$\theta_{p} \in[0, \pi / 4]$ and $\theta_{\Delta++} \in[0, \pi / 4]$

| $\theta_{p} \in[\pi / 2,3 \pi / 4]$ and $\theta_{\Delta++} \in[\pi / 2,3 \pi / 4]$ | $\|\varphi\| \in[0, \pi / 2]$ |
| :---: | :---: |
| $\theta_{p} \in[0, \pi / 4]$ and $\theta_{\Delta++} \in[\pi / 4, \pi / 2]$ | $\|\varphi\| \in[0, \pi / 2]$ |
| $\theta_{p} \in[\pi / 2,3 \pi / 4]$ and $\theta_{\Delta++} \in[3 \pi / 4, \pi]$ |  |

$\theta_{p} \in[0, \pi / 4]$ and $\theta_{\Delta^{+}} \in[\pi / 2,3 \pi / 4]$
$\theta_{p} \in[\pi / 2,3 \pi / 4]$ and $\theta_{\Delta++} \in[0, \pi / 4]$
$\theta_{p} \in[0, \pi / 4]$ and $\theta_{\Delta^{++}} \in[3 \pi / 4, \pi]$
4

5
$\theta_{p} \in[\pi / 2,3 \pi / 4]$ and $\theta_{\Delta^{+}} \in[\pi / 4, \pi / 2]$
$\theta_{p} \in[\pi / 4, \pi / 2]$ and $\theta_{\Delta^{++}} \in[0, \pi / 4]$
$\theta_{p} \in[3 \pi / 4, \pi]$ and $\theta_{\Delta^{++}} \in[\pi / 2,3 \pi / 4]$
$\theta_{p} \in[\pi / 4, \pi / 2]$ and $\theta_{\Delta^{++}} \in[\pi / 4, \pi / 2]$
$\theta_{p} \in[3 \pi / 4, \pi]$ and $\theta_{\Delta++} \in[3 \pi / 4, \pi]$
$|\varphi| \in[0, \pi / 2]$
3

6
$\theta_{p} \in[\pi / 4, \pi / 2]$ and $\theta_{\Delta++} \in[\pi / 2,3 \pi / 4]$
$\theta_{p} \in[3 \pi / 4, \pi]$ and $\theta_{\Delta^{++}} \in[0, \pi / 4]$
$\theta_{p} \in[\pi / 4, \pi / 2]$ and $\theta_{\Delta++} \in[3 \pi / 4, \pi]$
$\theta_{p} \in[3 \pi / 4, \pi]$ and $\theta_{\Delta^{+}} \in[\pi / 4, \pi / 2]$
$\theta_{p} \in[0, \pi / 4]$ and $\theta_{\Delta++} \in[0, \pi / 4]$
9

10
$\theta_{p} \in[\pi / 2,3 \pi / 4]$ and $\theta_{\Delta++} \in[\pi / 2,3 \pi / 4]$
$|\varphi| \in[\pi / 2, \pi]$

11
$\theta_{p} \in[0, \pi / 4]$ and $\theta_{\Delta++} \in[\pi / 4, \pi / 2]$
$\theta_{p} \in[\pi / 2,3 \pi / 4]$ and $\theta_{\Delta++} \in[3 \pi / 4, \pi]$
$|\varphi| \in[\pi / 2, \pi]$
$\theta_{p} \in[0, \pi / 4]$ and $\theta_{\Delta++} \in[\pi / 2,3 \pi / 4]$
$\theta_{p} \in[\pi / 2,3 \pi / 4]$ and $\theta_{\Delta^{+}} \in[0, \pi / 4]$ $\theta_{p} \in[0, \pi / 4]$ and $\theta_{\Delta++} \in[3 \pi / 4, \pi]$
$\theta_{p} \in[\pi / 2,3 \pi / 4]$ and $\theta_{\Delta^{++}} \in[\pi / 4, \pi / 2]$
$|\varphi| \in[\pi / 2, \pi]$
$\theta_{p} \in[\pi / 4, \pi / 2]$ and $\theta_{\Delta^{++}} \in[0, \pi / 4]$
$\theta_{p} \in[3 \pi / 4, \pi]$ and $\theta_{\Delta++} \in[\pi / 2,3 \pi / 4]$
$\theta_{p} \in[\pi / 4, \pi / 2]$ and $\theta_{\Delta^{+}} \in[\pi / 4, \pi / 2]$
$\theta_{p} \in[3 \pi / 4, \pi]$ and $\theta_{\Delta^{++}} \in[3 \pi / 4, \pi]$
$|\varphi| \in[\pi / 2, \pi]$
12

13
14
$\theta_{p} \in[\pi / 4, \pi / 2]$ and $\theta_{\Delta^{+}} \in[\pi / 2,3 \pi / 4]$
$\theta_{p} \in[3 \pi / 4, \pi]$ and $\theta_{\Delta^{+}} \in[0, \pi / 4]$
$|\varphi| \in[\pi / 2, \pi]$
$\theta_{p} \in[\pi / 4, \pi / 2]$ and $\theta_{\Delta++} \in[3 \pi / 4, \pi]$
$\theta_{p} \in[3 \pi / 4, \pi]$ and $\theta_{\Delta^{+}} \in[\pi / 4, \pi / 2]$

