Sensitivity coefficients in the $\mathbb{Z}_2$-symmetric Einstein-scalar-Gauss-Bonnet theory

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First sensitivity

$$\beta_1^{(1)} = -\frac{1}{2}\,, \tag{1a}$$

$$\beta_2^{(1)} = -\frac{73}{480}\,, \tag{1b}$$

$$\beta_3^{(1)} = -\frac{12511}{241920}\,, \tag{1c}$$

$$\beta_4^{(1)} = -\frac{227192473}{12773376000}\,, \tag{1d}$$

$$\beta_5^{(1)} = -\frac{12207964319}{1992646656000}\,, \tag{1e}$$

$$\beta_6^{(1)} = -\frac{1182444744943999}{560207699251200000}\,, \tag{1f}$$

$$\beta_7^{(1)} = -\frac{47557422073067386027}{65396405979788083200000}\,, \tag{1g}$$

$$\beta_8^{(1)} = -\frac{336739512708285679100713 49}{13439866917544632778752000000 0}\,, \tag{1h}$$

$$\beta_9^{(1)} = -\frac{184191744116332226502250346557}{213371327182938589995466752000000 0}\,, \tag{1i}$$

$$\beta_{10}^{(1)} = -\frac{485192967217327272373002022453967851 69}{16313432842567879661257407804211200000000 00}\,, \tag{1j}$$

$$\beta_{11}^{(1)} = -\frac{191341475638771738318978668003839230 1057}{18672606207493080719962325240512512000000 0000}\,, \tag{1k}$$

$$\beta_{12}^{(1)} = -\frac{634381566480074306640515177086823578111081122340783}{17968479585463247131580383232670328752911155200000000000 0}\,, \tag{1l}$$

$$\beta_{13}^{(1)} = -\frac{121304966461488976844185953043635090780662141027078 77}{99725061699321021580271126941320324578656911360000000000 00}\,, \tag{1m}$$

$$\beta_{14}^{(1)} = -\frac{730890888880467035476075589792868471448258972308964917948 17}{17439869694562269818993344392174065712309574242926592000000000000 00}\,. \tag{1n}$$

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Second sensitivity

$$\beta_1^{(3)} = 3\lambda\,, \tag{2a}$$

$$\beta_2^{(3)} = \frac{73\lambda}{20} - \frac{3}{2}\,, \tag{2b}$$

$$\beta_3^{(3)} = \frac{12511\lambda}{4032} - \frac{73}{40}\,, \tag{2c}$$

$$\beta_4^{(3)} = \frac{143581499\lambda}{66528000} - \frac{540721}{316800}\,, \tag{2d}$$

$$\beta_5^{(3)} = \frac{16863480811\lambda}{12773376000} - \frac{18133592447}{13837824000}\,, \tag{2e}$$

$$\beta_6^{(3)} = \frac{110334369211284601\lambda}{149388719800320000} - \frac{206444836630111}{237124952064000}\,, \tag{2f}$$

$$\beta_7^{(3)} = \frac{87111106558531087\lambda}{225138416025600000} - \frac{923112788215249169}{1773991047628800000}\,, \tag{2g}$$

$$\beta_8^{(3)} = \frac{461621371752108039031452 77\lambda}{23947131294967136256000000 0} - \frac{726513212022124744197 3569}{252775274780208660480000 00}\,, \tag{2h}$$

$$\beta_9^{(3)} = \frac{213364682846766748345402182998657\lambda}{231152271114850139161755648000000 0} - \frac{137084105324030987381655091 2653}{917270917122421187149824000000 0}\,, \tag{2i}$$

$$\beta_{10}^{(3)} = \frac{101549608372501642942090756399942847\lambda}{237235225617872511244959744000000000 0} - \frac{83962788227889216433166931924187819771}{113287728073388053203176443084800000000 0}\,, \tag{2j}$$

$$\beta_{11}^{(3)} = \frac{391079601670859370825351847346706748074607\lambda}{202286567247841707799591856772218880000000 00} - \frac{14912745708275933930385810773932014093 7619}{42143034843300355791581636827545600000000 00}\,, \tag{2k}$$

$$\beta_{12}^{(3)} = \frac{60094641605198435678335483713683959403675338388003\lambda}{70365286597208831185700122308389445304320000000000 00} - \frac{34758292612847193970052274116908418538701506474 31}{21221276910269330040131782918403166044160000000000 0}\,, \tag{2l}$$

$$\beta_{13}^{(3)} = \frac{79401811252769316555261592099601844713653942958179698 7\lambda}{21446249827810972382854005793832327866377830400000000000 00} - \frac{40933555444518395738405773648431923161486069004194087 33}{55402812055178345322372848300733513654809395200000000000 0}\,, \tag{2m}$$

$$\beta_{14}^{(3)} = \frac{98147194932193735962761108879161137312157459724585260937839 9\lambda}{62148658451016860648824966309830826277418987159552000000000000 0} - \frac{38897549565176674851828374676245324470106201728274291809957}{11927520308781013659875498584715007063343037939712000000000000}\,. \tag{2n}$$