APPENDIX A

JACOBI, LEGENDRE AND ALBRECHT SAMPLING COORDENATES.

The position of the samples in the sampling patterns J49, L49 and A49 is given by the zeroes of Jacobi, Legendre and Albrecht functions, respectively. The zeroes of Albrecht function have been obtained from the book *Numerical quadrature and cubature* (Engels, 1980), pages 44-46. The zeroes of Legendre and Jacobi functions have been obtained using Matlab. The programs that generate the sampling program were written in Matlab by Susana Marcos. The coordinates corresponding to each pattern is represented on table A.1.

Ray label	Albretch 49		Legendre49		Jacobi 49	
	X	Y	X	Y	X	Y
1	0.180704	0.180704	0	0	0	0
2	0.000000	0.255554	0	0.255899	0	0.230056
3	-0.180704	0.180704	0	0.709138	0	0.659429
4	-0.255554	0.000000	0	1	0	1
5	-0.180704	-0.180704	0.097928	0.236420	0.088039	0.212544
6	0.000000	-0.255554	0.271375	0.655158	0.252353	0.609233
7	0.180704	-0.180704	0.382683	0.923880	0.382683	0.923880
8	0.255554	0.000000	0.180948	0.180948	0.162674	0.162674
9	0.391891	0.391891	0.501436	0.501436	0.466287	0.466287
10	0.000000	0.554218	0.707107	0.707107	0.707107	0.707107
11	-0.391891	0.391891	0.236420	0.097928	0.212544	0.088039
12	-0.554218	0.000000	0.655158	0.271375	0.609233	0.252353
13	-0.391891	-0.391891	0.923880	0.382683	0.923880	0.382683
14	0.000000	-0.554218	0.255899	0	0.230056	0
15	0.391891	-0.391891	0.709138	0	0.659429	0
16	0.554218	0.000000	1	0	1	0
17	0.606775	0.606775	0.236420	-0.097928	0.212544	-0.088039
18	0.000000	0.858110	0.655158	-0.271375	0.609233	-0.252353
19	-0.606775	0.606775	0.923880	-0.382683	0.923880	-0.382683
20	-0.858110	0.000000	0.180948	-0.180948	0.162674	-0.162674
21	-0.606775	-0.606775	0.501436	-0.501436	0.466287	-0.466287
22	0.000000	-0.858110	0.707107	-0.707107	0.707107	-0.707107
23	0.606775	-0.606775	0.097928	-0.236420	0.088039	-0.212544
24	0.858110	0.000000	0.271375	-0.655158	0.252353	-0.609233
25	0.693252	0.693252	0.382683	-0.923880	0.382683	-0.923880

26	0.000000	0.980406	0	-0.255899	0	-0.230056
27	-0.693252	0.693252	0	-0.709138	0	-0.659429
28	-0.980406	0.000000	0	-1	0	-1
29	-0.693252	-0.693252	-0.097928	-0.236420	-0.088039	-0.212544
30	0.000000	-0.980406	-0.271375	-0.655158	-0.252353	-0.609233
31	0.693252	-0.693252	-0.382683	-0.923880	-0.382683	-0.923880
32	0.980406	0.000000	-0.180948	-0.180948	-0.162674	-0.162674
33	0.707439	0.293031	-0.501436	-0.501436	-0.466287	-0.466287
34	0.293031	0.707439	-0.707107	-0.707107	-0.707107	-0.707107
35	-0.293031	0.707439	-0.236420	-0.097928	-0.212544	-0.088039
36	-0.707439	0.293031	-0.655158	-0.271375	-0.609233	-0.252353
37	-0.707439	-0.293031	-0.923880	-0.382683	-0.923880	-0.382683
38	-0.293031	-0.707439	-0.255899	0	-0.230056	0
39	0.293031	-0.707439	-0.709138	0	-0.659429	0
40	0.707439	-0.293031	-1	0	-1	0
41	0.883097	0.365791	-0.236420	0.097928	-0.212544	0.088039
42	0.365791	0.883097	-0.655158	0.271375	-0.609233	0.252353
43	-0.365791	0.883097	-0.923880	0.382683	-0.923880	0.382683
44	-0.883097	0.365791	-0.180948	0.180948	-0.162674	0.162674
45	-0.883097	-0.365791	-0.501436	0.501436	-0.466287	0.466287
46	-0.365791	-0.883097	-0.707107	0.707107	-0.707107	0.707107
47	0.365791	-0.883097	-0.097928	0.236420	-0.088039	0.212544
48	0.883097	-0.365791	-0.271375	0.655158	-0.252353	0.609233
49	0	0	-0.382683	0.923880	-0.382683	0.923880

Table A.1. Coordinates of the 49 samples of the Albrecht, Jacobi and Legendre patterns.