

* Rank 0 tensor.

$$[T]$$

$$T = T_s^{(1)}$$

* Rank 1 tensor.

$$\begin{bmatrix} T_x & T_y & T_z \end{bmatrix}$$

$$T_x = T_{px}^{(1)}$$

$$T_y = T_{py}^{(1)}$$

$$T_z = T_{pz}^{(1)}$$

* Rank 2 tensor (s).

$$\begin{bmatrix} T_{xx} & T_{xy} & T_{xz} \\ T_{xy} & T_{yy} & T_{yz} \\ T_{xz} & T_{yz} & T_{zz} \end{bmatrix}$$

$$T_{xx} = -T_{du}^{(1)} + T_{dv}^{(1)} + T_s^{(1)}$$

$$T_{xy} = T_{dxy}^{(1)}$$

$$T_{xz} = T_{dxz}^{(1)}$$

$$T_{yy} = -T_{du}^{(1)} - T_{dv}^{(1)} + T_s^{(1)}$$

$$T_{yz} = T_{dyz}^{(1)}$$

$$T_{zz} = 2T_{du}^{(1)} + T_s^{(1)}$$

* Rank 2 tensor (a).

$$\begin{bmatrix} 0 & T_{xy} & T_{xz} \\ -T_{xy} & 0 & T_{yz} \\ -T_{xz} & -T_{yz} & 0 \end{bmatrix}$$

$$T_{xy} = M_{pz}^{(1)}$$

$$T_{xz} = -M_{py}^{(1)}$$

$$T_{yz} = M_{px}^{(1)}$$

* Rank 3 tensor (s).

$$\begin{bmatrix} T_{xxx} & T_{xxy} & T_{xxz} \\ T_{yyx} & T_{yyy} & T_{yyz} \\ T_{zzx} & T_{zzy} & T_{zzz} \\ T_{yzx} & T_{yzy} & T_{yzz} \\ T_{zxx} & T_{zxy} & T_{zxz} \\ T_{xyx} & T_{xyy} & T_{xyz} \end{bmatrix}$$

$$\begin{aligned}
T_{xxx} &= 2T_{fax}^{(1)} + T_{px}^{(1)} + 2T_{px}^{(2)} \\
T_{xxy} &= 2M_{dxz}^{(1)} - T_{fay}^{(1)} - T_{fby}^{(1)} + T_{py}^{(1)} \\
T_{xxz} &= -2M_{dxy}^{(1)} - T_{faz}^{(1)} + T_{fbz}^{(1)} + T_{pz}^{(1)} \\
T_{yyx} &= -2M_{dyz}^{(1)} - T_{fax}^{(1)} + T_{fbx}^{(1)} + T_{px}^{(1)} \\
T_{yyy} &= 2T_{fay}^{(1)} + T_{py}^{(1)} + 2T_{py}^{(2)} \\
T_{yyz} &= 2M_{dxy}^{(1)} - T_{faz}^{(1)} - T_{fbz}^{(1)} + T_{pz}^{(1)} \\
T_{zzx} &= 2M_{dyz}^{(1)} - T_{fax}^{(1)} - T_{fbx}^{(1)} + T_{px}^{(1)} \\
T_{zzy} &= -2M_{dxz}^{(1)} - T_{fay}^{(1)} + T_{fby}^{(1)} + T_{py}^{(1)} \\
T_{zzz} &= 2T_{faz}^{(1)} + T_{pz}^{(1)} + 2T_{pz}^{(2)} \\
T_{yzx} &= -3M_{du}^{(1)} - M_{dv}^{(1)} + T_{f3}^{(1)} \\
T_{yzy} &= -M_{dxy}^{(1)} - T_{faz}^{(1)} - T_{fbz}^{(1)} + T_{pz}^{(2)} \\
T_{yzz} &= M_{dxz}^{(1)} - T_{fay}^{(1)} + T_{fby}^{(1)} + T_{py}^{(2)} \\
T_{zxx} &= M_{dxy}^{(1)} - T_{faz}^{(1)} + T_{fbz}^{(1)} + T_{pz}^{(2)} \\
T_{zxy} &= 3M_{du}^{(1)} - M_{dv}^{(1)} + T_{f3}^{(1)} \\
T_{zzz} &= -M_{dyz}^{(1)} - T_{fax}^{(1)} - T_{fbx}^{(1)} + T_{px}^{(2)} \\
T_{xyx} &= -M_{dxz}^{(1)} - T_{fay}^{(1)} - T_{fby}^{(1)} + T_{py}^{(2)} \\
T_{xyy} &= M_{dyz}^{(1)} - T_{fax}^{(1)} + T_{fbx}^{(1)} + T_{px}^{(2)} \\
T_{xyz} &= 2M_{dv}^{(1)} + T_{f3}^{(1)}
\end{aligned}$$

* Rank 3 tensor (a).

$$\begin{bmatrix} T_{yzx} & T_{yzy} & T_{yzz} \\ T_{zxx} & T_{zxy} & T_{zxz} \\ T_{xyx} & T_{xyy} & T_{xyz} \end{bmatrix}$$

$$\begin{aligned}
T_{yzx} &= -M_{du}^{(2)} + M_{dv}^{(2)} + M_s^{(1)} \\
T_{yzy} &= M_{dxy}^{(2)} + T_{pz}^{(3)} \\
T_{yzz} &= M_{dxz}^{(2)} - T_{py}^{(3)} \\
T_{zxx} &= M_{dxy}^{(2)} - T_{pz}^{(3)} \\
T_{zxy} &= -M_{du}^{(2)} - M_{dv}^{(2)} + M_s^{(1)} \\
T_{zzz} &= M_{dyz}^{(2)} + T_{px}^{(3)} \\
T_{xyx} &= M_{dxz}^{(2)} + T_{py}^{(3)} \\
T_{xyy} &= M_{dyz}^{(2)} - T_{px}^{(3)} \\
T_{xyz} &= 2M_{du}^{(2)} + M_s^{(1)}
\end{aligned}$$

* Rank 4 tensor (sss).

$$\begin{bmatrix} T_{xxxx} & T_{xxyy} & T_{xxzz} & T_{xxyz} & T_{xxzx} & T_{xxxy} \\ T_{xxyy} & T_{yyyy} & T_{yyzz} & T_{yyyz} & T_{yyzx} & T_{yyxy} \\ T_{xxzz} & T_{yyzz} & T_{zzzz} & T_{zzyz} & T_{zzzx} & T_{zzxy} \\ T_{xxyz} & T_{yyyz} & T_{zzyz} & T_{yzyz} & T_{yzzx} & T_{yzxy} \\ T_{xxzx} & T_{yyzx} & T_{zzzx} & T_{yzzx} & T_{zxzx} & T_{zxxy} \\ T_{xxxy} & T_{yyxy} & T_{zzxy} & T_{yzxy} & T_{zxxy} & T_{xyxy} \end{bmatrix}$$

$$T_{xxxx} = -2T_{du}^{(1)} - 4T_{du}^{(2)} + 2T_{dv}^{(1)} + 4T_{dv}^{(2)} - T_{gu}^{(1)} + T_{gv}^{(1)} + 2T_g^{(1)} + T_s^{(1)} + 2T_s^{(2)}$$

$$T_{xxyy} = -2T_{du}^{(1)} + 2T_{gu}^{(1)} - T_g^{(1)} + T_s^{(1)}$$

$$T_{xxzz} = T_{du}^{(1)} + T_{dv}^{(1)} - T_{gu}^{(1)} - T_{gv}^{(1)} - T_g^{(1)} + T_s^{(1)}$$

$$T_{xxyz} = T_{dyz}^{(1)} + 2T_{gbx}^{(1)}$$

$$T_{xxzx} = T_{dxz}^{(1)} + 2T_{dxz}^{(2)} - T_{gay}^{(1)} - T_{gby}^{(1)}$$

$$T_{xxxy} = T_{dxy}^{(1)} + 2T_{dxy}^{(2)} + T_{gax}^{(1)} - T_{gbz}^{(1)}$$

$$T_{yyyy} = -2T_{du}^{(1)} - 4T_{du}^{(2)} - 2T_{dv}^{(1)} - 4T_{dv}^{(2)} - T_{gu}^{(1)} - T_{gv}^{(1)} + 2T_g^{(1)} + T_s^{(1)} + 2T_s^{(2)}$$

$$T_{yyzz} = T_{du}^{(1)} - T_{dv}^{(1)} - T_{gu}^{(1)} + T_{gv}^{(1)} - T_g^{(1)} + T_s^{(1)}$$

$$T_{yyyz} = T_{dyz}^{(1)} + 2T_{dyz}^{(2)} + T_{gax}^{(1)} - T_{gbx}^{(1)}$$

$$T_{yyzx} = T_{dxz}^{(1)} + 2T_{gby}^{(1)}$$

$$T_{yyxy} = T_{dxy}^{(1)} + 2T_{dxy}^{(2)} - T_{gax}^{(1)} - T_{gbz}^{(1)}$$

$$T_{zzzz} = 4T_{du}^{(1)} + 8T_{du}^{(2)} + 2T_{gu}^{(1)} + 2T_g^{(1)} + T_s^{(1)} + 2T_s^{(2)}$$

$$T_{zzyz} = T_{dyz}^{(1)} + 2T_{dyz}^{(2)} - T_{gax}^{(1)} - T_{gbx}^{(1)}$$

$$T_{zzzx} = T_{dxz}^{(1)} + 2T_{dxz}^{(2)} + T_{gay}^{(1)} - T_{gby}^{(1)}$$

$$T_{zzxy} = T_{dxy}^{(1)} + 2T_{gbz}^{(1)}$$

$$T_{yzyz} = T_{du}^{(2)} - T_{dv}^{(2)} - T_{gu}^{(1)} + T_{gv}^{(1)} - T_g^{(1)} + T_s^{(2)}$$

$$T_{yzzx} = T_{dxy}^{(2)} + 2T_{gbz}^{(1)}$$

$$T_{yzxy} = T_{dxz}^{(2)} + 2T_{gby}^{(1)}$$

$$T_{zxzx} = T_{du}^{(2)} + T_{dv}^{(2)} - T_{gu}^{(1)} - T_{gv}^{(1)} - T_g^{(1)} + T_s^{(2)}$$

$$T_{zxxy} = T_{dyz}^{(2)} + 2T_{gbx}^{(1)}$$

$$T_{xyxy} = -2T_{du}^{(2)} + 2T_{gu}^{(1)} - T_g^{(1)} + T_s^{(2)}$$

* Rank 4 tensor (ssa).

$$\begin{bmatrix} 0 & T_{xxyy} & T_{xxzz} & T_{xxyz} & T_{xxzx} & T_{xxxy} \\ -T_{xxyy} & 0 & T_{yyzz} & T_{yyyz} & T_{yyzx} & T_{yyxy} \\ -T_{xxzz} & -T_{yyzz} & 0 & T_{zzyz} & T_{zzzx} & T_{zzxy} \\ -T_{xxyz} & -T_{yyyz} & -T_{zzyz} & 0 & T_{yzzx} & T_{yzxy} \\ -T_{xxzx} & -T_{yyzx} & -T_{zzzx} & -T_{yzzx} & 0 & T_{zxxxy} \\ -T_{xxxy} & -T_{yyxy} & -T_{zzxy} & -T_{yzxy} & -T_{zxxxy} & 0 \end{bmatrix}$$

$$\begin{aligned}
T_{xxyy} &= 4M_{f3}^{(1)} - 2T_{dv}^{(3)} \\
T_{xxzz} &= -4M_{f3}^{(1)} + 3T_{du}^{(3)} - T_{dv}^{(3)} \\
T_{xxyz} &= -4M_{fbx}^{(1)} + T_{dyz}^{(3)} \\
T_{xxzx} &= 2M_{fay}^{(1)} + 2M_{fby}^{(1)} - 2M_{py}^{(1)} + T_{dxz}^{(3)} \\
T_{xxxy} &= -2M_{faz}^{(1)} + 2M_{fbz}^{(1)} + 2M_{pz}^{(1)} + T_{dxy}^{(3)} \\
T_{yyzz} &= 4M_{f3}^{(1)} + 3T_{du}^{(3)} + T_{dv}^{(3)} \\
T_{yyyz} &= -2M_{fax}^{(1)} + 2M_{fbx}^{(1)} + 2M_{px}^{(1)} + T_{dyz}^{(3)} \\
T_{yyzx} &= -4M_{fby}^{(1)} + T_{dxz}^{(3)} \\
T_{yyxy} &= 2M_{faz}^{(1)} + 2M_{fbz}^{(1)} - 2M_{pz}^{(1)} + T_{dxy}^{(3)} \\
T_{zzyz} &= 2M_{fax}^{(1)} + 2M_{fbx}^{(1)} - 2M_{px}^{(1)} + T_{dyz}^{(3)} \\
T_{zzzx} &= -2M_{fay}^{(1)} + 2M_{fby}^{(1)} + 2M_{py}^{(1)} + T_{dxz}^{(3)} \\
T_{zzxy} &= -4M_{fbz}^{(1)} + T_{dxy}^{(3)} \\
T_{yzzx} &= -4M_{faz}^{(1)} - M_{pz}^{(1)} \\
T_{yzxy} &= 4M_{fay}^{(1)} + M_{py}^{(1)} \\
T_{zxxxy} &= -4M_{faz}^{(1)} - M_{px}^{(1)}
\end{aligned}$$

* Rank 4 tensor (aas).

$$\begin{bmatrix} T_{yzyz} & T_{yzzx} & T_{yzxy} \\ T_{yzzx} & T_{zxzx} & T_{zxxy} \\ T_{yzxy} & T_{zxxy} & T_{xyxy} \end{bmatrix}$$

$$\begin{aligned}
T_{yzyz} &= -2T_{du}^{(4)} + 2T_{dv}^{(4)} + T_s^{(3)} \\
T_{yzzx} &= 2T_{dxy}^{(4)} \\
T_{yzxy} &= 2T_{dxz}^{(4)} \\
T_{zxzx} &= -2T_{du}^{(4)} - 2T_{dv}^{(4)} + T_s^{(3)} \\
T_{zxxxy} &= 2T_{dyz}^{(4)} \\
T_{xyxy} &= 4T_{du}^{(4)} + T_s^{(3)}
\end{aligned}$$

* Rank 4 tensor (aaa).

$$\begin{bmatrix} 0 & T_{yzzx} & T_{yzxy} \\ -T_{yzzx} & 0 & T_{zxxy} \\ -T_{yzxy} & -T_{zxxy} & 0 \end{bmatrix}$$

$$\begin{aligned}
T_{yzzx} &= -M_{pz}^{(2)} \\
T_{yzxy} &= M_{py}^{(2)} \\
T_{zxxxy} &= -M_{px}^{(2)}
\end{aligned}$$

* Rank 4 tensor (sa).

$$\begin{bmatrix} T_{xxyz} & T_{xxzx} & T_{xxyy} \\ T_{yyyz} & T_{yyzx} & T_{yyxy} \\ T_{zzyz} & T_{zzzx} & T_{zzxy} \\ T_{yzyz} & T_{yzzx} & T_{yzxy} \\ T_{zxyy} & T_{zxzx} & T_{zxxy} \\ T_{xyyz} & T_{xyzx} & T_{xyxy} \end{bmatrix}$$

$$\begin{aligned}
T_{xxyz} &= 2M_{fax}^{(2)} + M_{px}^{(3)} + 2M_{px}^{(4)} \\
T_{xxzx} &= -M_{fay}^{(2)} - M_{fby}^{(2)} + M_{py}^{(3)} + 2T_{dxz}^{(5)} \\
T_{xxxy} &= -M_{faz}^{(2)} + M_{fbz}^{(2)} + M_{pz}^{(3)} - 2T_{dxy}^{(5)} \\
T_{yyyy} &= -M_{fax}^{(2)} + M_{fbx}^{(2)} + M_{px}^{(3)} - 2T_{dyz}^{(5)} \\
T_{yyzx} &= 2M_{fay}^{(2)} + M_{py}^{(3)} + 2M_{py}^{(4)} \\
T_{yyxy} &= -M_{faz}^{(2)} - M_{fbz}^{(2)} + M_{pz}^{(3)} + 2T_{dxy}^{(5)} \\
T_{zzyz} &= -M_{fax}^{(2)} - M_{fbx}^{(2)} + M_{px}^{(3)} + 2T_{dyz}^{(5)} \\
T_{zzzx} &= -M_{fay}^{(2)} + M_{fby}^{(2)} + M_{py}^{(3)} - 2T_{dxz}^{(5)} \\
T_{zzxy} &= 2M_{faz}^{(2)} + M_{pz}^{(3)} + 2M_{pz}^{(4)} \\
T_{yzyz} &= M_{f3}^{(2)} - 3T_{du}^{(5)} - T_{dv}^{(5)} \\
T_{yzzx} &= -M_{faz}^{(2)} - M_{fbz}^{(2)} + M_{pz}^{(4)} - T_{dxy}^{(5)} \\
T_{yzxy} &= -M_{fay}^{(2)} + M_{fby}^{(2)} + M_{py}^{(4)} + T_{dxz}^{(5)} \\
T_{zxyz} &= -M_{faz}^{(2)} + M_{fbz}^{(2)} + M_{pz}^{(4)} + T_{dxy}^{(5)} \\
T_{zxzx} &= M_{f3}^{(2)} + 3T_{du}^{(5)} - T_{dv}^{(5)} \\
T_{zxxy} &= -M_{fax}^{(2)} - M_{fbx}^{(2)} + M_{px}^{(4)} - T_{dyz}^{(5)} \\
T_{xyyz} &= -M_{fay}^{(2)} - M_{fby}^{(2)} + M_{py}^{(4)} - T_{dxz}^{(5)} \\
T_{xyzx} &= -M_{fax}^{(2)} + M_{fbx}^{(2)} + M_{px}^{(4)} + T_{dyz}^{(5)} \\
T_{xyxy} &= M_{f3}^{(2)} + 2T_{dv}^{(5)}
\end{aligned}$$

* Rank 4 tensor (as).

$$\begin{bmatrix}
T_{yzxx} & T_{yzyy} & T_{yzzz} & T_{yzyz} & T_{yzzx} & T_{yzxy} \\
T_{zxzx} & T_{zxyy} & T_{zxzz} & T_{zxzy} & T_{zxzx} & T_{zxxy} \\
T_{xyxx} & T_{xyyy} & T_{xyzz} & T_{xyyz} & T_{xyzx} & T_{xyxy}
\end{bmatrix}$$

$$\begin{aligned}
T_{yzxx} &= 2M_{fax}^{(3)} + M_{px}^{(5)} + 2M_{px}^{(6)} \\
T_{yzyy} &= -M_{fax}^{(3)} + M_{fbx}^{(3)} + M_{px}^{(5)} - 2T_{dyz}^{(6)} \\
T_{yzzz} &= -M_{fax}^{(3)} - M_{fbx}^{(3)} + M_{px}^{(5)} + 2T_{dyz}^{(6)} \\
T_{yzyz} &= M_{f3}^{(3)} - 3T_{du}^{(6)} - T_{dv}^{(6)} \\
T_{yzzx} &= -M_{faz}^{(3)} + M_{fbz}^{(3)} + M_{pz}^{(6)} + T_{dxy}^{(6)} \\
T_{yzxy} &= -M_{fay}^{(3)} - M_{fby}^{(3)} + M_{py}^{(6)} - T_{dxz}^{(6)} \\
T_{zxzx} &= -M_{fax}^{(3)} - M_{fbx}^{(3)} + M_{px}^{(5)} + 2T_{dxz}^{(6)} \\
T_{zxyy} &= 2M_{fay}^{(3)} + M_{py}^{(5)} + 2M_{py}^{(6)} \\
T_{zxzz} &= -M_{fay}^{(3)} + M_{fby}^{(3)} + M_{py}^{(5)} - 2T_{dxz}^{(6)} \\
T_{zxyz} &= -M_{faz}^{(3)} - M_{fbz}^{(3)} + M_{pz}^{(6)} - T_{dxy}^{(6)} \\
T_{zxzx} &= M_{f3}^{(3)} + 3T_{du}^{(6)} - T_{dv}^{(6)} \\
T_{zxxy} &= -M_{fax}^{(3)} + M_{fbx}^{(3)} + M_{px}^{(6)} + T_{dyz}^{(6)} \\
T_{xyxx} &= -M_{faz}^{(3)} + M_{fbz}^{(3)} + M_{pz}^{(5)} - 2T_{dxy}^{(6)} \\
T_{xyyy} &= -M_{faz}^{(3)} - M_{fbz}^{(3)} + M_{pz}^{(5)} + 2T_{dxy}^{(6)} \\
T_{xyzx} &= 2M_{faz}^{(3)} + M_{pz}^{(5)} + 2M_{pz}^{(6)} \\
T_{xyyz} &= -M_{fay}^{(3)} + M_{fby}^{(3)} + M_{py}^{(6)} + T_{dxz}^{(6)} \\
T_{xyzx} &= -M_{fax}^{(3)} - M_{fbx}^{(3)} + M_{px}^{(6)} - T_{dyz}^{(6)} \\
T_{xyxy} &= M_{f3}^{(3)} + 2T_{dv}^{(6)}
\end{aligned}$$

* Rank 4 tensor (s).

$$\begin{bmatrix} T_{xxxx} & T_{xxyy} & T_{xxzz} & T_{xxyz} & T_{xxzx} & T_{xxxy} & T_{xxzy} & T_{xxxz} & T_{xxyx} \\ T_{yyxx} & T_{yyyy} & T_{yyzz} & T_{yyyz} & T_{yyzx} & T_{yyxy} & T_{yyzy} & T_{yyxz} & T_{yyyx} \\ T_{zzxx} & T_{zzyy} & T_{zzzz} & T_{zzyz} & T_{zzzx} & T_{zzxy} & T_{zzzy} & T_{zzxz} & T_{zzyx} \\ T_{yzxx} & T_{yzyy} & T_{yzzz} & T_{yzyz} & T_{yzzx} & T_{yzxy} & T_{yzzy} & T_{yzxz} & T_{yzyx} \\ T_{zxxx} & T_{zxxy} & T_{zxzz} & T_{zxyz} & T_{zxxz} & T_{zxxxy} & T_{zxxzy} & T_{zxxxz} & T_{zxxyx} \\ T_{xyxx} & T_{xyyy} & T_{xyzz} & T_{xyyz} & T_{xyzx} & T_{xyxy} & T_{xyzy} & T_{xyxz} & T_{xyyx} \end{bmatrix}$$

$$\begin{aligned}
T_{xxxx} &= -2T_{du}^{(1)} - 4T_{du}^{(2)} + 2T_{dv}^{(1)} + 4T_{dv}^{(2)} - T_{gu}^{(1)} + T_{gv}^{(1)} + 2T_g^{(1)} + T_s^{(1)} + 2T_s^{(2)} \\
T_{xyyy} &= 4M_{f3}^{(1)} - 2T_{du}^{(1)} - 2T_{dv}^{(3)} + 2T_{gu}^{(1)} - T_g^{(1)} + T_s^{(1)} \\
T_{xxzz} &= -4M_{f3}^{(1)} + T_{du}^{(1)} + 3T_{du}^{(3)} + T_{dv}^{(1)} - T_{dv}^{(3)} - T_{gu}^{(1)} - T_{gv}^{(1)} - T_g^{(1)} + T_s^{(1)} \\
T_{xxyy} &= 2M_{fax}^{(2)} - 4M_{fbx}^{(1)} + M_{px}^{(3)} + 2M_{px}^{(4)} + T_{dyz}^{(1)} + T_{dyz}^{(3)} + 2T_{gbx}^{(1)} \\
T_{xxzx} &= 2M_{fay}^{(1)} - M_{fay}^{(2)} + 2M_{fby}^{(1)} - M_{fby}^{(2)} - 2M_{py}^{(1)} + M_{py}^{(3)} + T_{dxz}^{(1)} + 2T_{dxz}^{(2)} + T_{dxz}^{(3)} + 2T_{dxz}^{(5)} - T_{gay}^{(1)} - T_{gby}^{(1)} \\
T_{xxxy} &= -2M_{faz}^{(1)} - M_{faz}^{(2)} + 2M_{fbz}^{(1)} + M_{fbz}^{(2)} + 2M_{pz}^{(1)} + M_{pz}^{(3)} + T_{dxy}^{(1)} + 2T_{dxy}^{(2)} + T_{dxy}^{(3)} - 2T_{dxy}^{(5)} + T_{gaz}^{(1)} - T_{gbz}^{(1)} \\
T_{xxzy} &= -2M_{fax}^{(2)} - 4M_{fbx}^{(1)} - M_{px}^{(3)} - 2M_{px}^{(4)} + T_{dyz}^{(1)} + T_{dyz}^{(3)} + 2T_{gbx}^{(1)} \\
T_{xxxz} &= 2M_{fay}^{(1)} + M_{fay}^{(2)} + 2M_{fby}^{(1)} + M_{fby}^{(2)} - 2M_{py}^{(1)} - M_{py}^{(3)} + T_{dxz}^{(1)} + 2T_{dxz}^{(2)} + T_{dxz}^{(3)} - 2T_{dxz}^{(5)} - T_{gay}^{(1)} - T_{gby}^{(1)} \\
T_{xxyx} &= -2M_{faz}^{(1)} + M_{faz}^{(2)} + 2M_{fbz}^{(1)} - M_{fbz}^{(2)} + 2M_{pz}^{(1)} - M_{pz}^{(3)} + T_{dxy}^{(1)} + 2T_{dxy}^{(2)} + T_{dxy}^{(3)} + 2T_{dxy}^{(5)} + T_{gaz}^{(1)} - T_{gbz}^{(1)} \\
T_{yyxx} &= -4M_{f3}^{(1)} - 2T_{du}^{(1)} + 2T_{dv}^{(3)} + 2T_{gu}^{(1)} - T_g^{(1)} + T_s^{(1)} \\
T_{yyyy} &= -2T_{du}^{(1)} - 4T_{du}^{(2)} - 2T_{dv}^{(1)} - 4T_{dv}^{(2)} - T_{gu}^{(1)} - T_{gv}^{(1)} + 2T_g^{(1)} + T_s^{(1)} + 2T_s^{(2)} \\
T_{yyzz} &= 4M_{f3}^{(1)} + T_{du}^{(1)} + 3T_{du}^{(3)} - T_{dv}^{(1)} + T_{dv}^{(3)} - T_{gu}^{(1)} + T_{gv}^{(1)} - T_g^{(1)} + T_s^{(1)} \\
T_{yyyz} &= -2M_{fax}^{(1)} - M_{fax}^{(2)} + 2M_{fbx}^{(1)} + M_{fbx}^{(2)} + 2M_{px}^{(1)} + M_{px}^{(3)} + T_{dyz}^{(1)} + 2T_{dyz}^{(2)} + T_{dyz}^{(3)} - 2T_{dyz}^{(5)} + T_{gax}^{(1)} - T_{gbx}^{(1)} \\
T_{yyzx} &= 2M_{fay}^{(2)} - 4M_{fby}^{(1)} + M_{py}^{(3)} + 2M_{py}^{(4)} + T_{dxz}^{(1)} + T_{dxz}^{(3)} + 2T_{gby}^{(1)} \\
T_{yyxy} &= 2M_{faz}^{(1)} - M_{faz}^{(2)} + 2M_{fbz}^{(1)} - M_{fbz}^{(2)} - 2M_{pz}^{(1)} + M_{pz}^{(3)} + T_{dxy}^{(1)} + 2T_{dxy}^{(2)} + T_{dxy}^{(3)} + 2T_{dxy}^{(5)} - T_{gaz}^{(1)} - T_{gbz}^{(1)} \\
T_{yyzy} &= -2M_{fax}^{(1)} + M_{fax}^{(2)} + 2M_{fbx}^{(1)} - M_{fbx}^{(2)} + 2M_{px}^{(1)} - M_{px}^{(3)} + T_{dyz}^{(1)} + 2T_{dyz}^{(2)} + T_{dyz}^{(3)} + 2T_{dyz}^{(5)} + T_{gax}^{(1)} - T_{gbx}^{(1)} \\
T_{yyxz} &= -2M_{fay}^{(2)} - 4M_{fby}^{(1)} - M_{py}^{(3)} - 2M_{py}^{(4)} + T_{dxz}^{(1)} + T_{dxz}^{(3)} + 2T_{gby}^{(1)} \\
T_{yyyx} &= 2M_{faz}^{(1)} + M_{faz}^{(2)} + 2M_{fbz}^{(1)} + M_{fbz}^{(2)} - 2M_{pz}^{(1)} - M_{pz}^{(3)} + T_{dxy}^{(1)} + 2T_{dxy}^{(2)} + T_{dxy}^{(3)} - 2T_{dxy}^{(5)} - T_{gaz}^{(1)} - T_{gbz}^{(1)} \\
T_{zzxx} &= 4M_{f3}^{(1)} + T_{du}^{(1)} - 3T_{du}^{(3)} + T_{dv}^{(1)} + T_{dv}^{(3)} - T_{gu}^{(1)} - T_{gv}^{(1)} - T_g^{(1)} + T_s^{(1)} \\
T_{zzyy} &= -4M_{f3}^{(1)} + T_{du}^{(1)} - 3T_{du}^{(3)} - T_{dv}^{(1)} - T_{dv}^{(3)} - T_{gu}^{(1)} + T_{gv}^{(1)} - T_g^{(1)} + T_s^{(1)} \\
T_{zzzz} &= 4T_{du}^{(1)} + 8T_{du}^{(2)} + 2T_{gu}^{(1)} + 2T_g^{(1)} + T_s^{(1)} + 2T_s^{(2)} \\
T_{zzyz} &= 2M_{fax}^{(1)} - M_{fax}^{(2)} + 2M_{fbx}^{(1)} - M_{fbx}^{(2)} - 2M_{px}^{(1)} + M_{px}^{(3)} + T_{dyz}^{(1)} + 2T_{dyz}^{(2)} + T_{dyz}^{(3)} + 2T_{dyz}^{(5)} - T_{gax}^{(1)} - T_{gbx}^{(1)} \\
T_{zzzx} &= -2M_{fay}^{(1)} - M_{fay}^{(2)} + 2M_{fby}^{(1)} + M_{fby}^{(2)} + 2M_{py}^{(1)} + M_{py}^{(3)} + T_{dxz}^{(1)} + 2T_{dxz}^{(2)} + T_{dxz}^{(3)} - 2T_{dxz}^{(5)} + T_{gay}^{(1)} - T_{gby}^{(1)} \\
T_{zzxy} &= 2M_{faz}^{(2)} - 4M_{fbz}^{(1)} + M_{pz}^{(3)} + 2M_{pz}^{(4)} + T_{dxy}^{(1)} + T_{dxy}^{(3)} + 2T_{gbz}^{(1)} \\
T_{zzzy} &= 2M_{fax}^{(1)} + M_{fax}^{(2)} + 2M_{fbx}^{(1)} + M_{fbx}^{(2)} - 2M_{px}^{(1)} - M_{px}^{(3)} + T_{dyz}^{(1)} + 2T_{dyz}^{(2)} + T_{dyz}^{(3)} - 2T_{dyz}^{(5)} - T_{gax}^{(1)} - T_{gbx}^{(1)} \\
T_{zzxz} &= -2M_{fay}^{(1)} + M_{fay}^{(2)} + 2M_{fby}^{(1)} - M_{fby}^{(2)} + 2M_{py}^{(1)} - M_{py}^{(3)} + T_{dxz}^{(1)} + 2T_{dxz}^{(2)} + T_{dxz}^{(3)} + 2T_{dxz}^{(5)} + T_{gay}^{(1)} - T_{gby}^{(1)} \\
T_{zzyx} &= -2M_{faz}^{(2)} - 4M_{fbz}^{(1)} - M_{pz}^{(3)} - 2M_{pz}^{(4)} + T_{dxy}^{(1)} + T_{dxy}^{(3)} + 2T_{gbz}^{(1)} \\
T_{yzxx} &= 4M_{fbx}^{(1)} + T_{dyz}^{(1)} - T_{dyz}^{(3)} + 2T_{gbx}^{(1)} \\
T_{yzyy} &= 2M_{fax}^{(1)} - 2M_{fbx}^{(1)} - 2M_{px}^{(1)} + T_{dyz}^{(1)} + 2T_{dyz}^{(2)} - T_{dyz}^{(3)} + T_{gax}^{(1)} - T_{gbx}^{(1)} \\
T_{yzzz} &= -2M_{fax}^{(1)} - 2M_{fbx}^{(1)} + 2M_{px}^{(1)} + T_{dyz}^{(1)} + 2T_{dyz}^{(2)} - T_{dyz}^{(3)} - T_{gax}^{(1)} - T_{gbx}^{(1)} \\
T_{yzyz} &= M_{f3}^{(2)} + T_{du}^{(2)} - 3T_{du}^{(5)} - T_{dv}^{(2)} - T_{dv}^{(5)} - T_{gu}^{(1)} + T_{gv}^{(1)} - T_g^{(1)} + T_s^{(2)} \\
T_{yzzx} &= -4M_{faz}^{(1)} - M_{faz}^{(2)} - M_{fbz}^{(2)} - M_{pz}^{(1)} + M_{pz}^{(4)} + T_{dxy}^{(2)} - T_{dxy}^{(5)} + 2T_{gbz}^{(1)} \\
T_{yzxy} &= 4M_{fay}^{(1)} - M_{fay}^{(2)} + M_{fby}^{(2)} + M_{py}^{(1)} + M_{py}^{(4)} + T_{dxz}^{(2)} + T_{dxz}^{(5)} + 2T_{gby}^{(1)} \\
T_{yzzy} &= -M_{f3}^{(2)} + T_{du}^{(2)} + 3T_{du}^{(5)} - T_{dv}^{(2)} + T_{dv}^{(5)} - T_{gu}^{(1)} + T_{gv}^{(1)} - T_g^{(1)} + T_s^{(2)} \\
T_{yzxz} &= -4M_{faz}^{(1)} + M_{faz}^{(2)} + M_{fbz}^{(2)} - M_{pz}^{(1)} - M_{pz}^{(4)} + T_{dxy}^{(2)} + T_{dxy}^{(5)} + 2T_{gbz}^{(1)} \\
T_{yzyx} &= 4M_{fay}^{(1)} + M_{fay}^{(2)} - M_{fby}^{(2)} + M_{py}^{(1)} - M_{py}^{(4)} + T_{dxz}^{(2)} - T_{dxz}^{(5)} + 2T_{gby}^{(1)} \\
T_{zxxx} &= -2M_{fay}^{(1)} - 2M_{fby}^{(1)} + 2M_{py}^{(1)} + T_{dxz}^{(1)} + 2T_{dxz}^{(2)} - T_{dxz}^{(3)} - T_{gay}^{(1)} - T_{gby}^{(1)} \\
T_{zxyy} &= 4M_{fby}^{(1)} + T_{dxz}^{(1)} - T_{dxz}^{(3)} + 2T_{gby}^{(1)} \\
T_{zxxz} &= 2M_{fay}^{(1)} - 2M_{fby}^{(1)} - 2M_{py}^{(1)} + T_{dxz}^{(1)} + 2T_{dxz}^{(2)} - T_{dxz}^{(3)} + T_{gay}^{(1)} - T_{gby}^{(1)} \\
T_{zxyz} &= 4M_{faz}^{(1)} - M_{faz}^{(2)} + M_{fbz}^{(2)} + M_{pz}^{(1)} + M_{pz}^{(4)} + T_{dxy}^{(2)} + T_{dxy}^{(5)} + 2T_{gbz}^{(1)} \\
T_{zxzx} &= M_{f3}^{(2)} + T_{du}^{(2)} + 3T_{du}^{(5)} + T_{dv}^{(2)} - T_{dv}^{(5)} - T_{gu}^{(1)} - T_{gv}^{(1)} - T_g^{(1)} + T_s^{(2)} \\
T_{zxxy} &= -4M_{fax}^{(1)} - M_{fax}^{(2)} - M_{fbx}^{(2)} - M_{px}^{(1)} + M_{px}^{(4)} + T_{dyz}^{(2)} - T_{dyz}^{(5)} + 2T_{gbx}^{(1)} \\
T_{zxzy} &= 4M_{faz}^{(1)} + M_{faz}^{(2)} - M_{fbz}^{(2)} + M_{pz}^{(1)} - M_{pz}^{(4)} + T_{dxy}^{(2)} - T_{dxy}^{(5)} + 2T_{gbz}^{(1)} \\
T_{zxxz} &= -M_{f3}^{(2)} + T_{du}^{(2)} - 3T_{du}^{(5)} + T_{dv}^{(2)} + T_{dv}^{(5)} - T_{gu}^{(1)} - T_{gv}^{(1)} - T_g^{(1)} + T_s^{(2)}
\end{aligned}$$

* Rank 4 tensor (a).

$$\begin{bmatrix} T_{yzxx} & T_{yzyy} & T_{yzzz} & T_{yzyz} & T_{yzzx} & T_{yzxy} & T_{yzzy} & T_{yzxz} & T_{yzyx} \\ T_{zxxx} & T_{zxyy} & T_{zxzz} & T_{zxyz} & T_{zxzx} & T_{zxxxy} & T_{zxzy} & T_{zxxxz} & T_{zxyx} \\ T_{xyxx} & T_{xyyy} & T_{xyzx} & T_{xyyz} & T_{xyzx} & T_{xyxy} & T_{xyzy} & T_{xyxz} & T_{xyyx} \end{bmatrix}$$

$$\begin{aligned} T_{yzxx} &= 2M_{fax}^{(3)} + M_{px}^{(5)} + 2M_{px}^{(6)} \\ T_{yzyy} &= -M_{fax}^{(3)} + M_{fbx}^{(3)} + M_{px}^{(5)} - 2T_{dyz}^{(6)} \\ T_{yzzz} &= -M_{fax}^{(3)} - M_{fbx}^{(3)} + M_{px}^{(5)} + 2T_{dyz}^{(6)} \\ T_{yzyz} &= M_{f3}^{(3)} - 2T_{du}^{(4)} - 3T_{du}^{(6)} + 2T_{dv}^{(4)} - T_{dv}^{(6)} + T_s^{(3)} \\ T_{yzzx} &= -M_{faz}^{(3)} + M_{fbz}^{(3)} - M_{pz}^{(2)} + M_{pz}^{(6)} + 2T_{dxy}^{(4)} + T_{dxy}^{(6)} \\ T_{yzxy} &= -M_{fay}^{(3)} - M_{fby}^{(3)} + M_{py}^{(2)} + M_{py}^{(6)} + 2T_{dxz}^{(4)} - T_{dxz}^{(6)} \\ T_{yzzy} &= M_{f3}^{(3)} + 2T_{du}^{(4)} - 3T_{du}^{(6)} - 2T_{dv}^{(4)} - T_{dv}^{(6)} - T_s^{(3)} \\ T_{yzzz} &= -M_{faz}^{(3)} + M_{fbz}^{(3)} + M_{pz}^{(2)} + M_{pz}^{(6)} - 2T_{dxy}^{(4)} + T_{dxy}^{(6)} \\ T_{yzyx} &= -M_{fay}^{(3)} - M_{fby}^{(3)} - M_{py}^{(2)} + M_{py}^{(6)} - 2T_{dxz}^{(4)} - T_{dxz}^{(6)} \\ T_{zxxx} &= -M_{fay}^{(3)} - M_{fby}^{(3)} + M_{py}^{(5)} + 2T_{dxz}^{(6)} \\ T_{zxyy} &= 2M_{fay}^{(3)} + M_{py}^{(5)} + 2M_{py}^{(6)} \\ T_{zxxz} &= -M_{fay}^{(3)} + M_{fby}^{(3)} + M_{py}^{(5)} - 2T_{dxz}^{(6)} \\ T_{zxyz} &= -M_{faz}^{(3)} - M_{fbz}^{(3)} + M_{pz}^{(2)} + M_{pz}^{(6)} + 2T_{dxy}^{(4)} - T_{dxy}^{(6)} \\ T_{zxxz} &= M_{f3}^{(3)} - 2T_{du}^{(4)} + 3T_{du}^{(6)} - 2T_{dv}^{(4)} - T_{dv}^{(6)} + T_s^{(3)} \\ T_{zxxxy} &= -M_{fax}^{(3)} + M_{fbx}^{(3)} - M_{px}^{(2)} + M_{px}^{(6)} + 2T_{dyz}^{(4)} + T_{dyz}^{(6)} \\ T_{zxxzy} &= -M_{faz}^{(3)} - M_{fbz}^{(3)} - M_{pz}^{(2)} + M_{pz}^{(6)} - 2T_{dxy}^{(4)} - T_{dxy}^{(6)} \\ T_{zxxz} &= M_{f3}^{(3)} + 2T_{du}^{(4)} + 3T_{du}^{(6)} + 2T_{dv}^{(4)} - T_{dv}^{(6)} - T_s^{(3)} \\ T_{zxyx} &= -M_{fax}^{(3)} + M_{fbx}^{(3)} + M_{px}^{(2)} + M_{px}^{(6)} - 2T_{dyz}^{(4)} + T_{dyz}^{(6)} \\ T_{xyxx} &= -M_{faz}^{(3)} + M_{fbz}^{(3)} + M_{pz}^{(5)} - 2T_{dxy}^{(6)} \\ T_{xyyy} &= -M_{faz}^{(3)} - M_{fbz}^{(3)} + M_{pz}^{(5)} + 2T_{dxy}^{(6)} \\ T_{xyzz} &= 2M_{faz}^{(3)} + M_{pz}^{(5)} + 2M_{pz}^{(6)} \\ T_{xyyz} &= -M_{fay}^{(3)} + M_{fby}^{(3)} - M_{py}^{(2)} + M_{py}^{(6)} + 2T_{dxz}^{(4)} + T_{dxz}^{(6)} \\ T_{xyzx} &= -M_{fax}^{(3)} - M_{fbx}^{(3)} + M_{px}^{(2)} + M_{px}^{(6)} + 2T_{dyz}^{(4)} - T_{dyz}^{(6)} \\ T_{xyxy} &= M_{f3}^{(3)} + 4T_{du}^{(4)} + 2T_{dv}^{(6)} + T_s^{(3)} \\ T_{xyzy} &= -M_{fay}^{(3)} + M_{fby}^{(3)} + M_{py}^{(2)} + M_{py}^{(6)} - 2T_{dxz}^{(4)} + T_{dxz}^{(6)} \\ T_{xyxz} &= -M_{fax}^{(3)} - M_{fbx}^{(3)} - M_{px}^{(2)} + M_{px}^{(6)} - 2T_{dyz}^{(4)} - T_{dyz}^{(6)} \\ T_{xyyx} &= M_{f3}^{(3)} - 4T_{du}^{(4)} + 2T_{dv}^{(6)} - T_s^{(3)} \end{aligned}$$

* Rank 4 tensor (t).

$$\begin{bmatrix} T_{xxxx} & T_{xxxxy} & T_{xxxxz} \\ T_{yyyyx} & T_{yyyyy} & T_{yyyyz} \\ T_{zzzzx} & T_{zzzzy} & T_{zzzzz} \\ T_{yyyzx} & T_{yyzyy} & T_{yyzzz} \\ T_{zzzxx} & T_{zzzxy} & T_{zzzzz} \\ T_{xxyyx} & T_{xxyyy} & T_{xxyyz} \\ T_{yzzzx} & T_{yzzzy} & T_{yzzzz} \\ T_{zxxx} & T_{zxxxxy} & T_{zxxxz} \\ T_{xxyy} + T_{yyyz} - T_{yzzz} - T_{zxxz} + T_{zzxx} & T_{xyyy} & T_{xyyz} \\ -\frac{T_{yyyx}}{2} + \frac{T_{yyzy}}{2} + T_{zxyx} & T_{xyyz} + \frac{T_{zzzz}}{2} - \frac{T_{zzzzx}}{2} & \frac{T_{xxxxy}}{2} - \frac{T_{xxxxyx}}{2} + T_{xyyy} - T_{yyyx} + T_{zzxy} \end{bmatrix}$$

$$\begin{aligned}
T_{xxxx} &= -2T_{du}^{(1)} - 4T_{du}^{(2)} + 2T_{dv}^{(1)} + 4T_{dv}^{(2)} - T_{gu}^{(1)} + T_{gv}^{(1)} + 2T_g^{(1)} + 3T_s^{(1)} \\
T_{xxxxy} &= T_{dxy}^{(1)} + 2T_{dxy}^{(2)} + T_{dxy}^{(3)} - 2T_{dxy}^{(5)} + T_{gaz}^{(1)} - T_{gbz}^{(1)} \\
T_{xxxz} &= T_{dxz}^{(1)} + 2T_{dxz}^{(2)} + T_{dxz}^{(3)} - 2T_{dxz}^{(5)} - T_{gay}^{(1)} - T_{gby}^{(1)} \\
T_{yyyx} &= T_{dxy}^{(1)} + 2T_{dxy}^{(2)} + T_{dxy}^{(3)} - 2T_{dxy}^{(5)} - T_{gaz}^{(1)} - T_{gbz}^{(1)} \\
T_{yyyy} &= -2T_{du}^{(1)} - 4T_{du}^{(2)} - 2T_{dv}^{(1)} - 4T_{dv}^{(2)} - T_{gu}^{(1)} - T_{gv}^{(1)} + 2T_g^{(1)} + 3T_s^{(1)} \\
T_{yyyz} &= T_{dyz}^{(1)} + 2T_{dyz}^{(2)} + T_{dyz}^{(3)} - 2T_{dyz}^{(5)} + T_{gax}^{(1)} - T_{gbx}^{(1)} \\
T_{zzzx} &= T_{dxz}^{(1)} + 2T_{dxz}^{(2)} + T_{dxz}^{(3)} - 2T_{dxz}^{(5)} + T_{gay}^{(1)} - T_{gby}^{(1)} \\
T_{zzzy} &= T_{dyz}^{(1)} + 2T_{dyz}^{(2)} + T_{dyz}^{(3)} - 2T_{dyz}^{(5)} - T_{gax}^{(1)} - T_{gbx}^{(1)} \\
T_{zzzz} &= 4T_{du}^{(1)} + 8T_{du}^{(2)} + 2T_{gu}^{(1)} + 2T_g^{(1)} + 3T_s^{(1)} \\
T_{yyzx} &= T_{dxz}^{(1)} + T_{dxz}^{(3)} + 2T_{gby}^{(1)} \\
T_{yyzy} &= T_{dyz}^{(1)} + 2T_{dyz}^{(2)} + T_{dyz}^{(3)} + 2T_{dyz}^{(5)} + T_{gax}^{(1)} - T_{gbx}^{(1)} \\
T_{yyzz} &= T_{du}^{(1)} + 3T_{du}^{(3)} - T_{dv}^{(1)} + T_{dv}^{(3)} - T_{gu}^{(1)} + T_{gv}^{(1)} - T_g^{(1)} + T_s^{(1)} \\
T_{zzxx} &= T_{du}^{(1)} - 3T_{du}^{(3)} + T_{dv}^{(1)} + T_{dv}^{(3)} - T_{gu}^{(1)} - T_{gv}^{(1)} - T_g^{(1)} + T_s^{(1)} \\
T_{zzxy} &= T_{dxy}^{(1)} + T_{dxy}^{(3)} + 2T_{gbz}^{(1)} \\
T_{zzxz} &= T_{dxz}^{(1)} + 2T_{dxz}^{(2)} + T_{dxz}^{(3)} + 2T_{dxz}^{(5)} + T_{gay}^{(1)} - T_{gby}^{(1)} \\
T_{xxyx} &= T_{dxy}^{(1)} + 2T_{dxy}^{(2)} + T_{dxy}^{(3)} + 2T_{dxy}^{(5)} + T_{gaz}^{(1)} - T_{gbz}^{(1)} \\
T_{xxyy} &= -2T_{du}^{(1)} - 2T_{dv}^{(3)} + 2T_{gu}^{(1)} - T_g^{(1)} + T_s^{(1)} \\
T_{xxyz} &= T_{dyz}^{(1)} + T_{dyz}^{(3)} + 2T_{gbx}^{(1)} \\
T_{yzzx} &= T_{dxy}^{(2)} - T_{dxy}^{(5)} + 2T_{gbz}^{(1)} \\
T_{yzzz} &= T_{du}^{(2)} + 3T_{du}^{(5)} - T_{dv}^{(2)} + T_{dv}^{(5)} - T_{gu}^{(1)} + T_{gv}^{(1)} - T_g^{(1)} + T_s^{(1)} \\
T_{yzzz} &= T_{dyz}^{(1)} + 2T_{dyz}^{(2)} - T_{dyz}^{(3)} - T_{gax}^{(1)} - T_{gbx}^{(1)} \\
T_{zxxx} &= T_{dxz}^{(1)} + 2T_{dxz}^{(2)} - T_{dxz}^{(3)} - T_{gay}^{(1)} - T_{gby}^{(1)} \\
T_{zxxxy} &= T_{dyz}^{(2)} - T_{dyz}^{(5)} + 2T_{gbx}^{(1)} \\
T_{zxxz} &= T_{du}^{(2)} - 3T_{du}^{(5)} + T_{dv}^{(2)} + T_{dv}^{(5)} - T_{gu}^{(1)} - T_{gv}^{(1)} - T_g^{(1)} + T_s^{(1)} \\
T_{xyyy} &= T_{dxy}^{(1)} + 2T_{dxy}^{(2)} - T_{dxy}^{(3)} - T_{gaz}^{(1)} - T_{gbz}^{(1)} \\
T_{xyyz} &= T_{dxz}^{(2)} - T_{dxz}^{(5)} + 2T_{gby}^{(1)}
\end{aligned}$$