

Figure 4B. K1SIX derived equivalent SINGLE HOP probability

EQUIVALENT Minimum 1x HOP Es Probability derived from Fig 4A

MAY (Ave. 40.5%)		JUNE (Ave. 74.6%)		JULY (Ave. 74.3%)		AUGUST (Ave. 48.5%)	
1	NOT EVALUATED	1	63.0%	1	75.4%	1	68.5%
2	NOT EVALUATED	2	68.5%	2	81.2%	2	65.9%
3	29.2%	3	65.9%	3	81.2%	3	65.9%
4	29.2%	4	73.2%	4	84.7%	4	63.0%
5	NOT EVALUATED	5	65.9%	5	83.0%	5	56.3%
6	NOT EVALUATED	6	68.5%	6	79.4%	6	65.9%
7	NOT EVALUATED	7	68.5%	7	87.9%	7	63.0%
8	29.2%	8	70.9%	8	81.2%	8	59.8%
9	29.2%	9	75.4%	9	83.0%	9	59.8%
10	29.2%	10	77.4%	10	81.2%	10	59.8%
11	32.9%	11	73.2%	11	75.4%	11	59.8%
12	42.2%	12	77.4%	12	77.4%	12	63.0%
13	32.9%	13	75.4%	13	77.4%	13	70.9%
14	41.5%	14	68.5%	14	70.9%	14	65.9%
15	63.0%	15	70.9%	15	75.4%	15	56.3%
16	41.5%	16	73.2%	16	68.5%	16	47.5%
17	36.8%	17	73.2%	17	70.9%	17	47.5%
18	47.5%	18	73.2%	18	75.4%	18	32.9%
19	52.3%	19	81.2%	19	68.5%	19	47.5%
20	63.0%	20	79.4%	20	70.9%	20	32.9%
21	47.5%	21	75.4%	21	68.5%	21	47.5%
22	52.3%	22	75.4%	22	77.4%	22	41.5%
23	52.3%	23	79.4%	23	70.9%	23	32.9%
24	56.3%	24	73.2%	24	70.9%	24	56.3%
25	65.9%	25	86.3%	25	63.0%	25	NO DATA
26	59.8%	26	90.9%	26	73.2%	26	32.9%
27	59.8%	27	86.3%	27	68.5%	27	41.5%
28	63.0%	28	79.4%	28	70.9%	28	32.9%
29	68.5%	29	75.4%	29	68.5%	29	NOT EVALUATED
30	70.9%	30	73.2%	30	65.9%	30	36.8%
31	59.8%			31	56.3%	31	29.2%

Based upon the assumption that the values shown [in the Table in Fig 4A](#) represent mostly triple hop events, which may or may not be true based upon an estimated 5,731 km. average path length, it is possible to derive single hop probability by simply taking the cube root of these values and that result is shown above.

Once estimated single hop values are known, the probability of any number of Es hops can be derived by the simple formula Y^x or multiplying the decimal single hop probability by itself by the number of hops desired. An example for 90.1% (.901) single hop probability would yield the following probabilities *for properly aligned multiple Es "clouds"*:

- .901 x .901 = .8118 (81.2%) **ESTIMATED** probability for double hop (.901)
- .901 x .901 x .901 = .7314 (73.1%) **DEMONSTRATED** probability for triple hop (.901)
- .901 x .901 x .901 x .901 = .6590 (65.9%) **ESTIMATED** probability for four hops (.901), etc.

This compilation represents: **28,335** 6M QSOs and heard data points for a total of: **1,035** days of actual observed 50 MHz transatlantic Es over the entire period of: **40** years and was last updated on [31 August 2022](#).

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