```
In[819]:=  Elonlon[lon, lat] := Cos[lon] * (1 + Cos[2 * lat])
           Elatlat[lon, lat] := 0
           Err[lon, lat] := 0
           Elonlat[lon, lat] := 0
           Elatr[lon, lat] := 0
           Elonr[lon, lat] := 0
           divElon[lon, lat] :=
            1 / (R * Cos[lat]) * D[Elonlon[lon, lat], lon] + 1 / R * D[Elonlat[lon, lat], lat] +
             D[Elonr[lon, lat], R] + 1 / R * (-2 * Tan[lat] * Elonlat[lon, lat] + Elonr[lon, lat])
           divElat[lon, lat] := 1 / (R * Cos[lat]) * D[Elonlat[lon, lat], lon] +
             1 / R * D[Elatlat[lon, lat], lat] + D[Elatr[lon, lat], R] +
             1 / R * (Tan[lat] * Elonlon[lon, lat] - Tan[lat] * Elatlat[lon, lat] + Elatr[lon, lat])
           divER[lon, lat] := 1 / (R * Cos[lat]) * D[Elonr[lon, lat], lon] + 1 / R * D[Elatr[lon, lat], lat] +
             D[Err[lon, lat], R] + 1 / R * (-Elonlon[lon, lat] - Elatlat[lon, lat] - Tan[lat] * Elatr[lon, lat])
```

```
In[837]:=  divElon[lon, lat]
```

$$Out[837]= -\frac{(1 + \cos[2\,lat])\,\sec[lat]\,\sin[lon]}{R}$$

```
In[838]:=  divElat[lon, lat]
```

$$Out[838]= \frac{(1 + \cos[2\,lat])\,\cos[lon]\,\tan[lat]}{R}$$

```
In[839]:=  divER[lon, lat]
```

$$Out[839]= -\frac{(1 + \cos[2\,lat])\,\cos[lon]}{R}$$