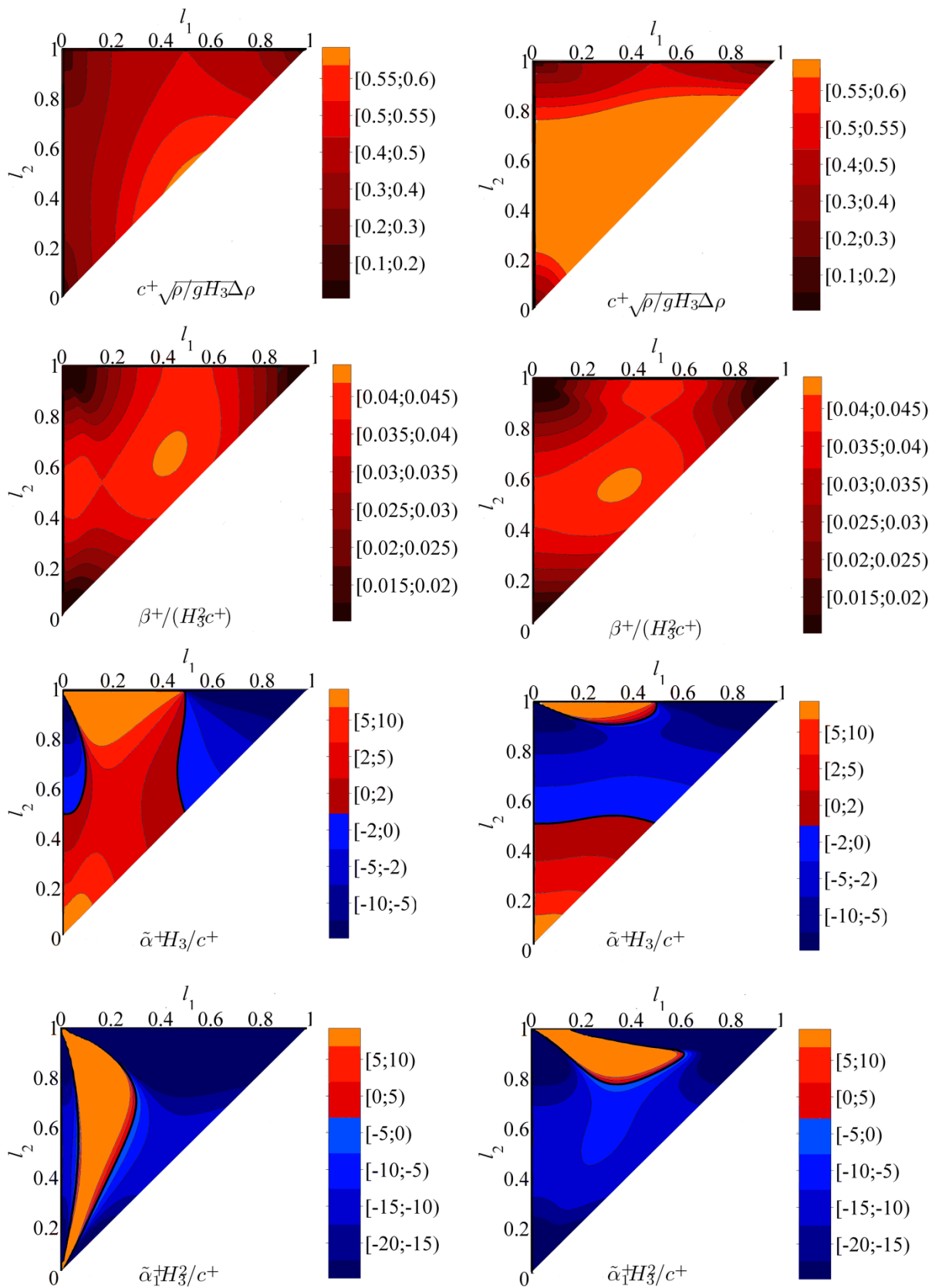
p. 34

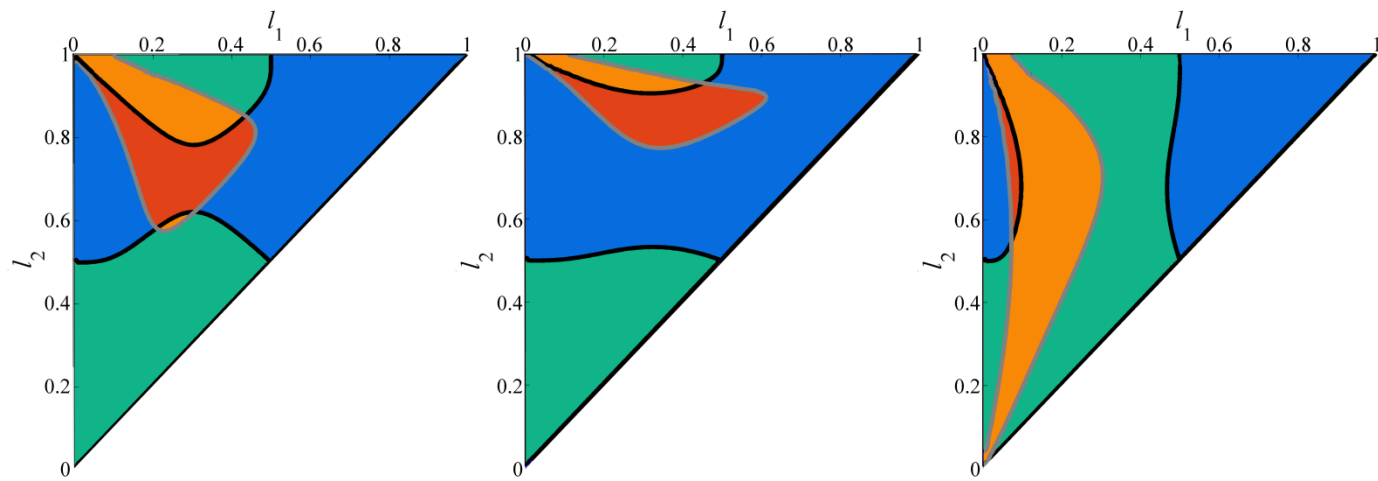
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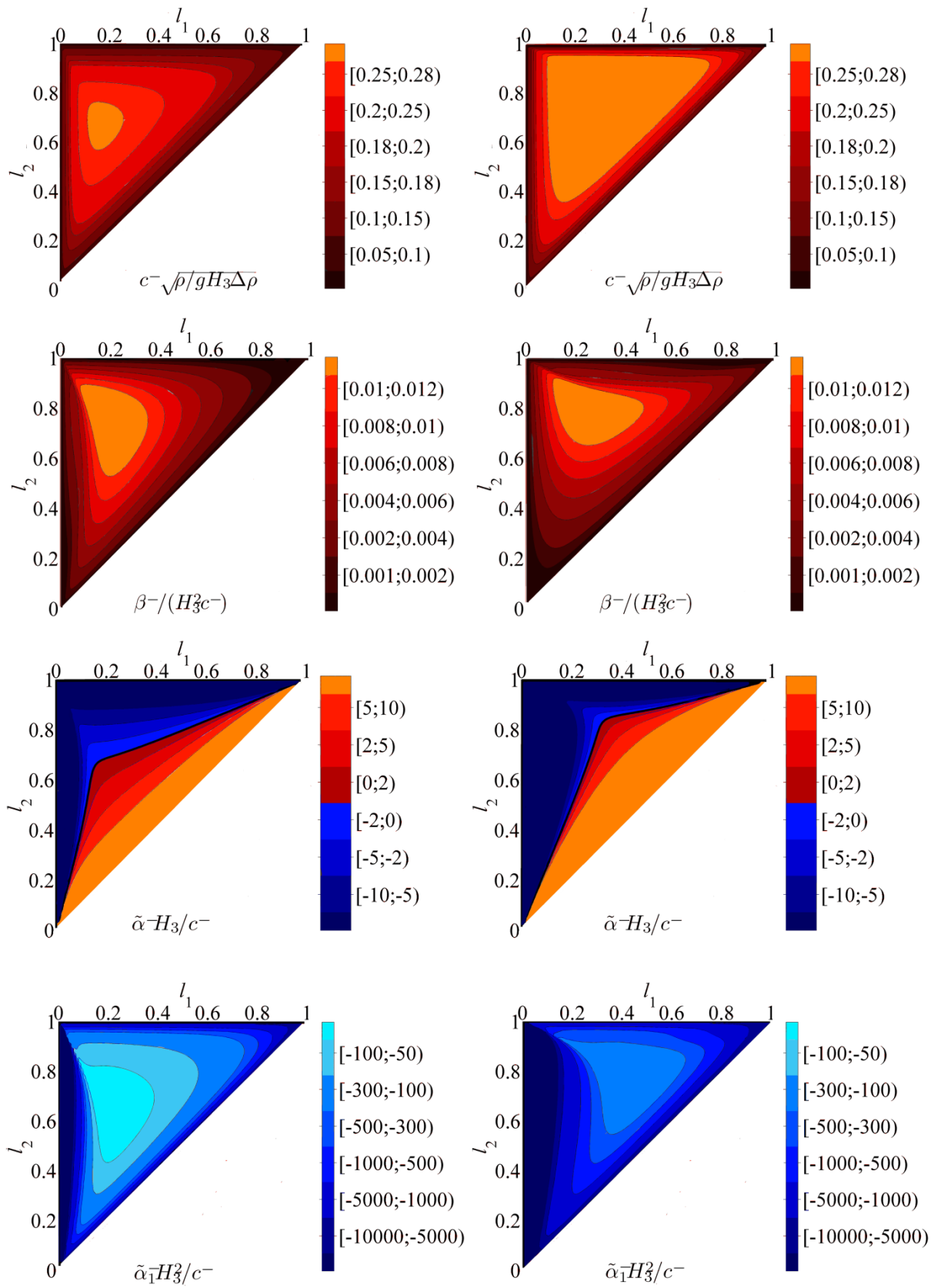


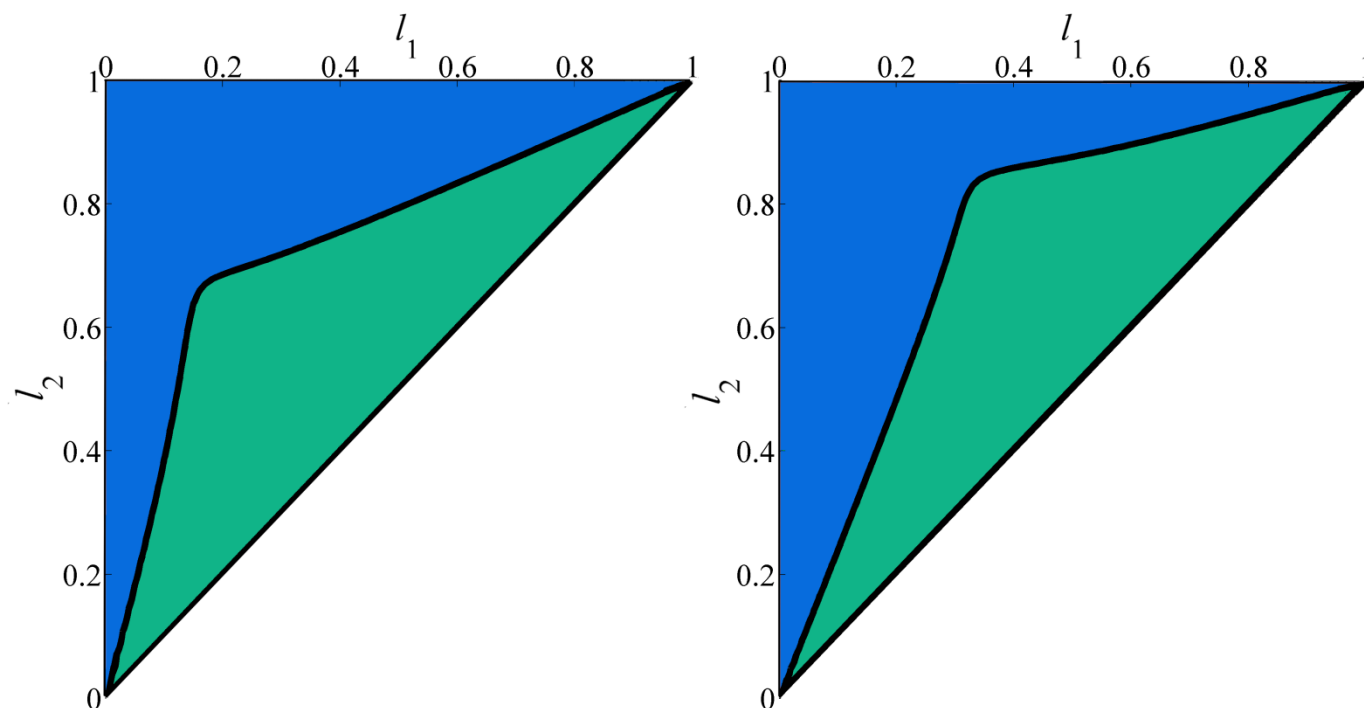
p. 38
Substitute for





p. 40
Substitute for





p. 15 line 4

Delete formula (30)

p. 12 line 10

(28) substitute for (26)

p. 6 line 7

Paste: Some coefficients at the nonlinear terms may vanish even in a two-layer fluid with the surface tension between the layers too (Giniyatullin et al., 2014; Kurkina et al., 2015). After: This feature is common for several wave classes in stratified environments.

p. 15 line 13

Delete: only

one substitute for two

p. 27 line 19

Paste: Giniyatullin A.R., Kurkin A.A., Kurkina O.E., Stepanyants Y.A. Generalised Korteweg–de Vries equation for internal waves in two-layer fluid. Fundamental and Applied Hydrophysics, 2014, v. 7, n. 4 (in Russian).

p. 28 line 29

Paste: Kurkina O., Singh N., Stepanyants Y. Structure of internal solitary waves in two-layer fluid at near-critical situation. Comm. Nonlin. Sci. Num. Simulation, 2015, v. 22, n. 5, 1235–1242.