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Electromagnetic immission reduction for
radio communication networks by using a
multi-hop ad hoc approach

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Abstract

The amount of utilization of wireless networks and related technologies will continue to accelerate in the foreseeable future [11]. Wireless local area networks (WLANs) can have the same impact on the networking industry that wireless phones had on the telecommunications industry.

Moving forward, the introduction of faster WLAN technologies such as 802.11g will accelerate the growth of WLANs. The 802.11 standard is developed by the Institute of Electrical and Electronic Engineering (IEEE). This standard provides a basis for the wireless technologies of WLANs [6, 9, 3] and will be used throughout this work.

The question of the influence of radio LANs on human health is important, since mobile communication devices emit radio frequency at a certain power. There are serious public concerns about the safety of exposure to radio frequency (RF) radiation.

The IEEE C95.1 standard [2] and the recommendations of the National Council on Radiation Protection and Measurements (NCRP) [8], the International Commission on Non-Ionizing Radiation Protection (ICNIRP) [7] and the National Radiation Protection Board (NRPB) in the United Kingdom [4] have generated guidelines for human exposure to RF energy. Their recommendations are independently issued and differ in some aspects but are generally similar to each other.

This work investigates a method of reducing the possible effects of radio frequency fields on human health by using a multi-hop ad hoc approach for WLANs.

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Chapter 1

INTRODUCTION

The risk that human health will be affected by the exposure to RF radiation is a matter of public concern. The lower the exposure to RF radiation the lower is the possibility that people are in danger. The multi-hop approach for a WLAN could contribute to a reduction of the emission and the consequential immission radiation of the RF energy.

1.1 Purpose of the technical report

The purpose of this work a simulation model of a WLAN is described which allows to evaluate the electromagnetic immission reduction for radio communication networks by using a multi-hop ad hoc approach. The structure of the network under investigation is simple: All the mobile stations are arranged in a line.

In this multi-hop WLAN the first station generates the data packets which will be sent to the next station. Afterwards, these packets are transmitted from one station to the next one until the last station is reached. In case of a fixed distance between the first and the last station every additional hop reduces the necessary transmission power. The reason is found in a shorter distance between the individual stations. Thus, a multi-hop WLAN decreases the RF power radiation of each sending station. Possible effects on human health can be reduced in this way. A disadvantage is that the added hops could increase the RF immission by addition of new radiation sources.

The IEEE 802.11b MAC-protocol allows to send their packets simultaneously, if permission is given. As a result the packets can collide and will not be received by the destined station. A collision triggers a repeated transmission which will affect adversely the emission of the RF power. Furthermore, the multi-hop approach can have a pipeline effect which can expand the capacity of the WLAN. These two factors will be part of this investigation.

The influence on the environment is evaluated by five defined measuring points in a fixed distance of the network. The immission RF power is a value which shows the environmental impact of the radiation sources. In addition to that, the impact on the measuring points of the immission peak power, the immission peak energy, the 99% percentile of the immission power and the total immission energy have to be investigated. The simulations of the WLAN shall be executed without any limit of the transmission power to show the expedience of the multi-hop approach. According to the rules of the IEEE 802.11b standard, the best number of the hops in connection with an optimal performance of the network is to be determined. The possible gain of the reduction of the immission load is to be pointed out.

1.2 Organization of the technical report

The technical report is organized as follows:

Firstly, in Chapter 2 the simulated model is described. Next, the link budget for the RF power is presented in Chapter 3. Chapter 4 contains a short description of the programming tool CSIM18, the used source model and the simulation setup. An instruction to analyze the resulting trace files, which are generated by the simulations, is specified at the end of that chapter. Afterwards, the results of the simulations are presented and compared in Chapter 5. Next, the conclusions include a discussion of the results of the immission radiation and can be found in Chapter 6. Finally, Appendices A to O contain diagrams and tables that display the results of the simulations. A listing of abbreviations, figures, tables and references can be found at the end of the Appendices.

Chapter 2

THE MODEL

An IEEE 802.11b [1] ad-hoc wireless network, which is used throughout this investigation, is programmed in CSIM18 and serves as the basis for the investigations. Information on the CSIM18 simulation tool can be found in [10]. The parts of the model were written in earlier project and are improved by the introduction of new features to conduct this investigation.

Figure 2.1 illustrates the network model that is designed as a line of stations. The model consists of Mobile S which creates the packets, a certain amount of Hops and Mobile R which destroys the packets. The relay stations work independently from each other. This fact includes the possibility of a pipeline effect. S, R and Relay Stations are further referred to as stations (STA). Every additional hop reduces the distance between the STAs. The circles around the STAs illustrate the radiation that decreases the bigger the distance from the sending STA. All STAs can receive packets according to the simulated physical environment. The measuring points (MP) quantify the immission radiation. These MPs have a fixed distance of 10 meter to the transmission line and a uniformly spread over the transmission line length.

A description of the simulated model is given in detail, next. After the link budget calculation for the desired WLAN is finished (see Chapter 3), the simulation of the model starts. The first station S has an activated source. This source creates an overload of packets as described in Section 4.2 and places them in a blocking queue. The queue can store up to 1000 packets. This is the precondition for an incessant existence of packets which are to be sent. This queue in conjunction with the source produces a full load of the network. The packets of the queue are waiting for the multiplexer to be processed. The multiplexer manages the outgoing and incoming stream of packets.

The instance Medium Access has to check the channel state. The channel structure is described later. A busy channel is indicated if the RF power level at the receiver is greater than -76dB. In case of a free channel the station sends the packets to the other STAs according to the IEEE 802.11b MAC specifications. This includes the possibility that more than one STA sends packets at the same time. All STAs of the network can detect a sent packet if the receiving power level is above -76dB. The correctness of the packet is evaluated as described below on the base of the signal-to-interference plus noise ratio (SINR). If a packet is correctly received, the STA has to control the destination address of the packet. If the received packet was not for this STA, the packet will be destroyed. Packets which are destined for this station will be managed according to the rules of the STAs in the network.

An overview of the structure of a station is shown in Figure 2.2.

A relay station manages all incoming packets like a normal station. The source address of an incoming packet will now be the address of this STA. The destination address of this packet will be changed to the address of the next STA in the line. After this process the STA puts

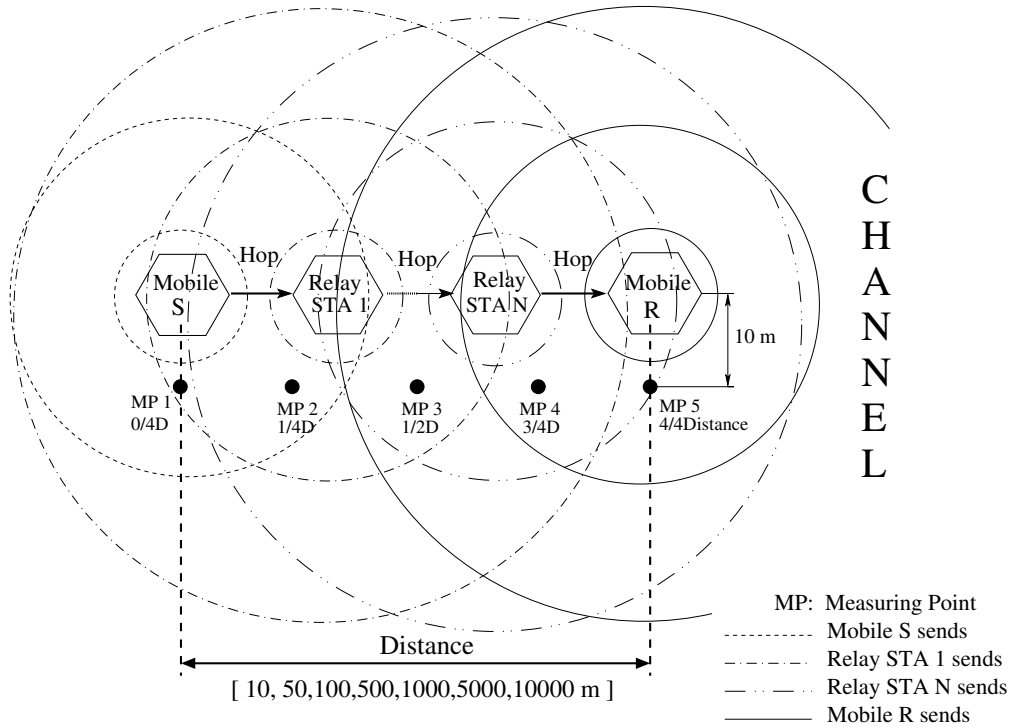


Figure 2.1: The model of the network

the packet into the queue. Now, the packet is waiting to be handled by the multiplexer. If this has been done, the packet will be sent under the rules of the medium access instance. Relay stations do not create new packets at all times. The amount of hops in a network depends on the simulation setup, see Chapter 4.3.

The last station of the network is the packet sink R. If a packet reaches this STA, the sink is activated. The sink has a very simple function: the destruction of the incoming packets.

The channel simulates a physical environment for the transmission including possible errors. These errors depend on the current bit error rate (BER) of the channel. This BER will be affected, if packets will be sent simultaneously. At all times, this BER is calculated while a packet is on air. The calculation is based on the signal-to-interference plus noise ratio (SINR) that is defined as follows:

$$SINR = \left(\frac{P_{cp}}{\sum P} \right) \quad (2.1)$$

where:

- P_{cp} stands for emission RF power of the current packet and
- P stands for RF power in the channel.

The following formula is the basis to calculate the BER:

$$\frac{E_b}{N_0} = SINR \left(\frac{B_T}{R} \right) \quad (2.2)$$

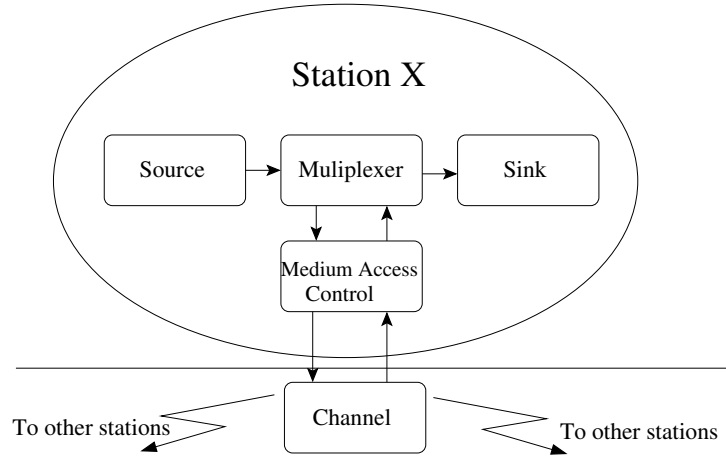


Figure 2.2: Detailed structure of the stations

where:

- E_b is energy required per bit of information;
- N_0 is thermal noise;
- R is system data rate in MBit/s; and
- B_T is system bandwidth of 2 MHz.

According to the data rates (for further information see Chapter 3 and 4.3) and formula 3 put into formula 4, the BER will be:

$$BER_{1/2} = \frac{1}{2} e^{-\left(\frac{E_b}{N_0}\right)} \quad \text{for } 1\text{MBit/s and } 2\text{MBit/s} \quad (2.3)$$

$$BER_{5.5/11} = \frac{2}{m} \left(1 - \left(\frac{1}{\sqrt{M}}\right)\right) \operatorname{erfc} \sqrt{\left(\frac{E_b}{N_0}\right)} \quad (2.4)$$

where $M = 2^m$ with $m = 4$ for 5.5 MBit/s and $m = 8$ for 11 MBit/s. The computed BER is the precondition to a calculation of the packet error. The next formula shows how p_{error} is calculated:

$$p_{error} = 1 - \left(10^{\left(\frac{BER}{t_p R}\right)}\right) \quad (2.5)$$

where t_p contains the time of using the channel for the current packet and R is the data rate. Thus, if the SINR during a sending is above a certain level, an error will be detected and the packet will be destroyed. Note, that the SINR may change during the transmission of a packet because of the beginning or the end of another packet transmission which is also considered.

This packet error will be compared with a uniform random number.

If the packet error has a lower value than the random number, the current packet is correct. For an accurately received packet the STA generates an ACK packet and sends this packet to the STA which has sent the data packet. The ACK packets are generally sent with a data rate of 1MBit/s. If a STA receives an ACK packet for the previously sent packet, the STA knows that this packet has been received correctly. Now, this STA can transmit the next packet which waits in the transmission queue.

If the packet error has a higher value than the random number, the current packet will be characterized as erroneous. A station that receives this kind of a packet executes a deletion of the packet. An ACK packet will not be sent. In general, if a packet is erroneous, the sending of the packet will be repeated until it is received correctly but not more than 8 times. Thereafter, the next packet will be transmitted.

Chapter 3

LINK BUDGET CALCULATION FOR THE RF POWER

This chapter contains a description of the calculation of the physical values for the modeled ad hoc network. At the beginning of every simulation, this link budget analysis is executed to determine the RF transmission power for a desired BER.

Channel noise :

The thermal noise is a random signal of known statistical properties of amplitude, distribution, and spectral density. The channel noise disturbs the frequency band which is used for the communication between , i.e., two wireless devices. This characteristic can affect a signal and that may distort the information carried by the signal. An idle channel noise is present in a communication channel when no signals are applied.

A formula to calculate the channel noise is given next:

$$N = k T B \tag{3.1}$$

$$N = 1.38066 \cdot 10^{-20} \frac{mW \cdot s}{K} \cdot 290K \cdot 2 \cdot 10^6 Hz = 8.007828 \cdot 10^{-12} mW \tag{3.2}$$

$$N = 10 \log_{10} \left(\frac{8.007828 \cdot 10^{-12} mW}{1 mW} \right) = -110.96 dBm \approx -111 dBm \tag{3.3}$$

where:

- N stands for channel noise power / receiver noise floor in mW;
- k stands for Boltzmann constant $1.38066 \cdot 10^{-20} \frac{mW \cdot s}{K}$;
- T stands for system temperature (usually 290 K); and
- B stands for channel bandwidth in Hz ($Hz = \frac{1}{s}$).

Modulation and channel data rates :

The modulation is the method by which the analog or digital information is converted to transmission signals in the 2.4 GHz band. The basic access rate is based on 1 MBit/s DBPSK modulation. The enhanced data rate of 2 MBit/s has a DQPSK modulation. The specification of the IEEE 802.11b standard defines the DQPSK with Complementary Code Keying (CCK) modulation for 5.5 MBit/s and 11 MBit/s data rate. The modeling of a CCK modulation is

expensive to implement. Similar results can be reached with a quadrature amplitude modulation (QAM). A 16-QAM is used as substitute for 5.5 MBit/s. A 256-QAM is utilized for 11MBit/s data rate.

The signal-to-noise ratio (SNR) is fundamental for the purpose of a link calculation and depends on the given modulation format. The SNR is computed by the following formula:

$$SNR = \left(\frac{E_b}{N_0} \right) \left(\frac{R}{B_T} \right) \quad (3.4)$$

where:

- E_b is energy required per bit of information;
- N_0 is thermal noise;
- R is system data rate in MBit/s; and
- B_T is system bandwidth of 2 MHz.

The term $\frac{E_b}{N_0}$ is calculated by using the given BER of 10^{-6} or 10^{-8} with account to the desired modulation technique as shown below:

Data rate: 1 MBit/s and 2 MBit/s

$$\frac{E_b}{N_0} = - \ln (2 BER) \quad (3.5)$$

Data rate: 5.5 MBit/s and 11 MBit/s

$$\operatorname{erfc} \sqrt{\left(\frac{E_b}{N_0} \right)} = \frac{m BER}{2 \left(1 - \left(\frac{1}{\sqrt{M}} \right) \right)} \quad (3.6)$$

where $M = 2^m$ with $m = 4$ for 5.5 MBit/s and $m = 8$ for 11 MBit/s.

The erfc function can not be calculated during the simulation. The use of formula 13 and a routine of MATLAB [5], that solves the erfc function leads to values shown in table 3.1. These are implemented in the simulation program.

Data rate	BER	$\frac{E_b}{N_0}$	SNR
1	10^{-6}	13.1223633774	6.561181688702
1	10^{-8}	17.72753356339	8.8637667817
2	10^{-6}	13.1223633774	13.122363377
2	10^{-8}	17.72753356339	17.72753356339
5.5	10^{-6}	11.01730621005	27.54326552513
5.5	10^{-8}	15.46400946715	42.52602603466
11	10^{-6}	10.57057588718	58.13816737949
11	10^{-8}	15.01214825653	82.56681541091

Table 3.1: The SNR of the link budget analysis

Wave propagation and path loss :

In a transmission system, a path is used for data messages, system control and synchronization. Path loss may occur to many effects, such as free-space loss, refraction, reflection (see next paragraph), aperture-medium coupling loss, and absorption. Free-space loss is primarily caused by beam divergence. The signal energy covers larger areas at increased distances from the source. The receiver power can be calculated for an undirected radiation, as follows:

$$\frac{P_{receiver}}{P_{transmitter}} = \left(\frac{4 \pi D}{\lambda} \right)^2 \quad (3.7)$$

where:

- P stands for receiving or transmitting power;
- D stands for distance between transmitter and receiver STA;
- λ stands for free space wavelength; $\lambda = \frac{c}{f}$
 - c is speed of light ($3 \cdot 10^8 \frac{m}{s}$); and
 - f is carrier frequency (2.4 GHz).

The propagation loss L_{pl} in [dB] can be computed as:

$$L_{pl} = 10 \log_{10} \left(\frac{P_{receiver}}{P_{transmitter}} \right) \quad (3.8)$$

with (14):

$$L_{pl} = 20 \log_{10} \left(\frac{4 \pi D}{\lambda} \right). \quad (3.9)$$

Multi-path and fade margin :

The propagation phenomenon occurs when signals reach the receiving antenna on a direct line-of-sight path and, in addition to that, on more paths. This effect is called multi-path. Multi-path is caused by atmospheric ducting, ionospheric reflection and refraction, and reflection from terrestrial objects, such as buildings and office furniture. The effects of multi-path can be constructive and destructive interference, and phase shifting of the signal. There is the possibility that the waves of a signal are canceling each other out, if they are completely out of phase at the receiving antenna. The signal reduction can be more than 30 dB. All these multi-path signals can reduce the system performance level. Thus, a minimum signal power at the receiver is needed to overcome system losses.

To overcome the effects of negative multi-path the amount of transmitter power is increased. This amount of extra RF power is also called fade margin [12].

For the simulations the fade margin was set to 30 dB and the minimum receiver level was fixed at -76dB. This fade margin ensures that a signal will be received and the wireless system has the minimum input requirements of the receiver for a given performance level at any given time.

Transmitter power :

The antenna gain values $G_{transmitter}$ and $G_{receiver}$ for a sending and receiving dipole antenna were set to 0dB. The necessary transmitter power can be computed as follows:

$$P_{transmitter} = P_{receiver} - G_{transmitter} - G_{receiver} + L_{pl} + FadeMargin \quad (3.10)$$

$$= -111dB + SNR - 0dB - 0dB + L_{pl} + 30dB \quad (3.11)$$

$$= -81dB + SNR + L_{pl} \quad (3.12)$$

At this point in the calculation, the transmitter power is calculated and the simulation of the network with the different parameters starts.

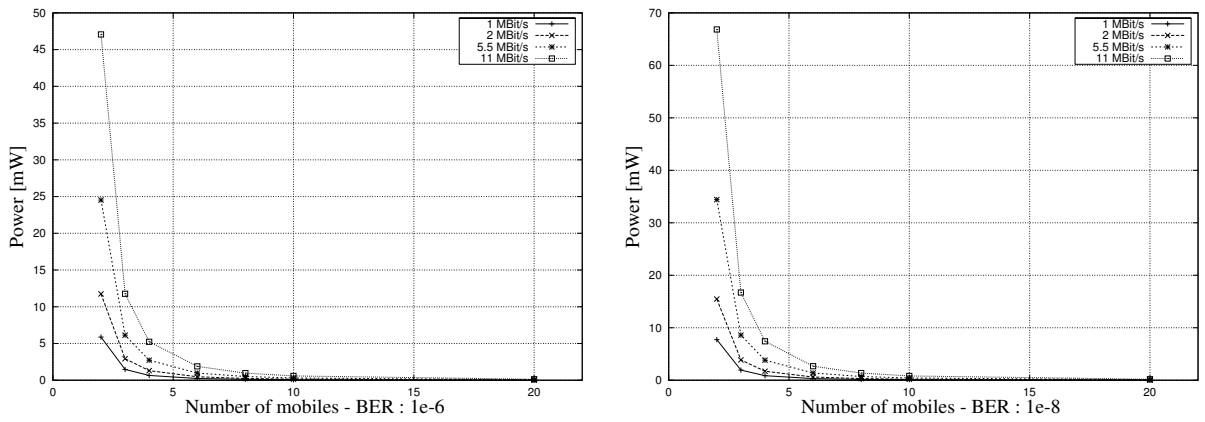


Figure 3.1: Emission of power for a distance of 100m

Figure 3.1 illustrates the emission power for all simulated networks at a distance of 100m and a BER of 10^{-6} on the left side and a BER of 10^{-8} on the right side at all four transmission data rates. The abscissa shows the number of the STAs in the network. The higher the number of STAs in a network the shorter is the distance between the STAs. Values on the ordinate represent the calculated transmitter power. The transmitter power equals the emission power. The higher the transmission data rate, the higher is the power of emission. If the amount of the STAs in a network increases, the emission power decreases fast. The lower BER of 10^{-8} implies a higher transmitter power, because less bit errors indicate a safer transmission. The major difference consists in a higher power level for longer distances between the STAs. The other diagrams can be found and compared in Appendix A.

The following table shows the necessary number of STAs in combination with the network distances to follow the official guidelines of an emission power less than 100mW.

Distance	Speed			
	1 MBit/s	2 MBit/s	5.5 MBit/s	11 MBit/s
10m	2	2	2	2
50m	2	2	2	2
100m	2	2	2	2
500m	3	3	4	6
1000m	4	6	6	8
5000m	20	20	$\gg 20$	$\gg 20$
10000m	$\gg 20$	$\gg 20$	$\gg 20$	$\gg 20$

Table 3.2: Minimum of STAs in a WLAN for a emission power less than 100mW

Chapter 4

SIMULATION OF THE AD HOC WLAN MODEL

4.1 The simulation tool CSIM18

CSIM18 is a process-oriented discrete-event simulation application for use in C/C++ language programs [10]. This simulation tool contains a library of routines which implement all necessary operations. Complex systems can be simulated in models without any restrictions. A CSIM program is a collection of CSIM processes which interact with each other by using the structures of CSIM.

The structures of CSIM are:

- Processes are active entities, implemented here are: request from facilities, wait for events and all other elements of the structure;
- Facilities contains queues and servers and are used for processes;
- Storage blocks are resources, i.e., requested by processes;
- Events are used for synchronization of process activities;
- Mailboxes help to communicate between different processes;
- Tables serve to collect data during the simulation;
- Process classes select statistics for reporting purposes; and
- Streams create streams of random numbers.

The combination of the familiar development environment and this convenient tool give programmers a good foundation to create simulation programs. The model maintains simulated time which is necessary to reproduce real time applications.

4.2 Traffic source of the model

The timing of the generation of new packets is realized by a specific Pareto distribution. This distribution results from the traffic parameter k and α and a uniform random number z between $[0...1]$.

The following formula shows the skewed, heavy-tailed distribution.

$$Time_{wait} = \left(\frac{k}{z(\frac{1}{\alpha})} \right) \quad (4.1)$$

The packets can have a maximum size of 1536 bytes. All smaller packets are multiple integer values of 64 byte. In this case, a fragmentation of packets is not necessary. The calculation of the packet size is done after the $Time_{wait}$ procedure from above has been executed and is specified next. Firstly, a uniform random number between [0...1] is computed. Secondly, this number is compared with the first number of a fixed Harvard trace. If the random number is smaller or equal than the first Harvard number, the next number of the trace is added to the first one and the comparison starts again. In the other case, the comparison stops and the amount of used Harvard numbers is multiplied with the minimum packet size of 64 bytes. The characteristic of the source does not become effective, because the parameter of the Pareto distribution in the way that keeps the transmission queue constantly filled up.

Now, the source creates a packet with the source address, the destination address, the kind of the packet: data packet, the packet size and the packet number. This packet is passed to the queue and has the status of a packet which has to be send.

4.3 Setup of the simulations

The general setup of the simulated IEEE 802.11 ad-hoc WLAN is characterized in this chapter, starting with a summary of primary characteristics of the model.

- There is no power saving.
- RTS/CTS packet are not handled.
- There is no fragmentation of the packets, because the maximum packet size is 1536 bytes.
- ACK packet size is fixed to 14 bytes and always transmitted with 1MBit/s.
- Preamble length depends on the transmission speed:
 - 24 byte for 1 and 2 MBit/s
 - 66 byte for 5.5 MBit/s
 - 132 bytes for 11 MBit/s.
- The WLAN is simulated under full-load conditions. That means, that there will always be a packet to send at STA S.
- The RF power is calculated for the link , according to the structure of the network.
- RF power is not limited for the simulations.
- The BER in the channel is calculated on the basis of the current SINR.
- Repetition of erroneous packets is limited to 8.

The simulated network consists of 2 (0 hops), 3 (2 hops), 4 (3 hops), 6 (5 hops), 8 (7 hops), 10 (9 hops) or 20 (19 hops) stations. The distances between the sending station S and the receiving station R are fixed to 10, 50, 100, 500, 1000, 5000 or 10000 meters, see figure 2.1. This

means that the higher the number of stations for a fixed distance from S to R, the shorter the distance between the stations of the network. The given BER are 10^{-6} or 10^{-8} . With these BER, the link budget is calculated. The transmission speed is defined to 1, 2, 5.5 or 11 MBit/s.

The simulations are executed in the following order: for every given distance a simulation at any transmission speed and at any BER is started. Table 4.1 gives an example for 100m and 6 stations in the network.

STAs in the network	Distance from STA S to STA R [m]	Distance from STA to STA [m]	BER	Speed [MBit/s]
6	100	20	10^{-6}	1
				2
				5.5
				11
			10^{-8}	1
				2
				5.5
				11
Number of simulations for this example : 8				

Table 4.1: Example for 6 STAs in connection to the number of simulations

This table shows that for every number of stations and for every distance 8 simulations are to be put into execution. The total number of networks that are to be simulated under the conditions mentioned above is 392. The results of a simulation are the statistical parameters, such as the throughput and a trace file. This file contains simply the time, the number of the STA and the status: sending a packet or packet sent. The analysis of these files is described in Chapter 4.4. A simulation expires if 30000 packets are successfully received by the last STA R.

4.4 Analysis of the resulting trace files of the simulations

The resulting trace files of the simulations are analyzed with a special program which is written in 'C'-language.

Figure 4.1 gives an example for the analysis of a network that consists of 3 STAs and has a distance of 100m from STA S to STA R.

If STA S is sending a packet the following happens: According to Figure 2.1, the radiated power from STA S will have an effect on all five measuring points (MP). The incoming power at a MP will be called the immission power. The immission power depends on the distance from the sending STA S.

Firstly, the program calculates the distances of the five different measure points from the sending STAs to this distance is computed on the basis of trigonometry. Secondly, the immission power at the MPs will be calculated by help of the path loss function. The immission power is computed by the following formula (see formulas of section "Wave propagation and path loss" in Chapter 3):

$$P_{immission} = \frac{P_{transmitter}}{\left(\frac{4 \pi Distance}{\lambda}\right)^2} \text{ in } [mW] \quad (4.2)$$

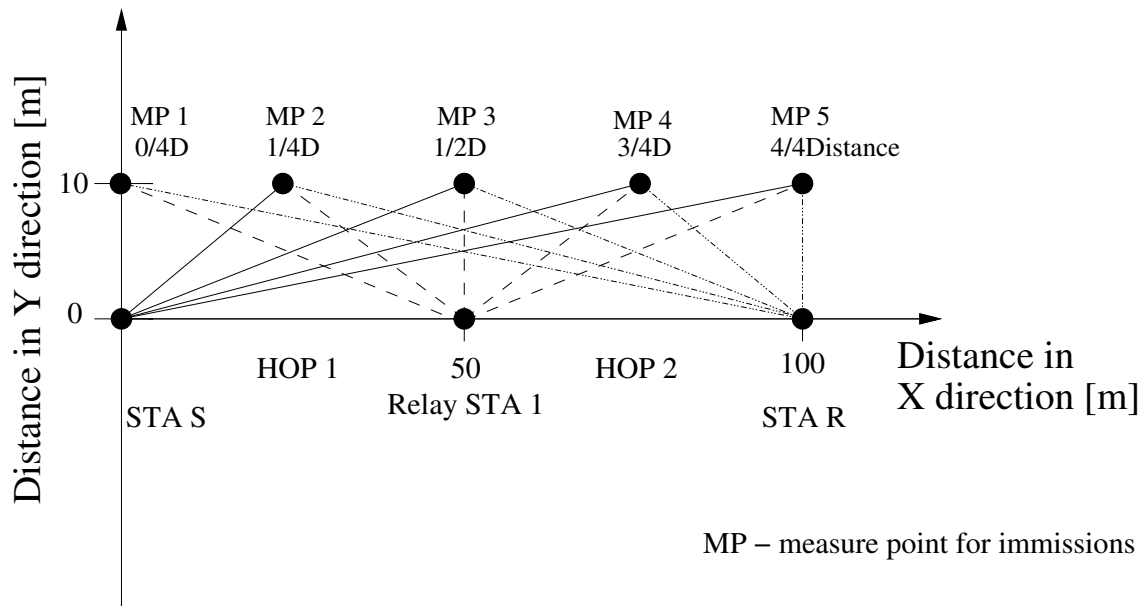


Figure 4.1: Example for distance analysis from STAs to measure points

There is a chance that more than one STA is sending. In this case, the sum of the immission power is computed.

In addition to the immission power, the peak immission power and energy, the total immission energy, and the 99% percentile are analyzed for all MPs. The 99% percentile contains a value of the immission power. This value represents the fact that 99% percent of all other values of the immission power are lower or equal.

These results of the simulated networks are described in Chapter 5 which comes next.

Chapter 5

RESULTS

5.1 Throughput of the network

The throughput of the simulated network is shown in Figure 5.1 and 5.2. These Figures indicate the independence of the throughput from the distance D in the network. For a data rate of 1MBit/s the throughput for a BER of 10^{-6} is smaller than for a BER of 10^{-8} if the network contains more than 6 stations. The same fact is true for more than 4 stations at a transmission speed of 11 MBit/s.

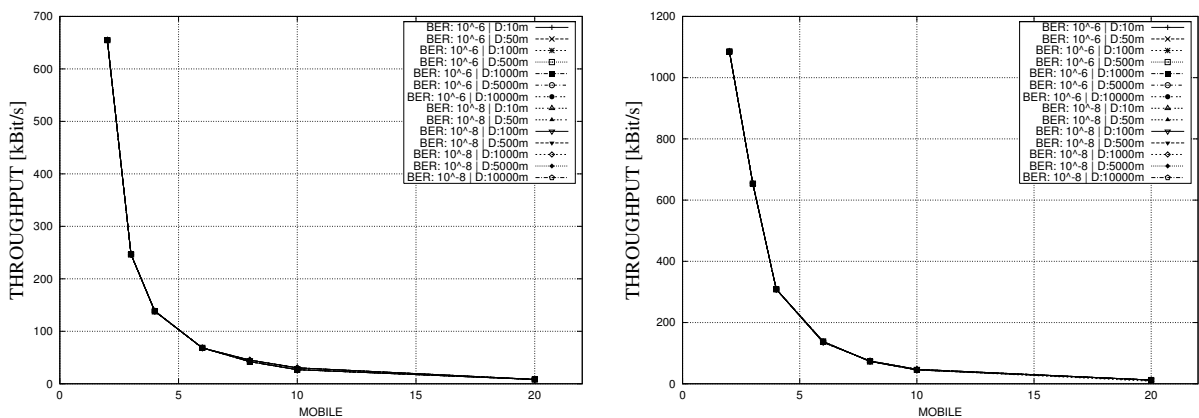


Figure 5.1: Throughput of wireless network - left: 1 MBit/s right: 2 MBit/s

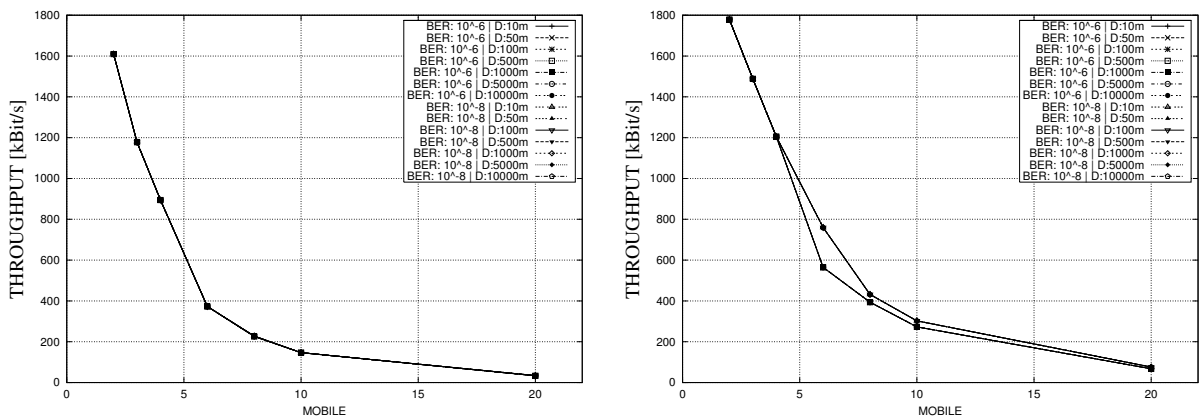


Figure 5.2: Throughput of wireless network - left: 5.5 MBit/s right: 11 MBit/s

The throughput for all different data rates decreases enormously, the more stations a network contains. The best performance with 2 STAs at a data rate of 1MBit/s is 654kBit/s for a WLAN. This throughput is the basis to find the optimal number of hops for higher data rates. The related results will be discussed in Chapter 5.3. In general, it is not useful to have a network with more than 3 hops (4 mobiles) for a transmission speed of 1MBit/s, 2MBit/s and 5.5MBit/s, because the throughput will be very low. The limit for a data rate of 11MBit/s can be set to 7 hops (8 mobiles).

An example of the pipeline effect is shown in Table 5.1. The values are taken from the trace file of a WLAN with 8 STAs at 100m distance, a BER of 10^{-6} and a 11MBit/s data rate. The + sign stands for the start of the transmission at the STA which is indicated in the second column. The first column of the table shows the according time. The symbol – in column 3 indicates that a STA has stopped the sent at the time given in column 1. In summary, there is a pipeline effect, but this effect does not have a significant impact on the throughput.

Time [s]	STA	Current status of sending
146.556416	0	+
146.556535	5	+
146.556956	0	-
146.557074	5	-
146.557088	6	+
146.557194	6	-

Table 5.1: Pipeline effect for a WLAN with 8 STAs

5.2 Results for the different distances of the network

The results of the simulations are represented in tables and diagrams which can be found in the Appendices. These Appendices are organized according to the distance of the network.

The diagrams in Appendices B to H show the statistical distribution of the immission power. The immission power is displayed over frequency of occurrence in time. This time is divided by the duration of the whole transmission. The vertical lines of the steps present the relative frequency of occurrence for the related immission power level of the x-axis. When the probability of 1 is received, the vertical lines in the distribution diagrams assign the peak power immission. The quantity of 0mW immission power was set to $1e^{-10}$, because the x-axis is displayed logarithmically. The logarithmic representation offers a better view of the gradient and a better basis for the comparison of the different diagrams. There is only one exception of the immission power at 20 STAs and 1MBit/s data rate. The value of $1e^{-10}$ is higher than the lowest power level for all other values of the immission power.

The tables from Appendix I to O contain the results for the immission power, 99% percentile of the immission power, peak immission power, peak immission energy and immission energy.

General results :

The following results are valid throughout all distances, if there are not given any limitations. Therefore, those results will be not repeated in the analysis of the results for the different distances.

The maximum of the immission power, the immission energy and the peak immission energy is always located at MP 1 for a WLAN of 2 STAs. The minimum of immission power for this

network is at MP 5 for a distance of 10m. These minima oscillate between point 3 and 4 for networks which have a greater distance than 10m from STA S to STA R.

The 99% percentile for 2 stations is equal to the peak immission power for 2 stations. The maxima of both quantities are located at the first and the last measuring point. The minimum is always at point 3 for these networks. A WLAN with 3 STAs has the following characteristics at all data rates and distances: 99% percentile is equal to the peak immission power, the minima are at point 2 and 4, the maxima are located at points 1,3 and 5. The last statement can be made for the peak immission power too. There is only one exception at 1MBit/s and 10m distance.

A specific characteristic can be found at point 3 for WLANs with 3 STAs, if the distance is over 10m. At this MP, the immission radiation increases for all data rates, because a sending STA is close to it. In addition to that, this point is affected more than other STAs by the radiation of all sending STAs. Thus, the gain of the radiation reduction will be limited to point 1, 2, 4 and 5. In general, the mean value of the immission radiation WLAN consisting of 3 STAs is below the radiation of a 2 STAs WLAN. The immission energy at MP 3 decreases up to and including a distance of 100m and will also be higher than the energy in a WLAN with 2 STAs. At higher distances, the following effect can be observed. The greater the distances and the more STAs a WLAN contains, the bigger is the possibility that the immission energy increases with more hops. The reason can be found in the relation of the location of the MPs and the location of the sending STA. In addition to that, all kinds of radiation except the peak immission energy increase significantly at the MPs 2 and 4 for networks with distances larger than 100m. This fact is valid for all transmission speeds.

The immission energy goes down from the lowest data rate to a data rate of 5.5MBit/s for networks that have up to 10 STAs. There is one exception at a data rate of 2MBit/s in a WLAN with 20 STAs. A network with 2 STAs and a transmission speed of 11MBit/s has an higher immission energy than slower networks. The energy is also higher at WLANs with 20 STAs with a distance up to 1000m. There is a decrease at higher distances. The immission energy at 11MBit/s is lower than the energy at 1MBit/s for all other networks, even if there is a slight increase from 5.5MBit/s to 11MBit/s data rate. A constant decrease can be found at networks with 8 or 10 STAs for both BERs. The immission energy goes also down continuously for more than 4 STAs for a BER of 10^{-8} .

In general, the immission power for a BER of 10^{-8} is 20% - 25% higher than for a BER of 10^{-6} . The reason can be found in a higher transmission power by the stations to establish a safer link with less errors. The 99% percentile of the immission power, the peak immission power, the peak immission energy and the immission energy show a similar behavior.

With a higher number of STAs, the quantity of the immission power, 99% percentile, peak power, peak energy and immission energy at the different MPs in particular for distances lesser than or equal 1000m become more similar.

Also, the statistical distribution of the immission power is close to each other for the different BERs. The higher the amount of STAs the lower is the share of a silence channel which equals a non-sending. In the diagrams presents this the value of 0mW ($1e^{-10}$ mW). That share of time increases with a higher transmission speed. The more inter frame spaces per time frame for higher transmission rates can be found as reason. The distribution diagrams illustrate the uniform spread of the immission power, the more STAs a WLAN has. The steps of the distribution are significantly smaller in this case. If the ending points of the gradients are compared, the reduction of the immission power can be detected. The higher the number of STAs, the better is the utilization of the wireless medium (WM). The characteristics of the distribution won't be discussed in detail for every result. The distribution diagrams of the

immission power are given as an additional reference information.

Next, the results for the different distances from end to end will be described. If there is not an explicit declaration, the results are reported for both BERs. The distribution of the maxima and minima is given, if there is any specific structure.

Results for a distance of 10m :

The higher the amount of hops in the network, the lower is the immission power at every MP. The mean value of the immission power decreases, too. These two characteristics apply to a constant data rate in the network . If a network contains 2 stations and the immission power is set to 100%, the reduction gain of the immission is 70% for 2 hops at 1MBit/s data rate. The gain increases with more hops. The higher the transmission speed the higher is the immission power and the lower is the reduction gain. The minimum of radiation is always located at MP 5. The immission power maximum switches to point 2 or 3 with more stations, because the radiation from all other STAs comes into account. Figure 5.3 displays a visualization of the related table of Appendix I.

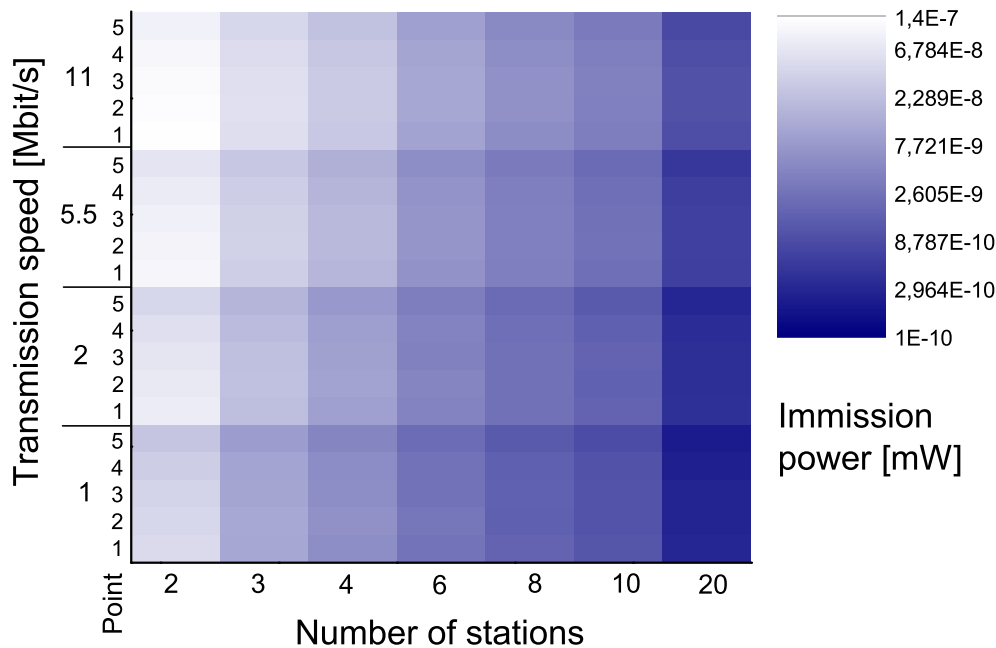


Figure 5.3: Immission power at 10m distance (BER: 10^{-6})

The x-axis displays the number of stations in the network. The y-axis shows the immission power at the measuring points and the related transmission speeds. At the right side of each diagram the quantity of the levels is given.

The 99% percentile of the immission power decreases with a higher amount of stations for the same data rate. If the transmission speed increases, the 99% percentile increases too. The minima and the maxima are located at different points of the WLAN for more than 3 stations. A minima can mostly be found at point 5. A lot of maxima are at points 2 or 3.

The peak immission power goes down with more stations for the same data rate. The only exception can be observed at 11MBit/s data rate. The peak immission power increases from a

network of 4 stations to a 6 stations one. The peak immission power raises for faster transmission speeds.

The peak immission energy decreases for the same data rate and more STAs. There are only a few exceptions at different MPs which can be disregarded. The peak energy goes preponderant up for networks with a higher transmission speed that have a BER of 10^{-6} . There is an exception in a network with 8 STAs at a data rate of 11MBit/s. A network with a BER of 10^{-8} , that contains up to 4 STAs and more than 8 STAs, has a higher peak immission energy with a higher data rate. The peak energy decreases continuously for higher transmission speeds of a WLAN with 6 or 8 STAs.

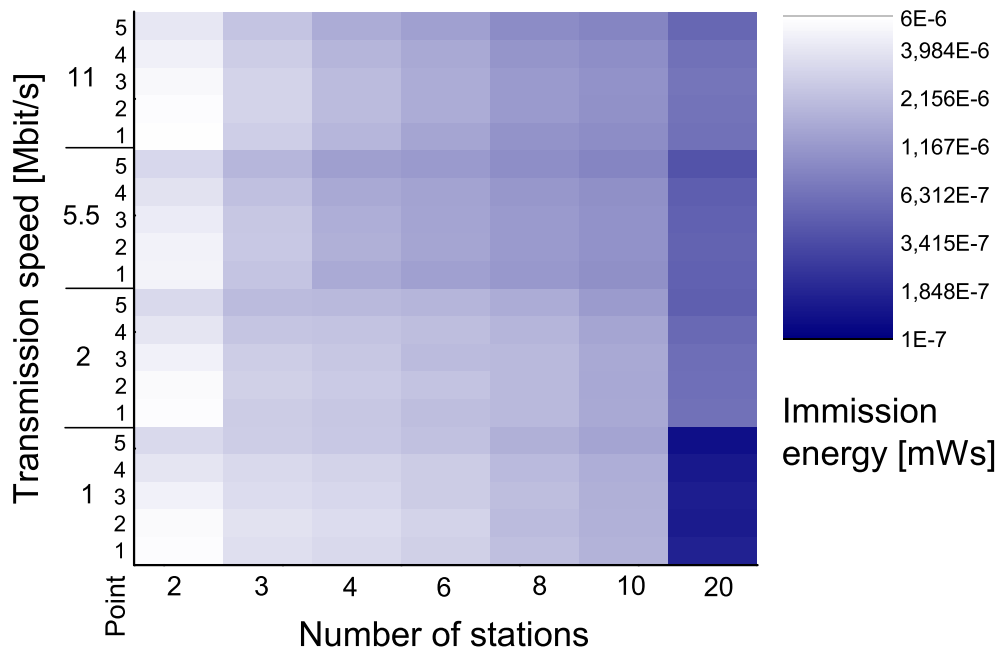


Figure 5.4: Immission energy at 10m distance (BER: 10^{-6})

The immission energy is lower for the same data rate, if the WLAN contains more stations. The gain of the reduction increases up to around 90% with a higher amount of STAs and a higher transmission speed. The minimum of the immission energy is always located at measuring point 5. Maxima can be found at point 2 or 3 for a BER of 10^{-6} and for the other BER at MP 1. Figure 5.4 displays a visualization of the related table of Appendix I and is organized like Figure 5.3.

Results for a distance of 50m :

The higher the number of STAs in a network, the lower is the immission power. The reduction gain goes up to 99% the more STAs a network has. This gain decreases with a higher transmission speed. The minimum of radiation is located at MP 5 for WLANs with more than 3 STAs. The maxima can be found at point 1 or 2 for low data rates. The higher the transmission speed, the more often can the maximum be found at point 3 for different numbers of STAs.

The 99% percentile of the immission power goes down with more stations for the same transmission speed. There is a small increase at point 2 for the three fastest data rates, if the

network has 4 STAs. It originates to the position of point 2 that is close to the sending STA S. If the transmission speed increases, the 99% percentile increases for all kinds of WLANs as well.

The higher the number of STAs, the lower is the peak immission power for the same data rate. The minima are at MP 5 for networks with more than 4 STAs.

The peak immission energy decreases for the results of equal transmission speed and more STAs. There are some exceptions to this, if the WLAN has more than 4 STAs. The most increases are located in WLANs with 8 or 10 STAs. A structure can not be found for these exceptions. The higher the data rate, the higher is the peak energy.

The higher the number of hops in the network, the lower is the immission energy at every MP for the same data rate. There is a significant exception at 4 STAs networks with a transmission speed of 1MBit/s or 2MBit/s. The power increases at MPs 2,4 and 5, if a hop is added in a network of 3 STAs. The reason can be found in the location of the additional hop and the location of the MP. Regardless of this, the mean value is smaller than the quantity of the energy at 3 STAs. The gain of the reduction goes up for more STAs and higher data rates. The minima of the immission energy are always at measuring point 5 for WLANs with more than 2 STAs. Maxima are located at point 2 or 3 for a BER of 10^{-6} and in addition at MP 1 for the other BER.

Results for a distance of 100m :

The immission power decreases for the same data rate and for a higher number of STAs. The higher the transmission speed the higher is the immission power. The gain raises with more than 3 STAs and sinks with higher data rates. A gain of the reduction for 3 STAs is concentrated at points 1, 2, 4 and 5. The immission power goes up at point 4 for data rate of 1MBit/s and 2MBit/s in a WLAN of 4 STAs. This is also valid for point 2 and 4 for data rates of 5.5MBit/s and 11MBit/s. The minima are located at the MP 5 for these networks and the maximum of the immission power can be found at point 1 or 2 for WLANs which contain more than 3 STAs.

The 99% percentile of the immission power decreases with a higher number of stations for the same data rate and for higher data rates. This percentile has the same characteristic of the increase as the immission power for a WLAN that consists of 4 STAs.

The peak immission power goes down for more STAs in a WLAN, if the level of the data rate is identical. An increase of the peak power can be confirmed with higher data rates. The peak power for a 4 STAs network increases for points 2 and 4 at all data rates. An additional increase can be found at point 3 at 6 STAs for a transmission speed of 5.5MBit/s and 11MBit/s.

The peak immission energy goes down for the results of the same transmission speed in connection with more STAs. The peak energy is higher for faster networks. There are some additional increases that are higher than the peak energy in a WLAN with 2 STAs. These anomaly is located at point 4 for 5.5MBit/s and 11MBit/s data rate. All other exceptions do not have a significant effect on the gradient of the peak energy for the same data rates. Those exceptions can also be found for results of the immission energy. The higher the number of STAs, the lower is the immission energy for the same data rate. The minima of the immission energy are always located at MP 5 for WLANs with more than 3 STAs. The maxima can be found at point 1 or 2 for networks larger than 3 STAs and a BER of 10^{-6} .

Results for a distance of 500m :

The higher the number of STAs in a network, the lower is the immission power. The reduction gain of this power goes up to 92%, the more STAs a network has. This gain decreases with a higher transmission speed. This statement includes an increase of the immission power. The

maxima can be found at point 1 for WLANs with more than 3 STAs. The minima are mostly located at MP 5, if a WLAN contains more than 4 STAs.

The 99% percentile of the immission power decreases with a higher number of stations for the same data rate. There are a few ineffectual exceptions. If the transmission speed increases, the 99% percentile increases too and the gain of the reduction will be lower. The minima are concentrated at point 3 for more than 3 STAs. The maxima for a 4 STAs network are at the first and last MP. A network with more than 4 STAs has the maximum at point 1. These facts can be transferred to the results of the peak immission power.

The peak immission energy goes down for the results of same transmission speeds and more STAs. There are some unimportant exceptions to this, if the WLAN contains more than 4 STAs. The higher the data rate, the higher is the peak energy.

The immission energy is lower for the same data rate, if the WLAN contains more stations. The gain of the reduction is limited to point 1 and 5. The level of the gain increases up to around 99% with a higher number of STAs and a higher transmission speed. In addition to the general results, the immission energy increases at points 2, 3 and 4 for a WLAN of 6 STAs and at points 2 and 3 for a WLAN of 8 STAs. This is also valid for the highest data rates and a network of 10 STAs. The maxima are always located at point 1 for networks larger than 3 STAs.

Results for a distance of 1000m :

The immission power decreases for the same data rate and for a higher number of STAs. The higher the transmission speed the higher is the immission power. The gain raises up to 88% with more than 3 STAs and falls with higher data rates. The maxima of the immission power are located always at MP 1 for WLANs with more than 3 STAs. And for this case the minima are mostly located at point 3.

The 99% percentile of the immission power goes down with more stations for the same transmission speed. If the transmission speed increases, the 99% percentile increases too for all kinds of WLANs. A few ineffectual exceptions can be found for WLANs with 6, 8 or 10 STAs. The maxima for a 4 STAs network are at the first and last point. A network with more than 4 STAs has the maxima at point 1 and at MP 5 is always the second maximum. The minima are at MP 3 for more than 3 STAs. These results are similar to the results of the peak immission power. The quantities of the 99% percentile are always smaller than the peak power ones.

The peak immission energy decreases for more STAs in a WLAN, if the level of the data rate is identical. The isolated increasing of the peak energy levels for WLANs with more than 4 STAs are lower than the immission energy of a 2 STAs one. They have no influence on the main decrease. The last statement has a validity for the increase at point 2 and 4 in a WLAN with 4 STAs. The higher the transmission speed, the higher is the peak energy.

The immission energy goes down for the results of the equal transmission speed in connection with more STAs. The level of the gain at point 1 and 5 increases up to around 99% with a higher number of STAs and a higher transmission speed. An increase of the immission energy can be comprehended at the MPs 2, 3 and 4 for WLANs which contain more than 4 STAs and less than 20 STAs. There is the possibility that the immission energy decreases for more than 20 STAs at these points. The maxima are always at point 1 for networks larger than 3 STAs.

Results for a distance of 5000m and 10000m :

The results for these distances are similar to the 1000m results. The quantities of the immission radiation are higher than the quantities 1000m. The decreases of all kinds of immission bear a close resemblance to the 1000m ones. The local increases of the 99% percentile, the peak power and the immission energy can also be applied to WLANs with 20 STAs. These effects

can be found at the MPs 2, 3 and 4. The gain of the reduction of the immission is concentrated at the first and last point of the networks. The mean values of the immission power and energy fall although there is an increase at the middle MPs.

5.3 Similar throughput case study results

This chapter contains results for the aforementioned metrics if the throughput is kept on a similar level. The goal is to proof whether the multi-hop approach leads to an immission reduction if one considers a comparable throughput. For that purpose, certain network scenarios with a similar throughput are picked out and compared.

The reference throughput is taken from the single hop network and a data rate of 1MBit/s, here the highest throughput at this data rate (654 kbyte/s) was achieved. The scenarios with a higher number of hops which matched the throughput are the 3 STAs scenario at a data rate of 2 MBit/s (654 kbyte/s), the 4 STAs scenario at a data rate of 5.5 MBit/s (894 kbyte/s), the 6 STAs scenario at a data rate of 11 MBit/s (594 kbyte/s) and the 8 STAs scenario at a data rate of 11 MBit/s (394 kbyte/s). In all other scenarios the throughput differed too much.

According to the radiation guidelines of the IEEE 802.11 standard, only distances lower than 100m were considered to keep the emission power of each station less than 100mW (see also Table 3.2).

The Figures shown on the y-axis are the immission power, the immission energy, the peak immission power and the peak immission energy for the five measuring points. The results of the 99% percentile will not be displayed, because the characteristics and the behavior of these results are very close to the results of the peak immission power.

The x-axis indicates the number of stations in the network and the related transmission speed. In addition to that, the throughput is specified. At the right side of each diagram the quantity of the levels is given. The exact quantities for the different kinds of immission can be found in the corresponding tables of the related Appendix. The following diagrams manage to visualize the results much better.

Figure 5.5 shows the results for a distance of 10m and a BER of 10^{-6} . The immission power decreases with more stations at all MPs. The higher values of this power are located at point 1 or 2. The immission power goes down when moving into the direction of MP 5. The minimum is always located at this point.

The amount of the immission energy is lower for more stations at all points. The maximum goes from point 1 for 2 STAs to point 2 for 3 and 4 STAs and in the end, it can be found at point 3 for 6 and 8 STAs.

The peak immission power for a network of 2 stations has a maximum at point 1 and 5, which are close to the sending STAs. The peak immission power decreases up to a 4 stations network. Afterwards, there is a significant boost for 6 STAs and again a decrease for 8 STAs, but the amount at 6 STAs is smaller than for 2 STAs. The increase at 6 STAs can be explained by a possible simultaneous sending of packets at different STAs in combination with a higher transmission speed. In general, the peak immission power decreases for more stations.

The uniform color in the peak immission energy diagram means a fast decrease to very low levels of the peak immission energy.

The results for a BER of 10^{-8} and the same distance are displayed in Figure 5.6. The behavior of the immission power, the immission energy and the peak immission power is close to the results for a BER of 10^{-6} .

The main difference between the results for a BER of 10^{-6} and 10^{-8} is that the levels of the immission are higher for a BER of 10^{-8} . Thus, the peak immission energy has a different

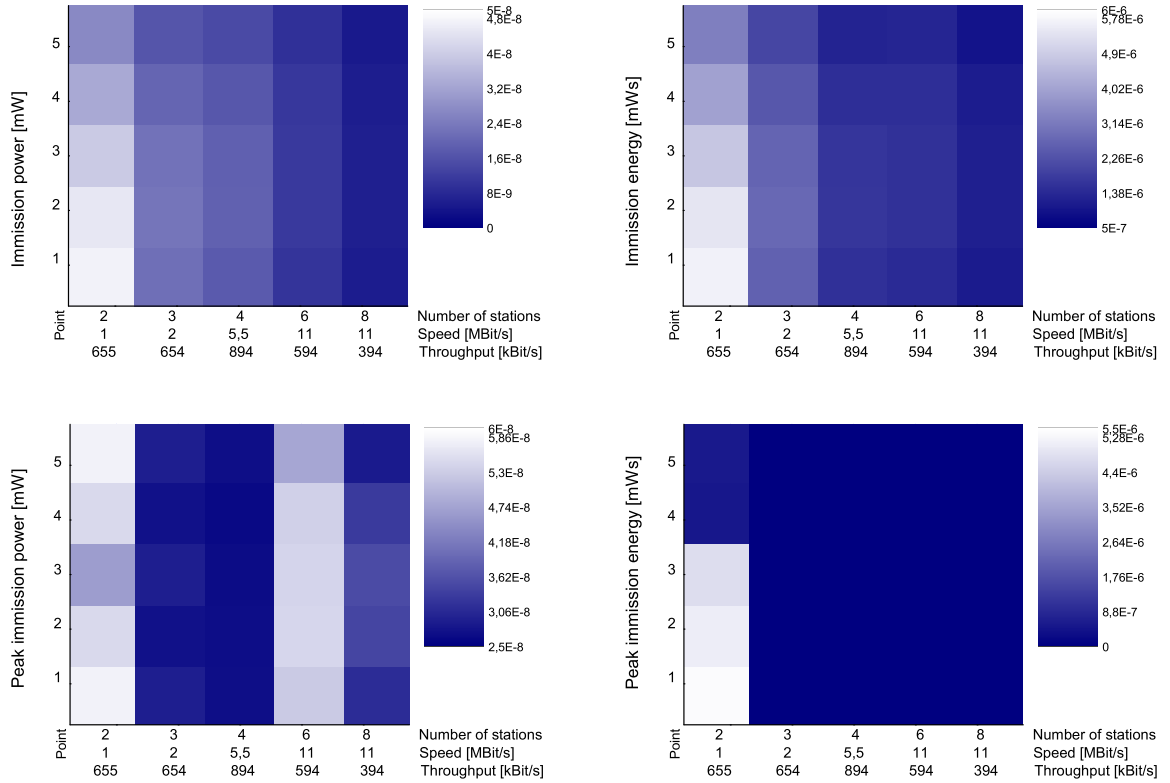


Figure 5.5: Results for a similar throughput (distance: 10m; BER: 10^{-6})

illustration as a result of the resolution of the levels, but it also goes down fast for a higher number of stations.

Next, the results for a distance of 50m will be discussed. Figure 5.7 contains the results for a BER of 10^{-6} .

The immission power increases at point 3 for a network of 3 STAs. There is also the maximum of all MPs. The reason can be found in the sending hop, that is close to the measuring point and in the emission power from the other sending stations. But the mean value of the immission power is smaller than the one for 2 STAs. The immission power diagram shows that the minimum is always located at point 5. From this diagram it follows that the immission power goes down with more STAs in the network.

In general, the immission energy goes down with a higher number of STAs. The increase of the immission energy at point 3 is consequentially for a network which containing 3 STAs. The total maximum is located at MP 1 for 2 STAs and is relocated to point 3 for a network of 6 or 8 STAs.

The peak immission power for 2 STAs has the usual distribution of the quantities: the maxima at point 1 and 5, a lower level at point 2 and 4 and a minimum at point 3. If a network consists of 3 STAs, the peak power has the same quantity at point 1,3 and 5. A network with 6 STAs shows an increase of the peak immission power at all points except point 5. The reason is described for a 10m distance WLAN.

The higher the number of STAs in a WLAN, the lower is the peak immission energy. The results for a BER of 10^{-8} are similar to the discussed results for a BER of 10^{-6} . Figure 5.8 clarifies this aspect.

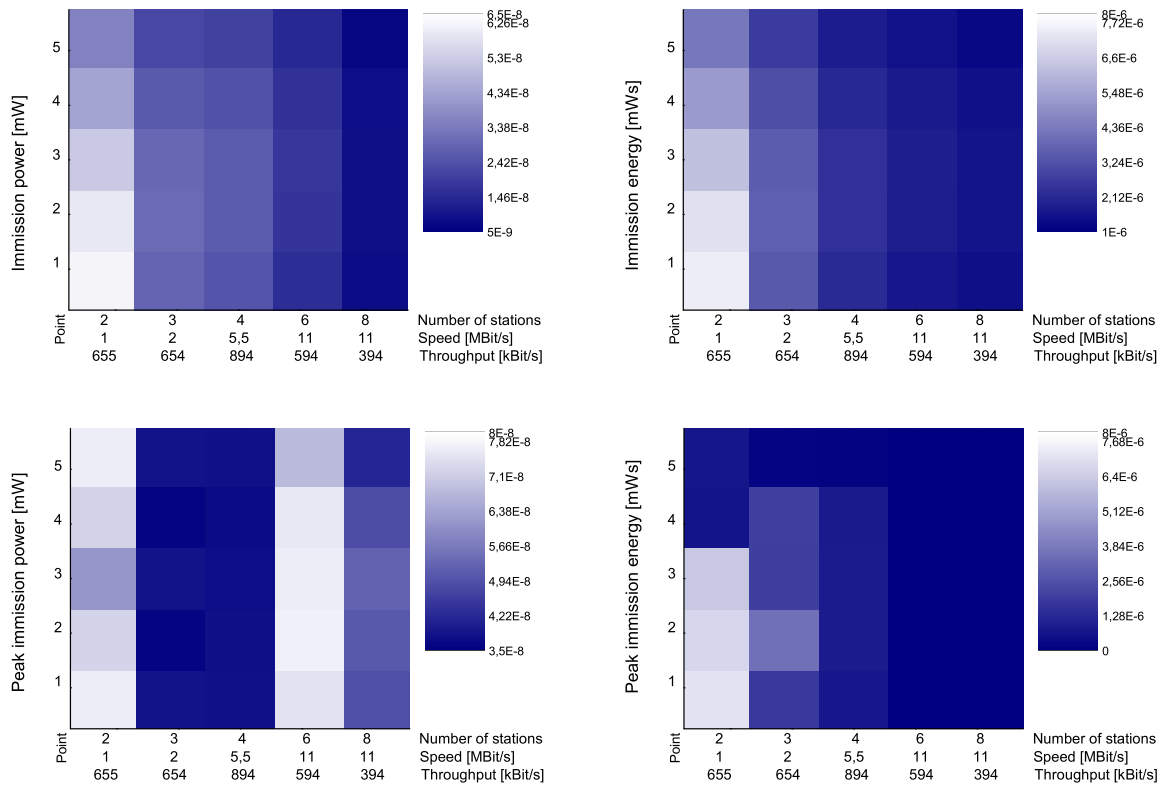


Figure 5.6: Results for an similar throughput (distance: 10m; BER: 10^{-8})

The results of 100m distance for both BERs can be found in Figure 5.9 and 5.10. The behavior of the different kinds of immission is very close to the results for 10m and 50m for a similar throughput. As a summary for this distance it can be said that the immission power, the immission energy, the peak immission power and the peak immission energy decrease with a higher number of stations in the network and a higher transmission speed.

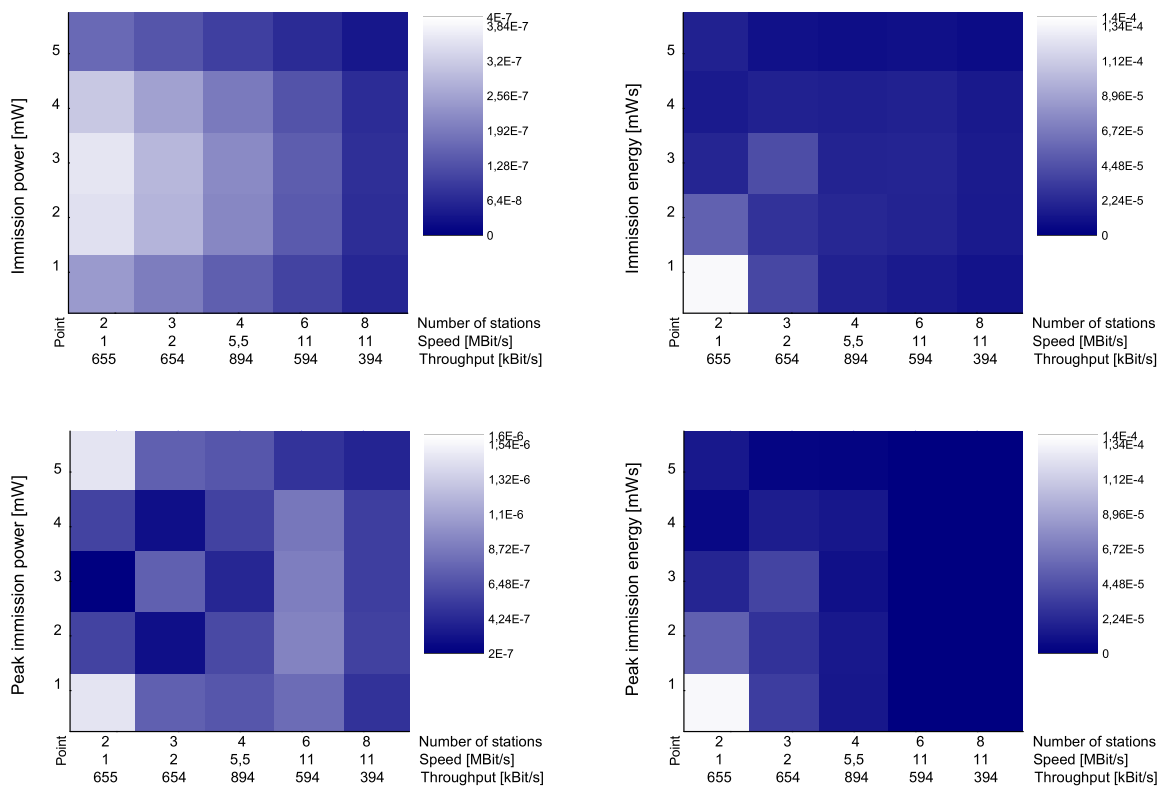


Figure 5.7: Results for an similar throughput (distance: 50m; BER: 10^{-6})

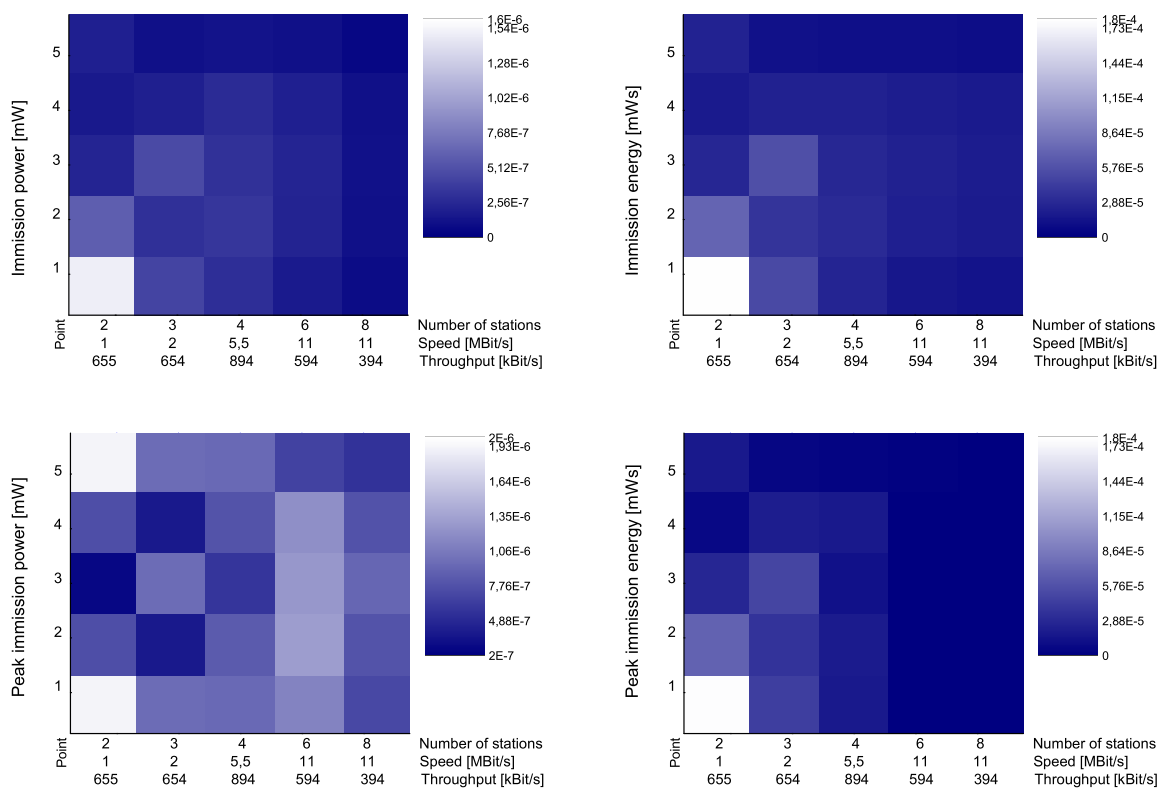


Figure 5.8: Results for an similar throughput (distance: 50m; BER: 10^{-8})

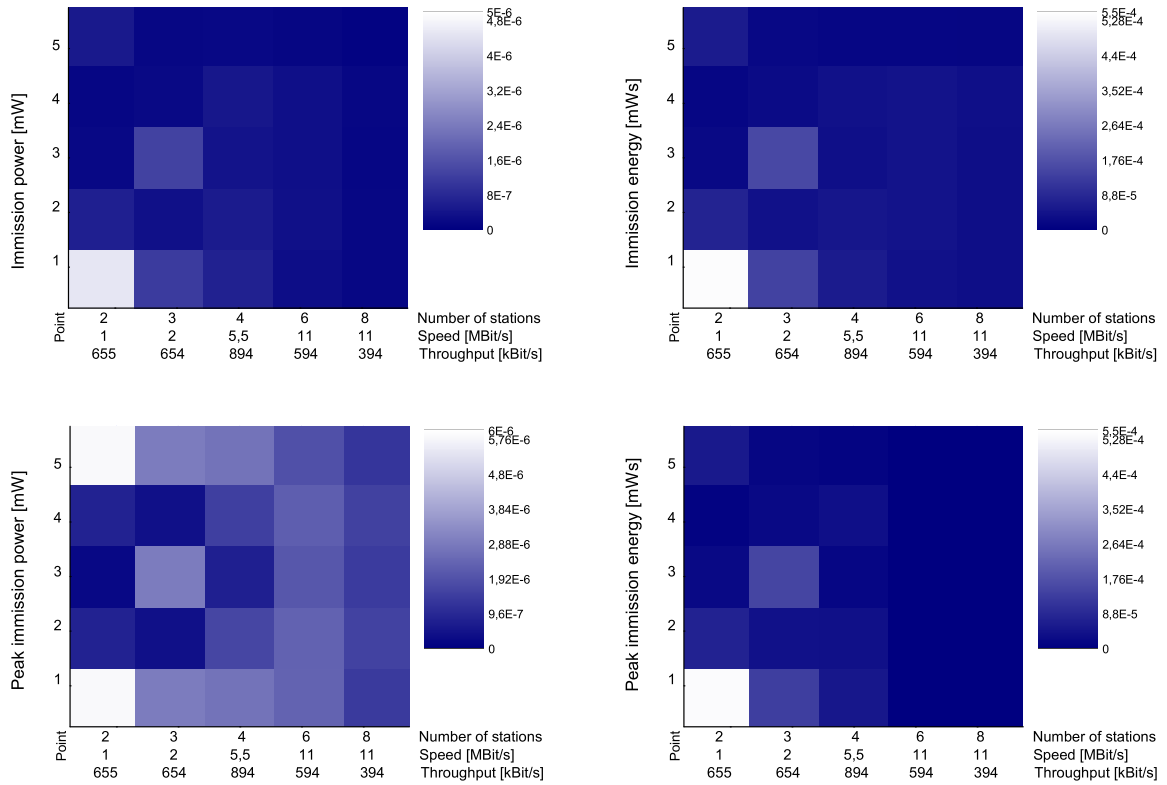


Figure 5.9: Results for an similar throughput (distance: 100m; BER: 10^{-6})

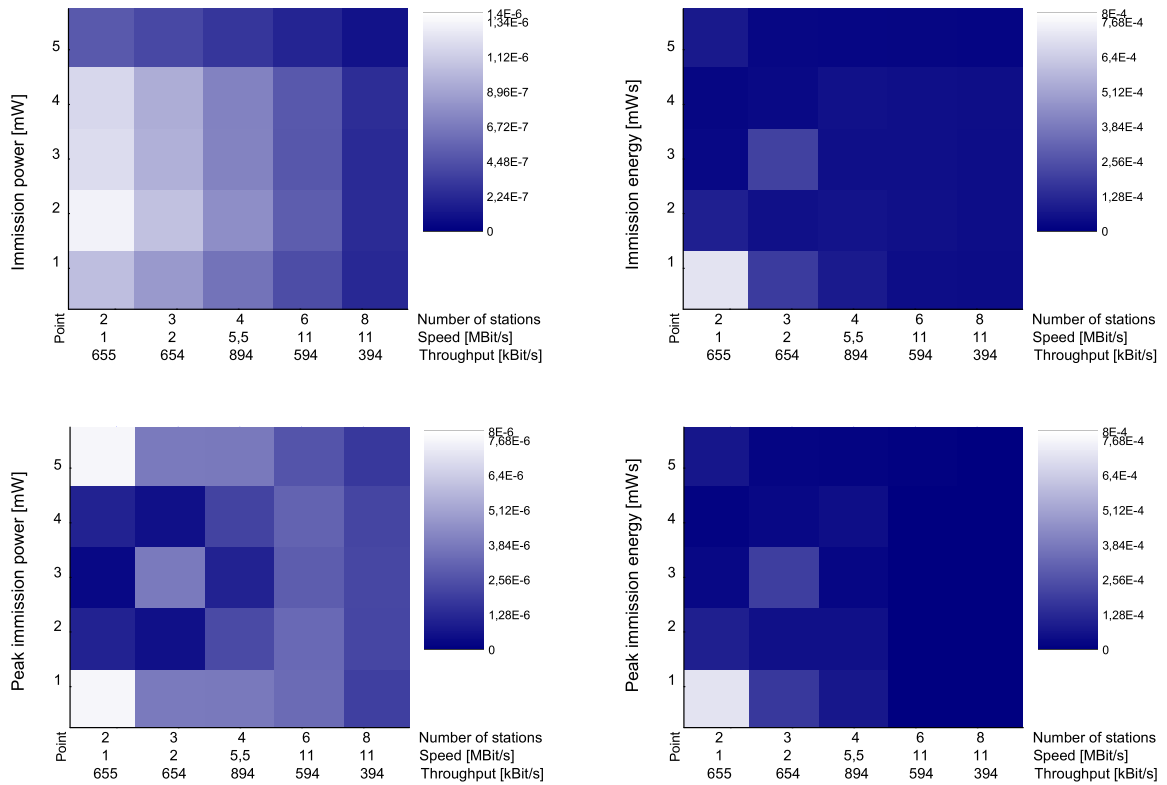


Figure 5.10: Results for an similar throughput (distance: 100m; BER: 10^{-8})

5.4 Summary

This chapter contains a summary of the results for all distances and for the similar throughput case study. In addition to that, the related causes and reasons will be presented. Firstly, a summary of the results for WLANs that consists of 2 STAs is given. Secondly, the general results for the multi-hop approach are described. Finally, similar throughput results are summarized.

The higher the distance between the two STAs and the higher the transmission speed, the higher is the immission radiation. The reason can be found in the emission radiation of the sending STAs. This emission increases, because of the power that is necessary to transmit the data packets from one STA to the next one has to be higher for larger distances (see Chapter 3). The maximum of the immission power, the immission energy and the peak immission energy is always located at MP 1. The 99% percentile is equal to the peak immission power.

The general results for the multi-hop approach are as follows:

- The immission power, the 99% percentile of the immission power, the peak immission power, the peak immission energy and the immission energy for a BER of 10^{-8} is 20% - 25% higher than for a BER of 10^{-6} . The reason is a higher transmission power from the sending stations.
- The higher the number of intermediate hops of a WLAN, the lower is the immission power for all distances. There are some exceptions that can be explained by the unfavorable location of the measuring point in combination with the distance of a WLAN and the number of the added hops. Thus, the gain of the reduction of the immission power increases with more hops in the WLAN.
- The 99% percentile of the immission power, the peak immission power, the peak immission energy and the immission energy is the smaller the more hops a WLANs has. This is valid for distances up to 100m at all MPs. There are some exceptions for larger distances and a smaller number of intermediate hops, but the overall trend is a decrease. In general, there is a gain of immission reduction.
- The mean value of the immission power and energy decreases at all WLANs with more than one intermediate hop, if compared with the 2 STAs WLAN.
- The higher the transmission speed, the higher is the immission power, the 99% percentile, the peak power and the peak immission energy. This is independent of the number of STAs in a WLAN. The gain of the reduction of the immission behaves analogical.
- The immission energy decreases continuously the higher the transmission speed for WLANs with 8 and 10 STAs is. There is also a constant decrease for a network with 6 STAs at a given BER of 10^{-8} . In addition to that, WLANs with 6 STAs at a BER of 10^{-6} show also a decrease for higher distances than 500m.
- The immission energy goes down from the lowest data rate to a data rate of 5.5MBit/s for a lower number of hops and for 19 hops. There is an very slight increase from 5.5 MBit/s to 11 MBit/s. If this increase will be compared with the immission radiation at a data rate of 1MBit/s, the quantity of the radiation at 11MBit/s is lower.
- The distribution of the immission power shows a more smooth spreading over all possible power levels for all MPs the more STAs there are in a WLAN. The higher the number of STAs the better, is the utilization of the WM.

- The higher the transmission speed, the lower is the utilization of the WM, but this will be compensated by a larger number of hops in the WLAN. This is concluded from the distribution of the immission power.
- The higher the distance of a WLAN, the closer is the 99% percentile of the immission power to the peak power values.
- The higher the number of stations, the more similar is the quantity of all kinds of the immission radiation at the MPs. This is due to a lesser emission power of each sending STA in combination with a more uniformly distributed radiation from the first to the last STA.
- If the number of STAs is higher, the throughput is lower. The throughput goes up for higher transmission speeds. The proven pipeline effect does not increase the throughput significantly.

A summary for the similar throughput case study is given next.

- The higher the number of STAs in a WLAN, the lower is the immission power. The increase at point 3 for a 3 STA WLAN can be explained by the combination of the close location of this point and the added hop. The quantity of that immission power is always smaller than the related quantity for a WLAN of 2 STAs.
- The results of immission energy show the same characteristics of the reduction as the immission power.
- In addition to the same behavior of the peak immission power at point 3, the peak power increases for a 6 STAs WLAN which operates at a transmission speed of 5.5MBit/s. But the levels of this power are still smaller than the levels at a 2 STAs WLAN.
- The higher the number of STAs and the higher the transmission speed in a network, the lower is the peak immission energy.
- The 99% percentile is close to the peak immission power but gets up to 45% smaller the more intermediate hops are used.

The next chapter contains the conclusion for this summary and the related results of this work.

Chapter 6

CONCLUSIONS

The purpose of the work was to show how the electromagnetic immission can be affected and possibly reduced by using a multi-hop ad hoc approach.

A reduction of the investigated immission power, 99% percentile of the immission power, peak immission power, peak immission energy and immission energy can be generally confirmed by the results. The gain of the reduction depends on the amount of the hop stations and the transmission speed. The networks that have the most hops show the lowest immission radiation, but the resulting throughput is not acceptable. These concern have a validity for all data rates. On this account, the results were considered for a similar throughput. A reduction of all kinds of immission radiation can also be confirmed for this specific comparison. The related results can be fixed as follows. A maximum of 7 hops makes sense for a transmission speed of 11MBit/s. The amount of hops should not be higher than 3 for 5.5MBit/s data rate. Two hops are useful for transmission speeds of 2MBit/s.

Thus, a sophisticated WLAN which uses multi-hops reduces the electromagnetic emission and the immission radiation. These networks implicate a smaller environmental impact.

Additionally as the simulation results indicate, immission can be further reduced, if the link quality, that is to say the allowed BER, is reduced. In this case less RF transmission power is necessary, but network applications have to be more resistant with respect to errors and delays.

For further researches, all results should be confirmed for faster ad hoc networks that are based on ,for example, the IEEE 802.g standard. Further on, the number of the hops should be increased by single steps to find an optimum number of hops. Another aspect remaining for research is the amount of the measuring points can be increased in combination with a specific adjustment of these points in a way that there are not any local overestimations of the immission radiation. In addition to that, a specific ACK handling which reduces the send of an ACK packet for every received packet should be developed. Another option is the use of directional antennas which reduce radiation and therefore immission.

The current status of the researches, which are related to the radiation of WLAN, is disappointing to say the last. There are urgent informal needs, even if the official guidelines will be strictly adhered for the WLANs.

Appendix A

DIAGRAMS OF THE EMISSION POWER

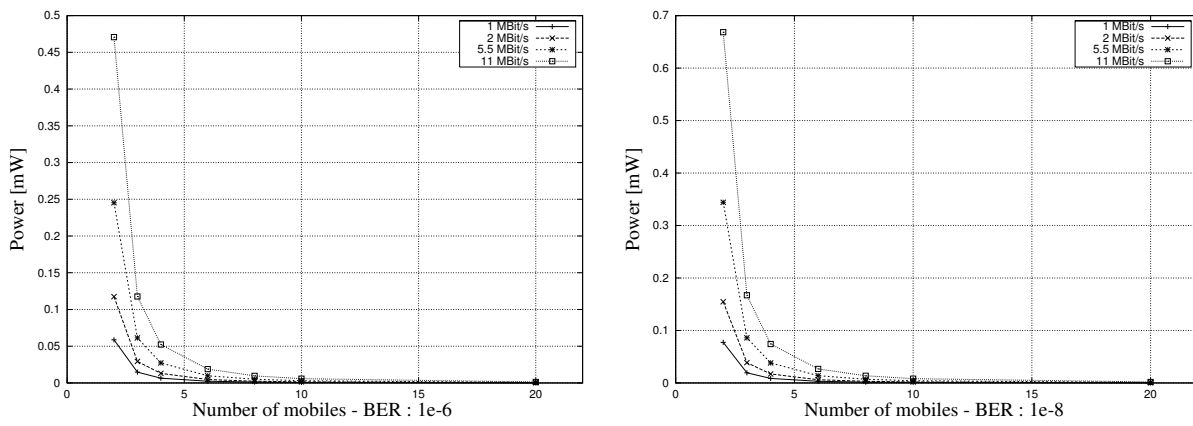


Figure A.1: Power emission over a distance of 10m

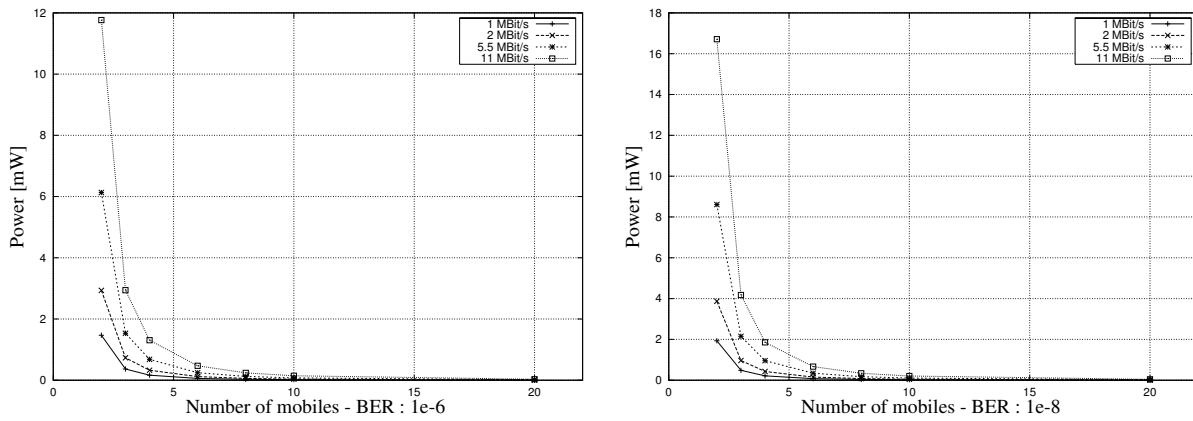


Figure A.2: Power emission over a distance of 50m

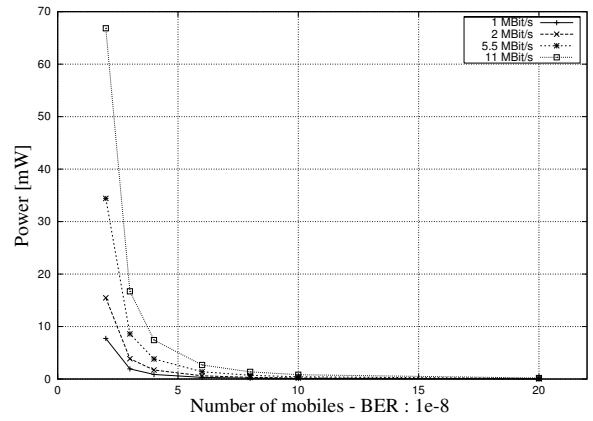
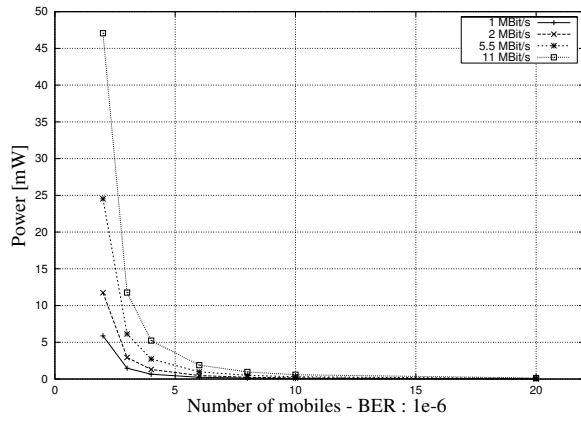


Figure A.3: Power emission over a distance of 100m

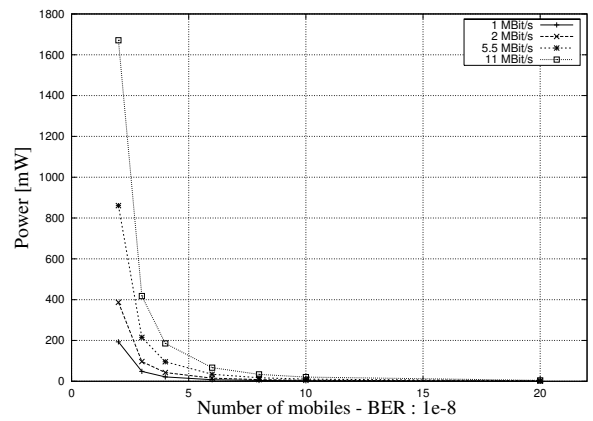
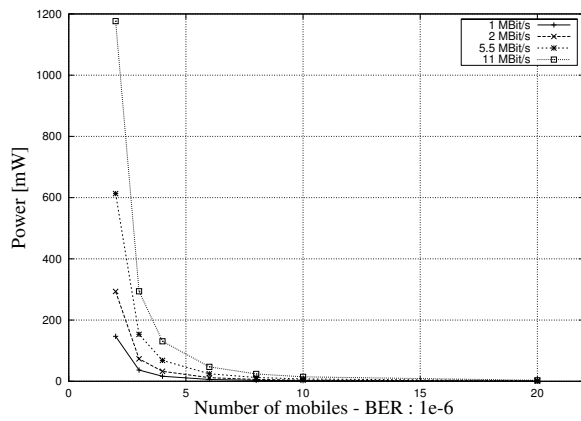


Figure A.4: Power emission over a distance of 500m

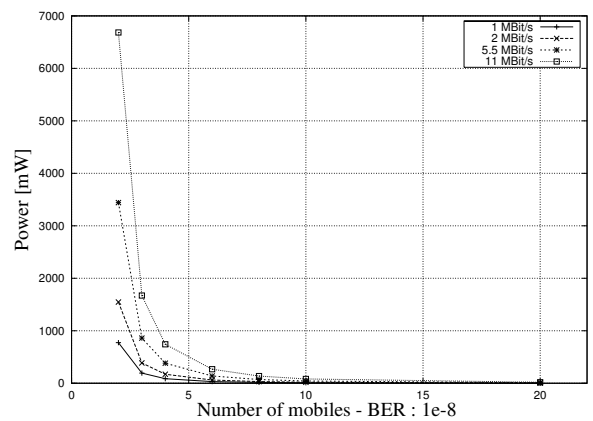
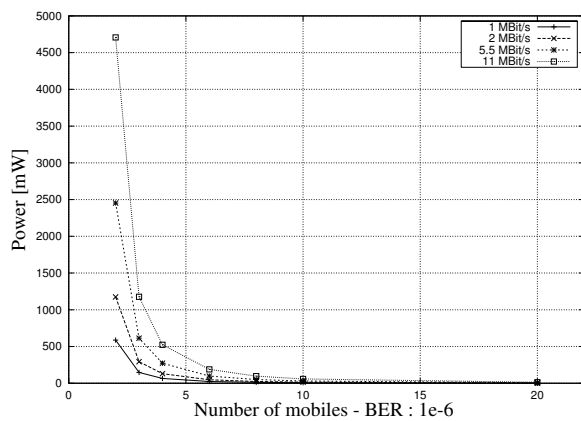


Figure A.5: Power emission over a distance of 1000m

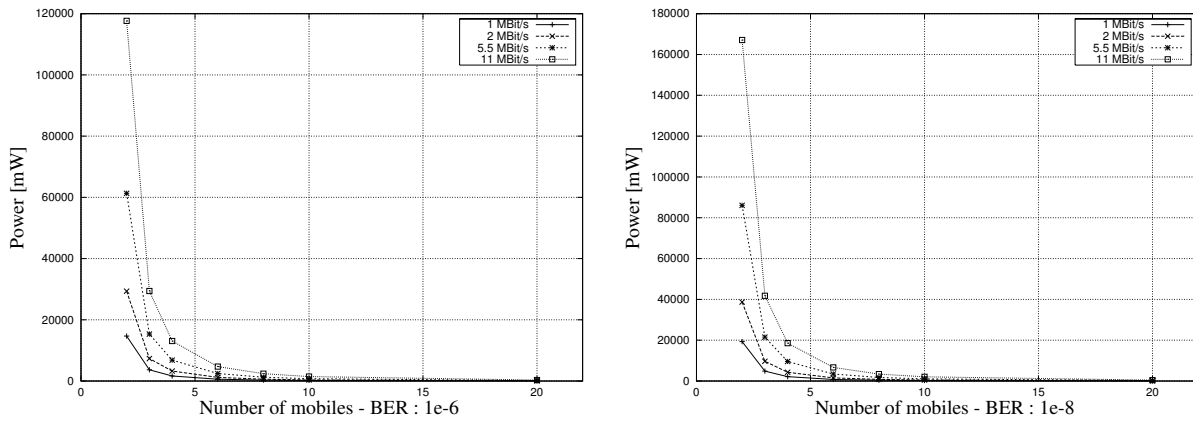


Figure A.6: Power emission over a distance of 5000m

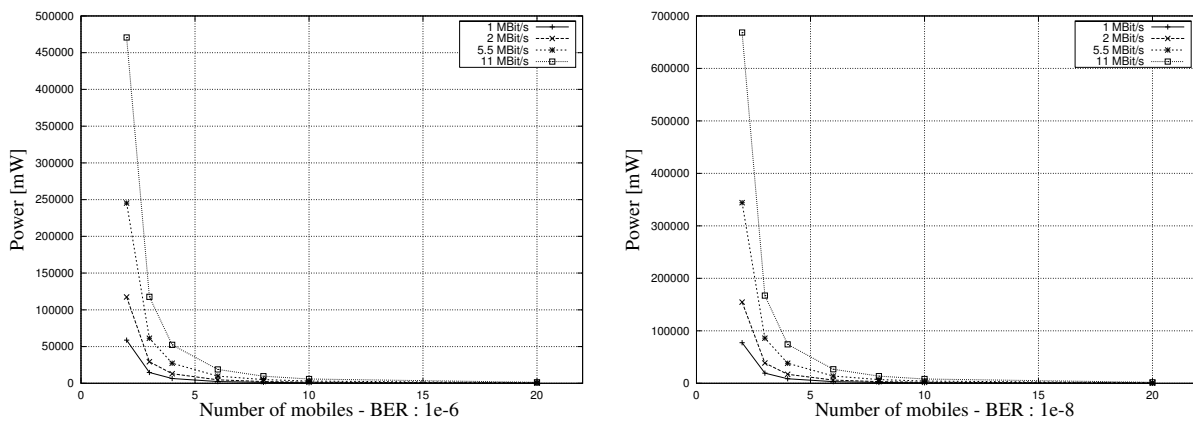


Figure A.7: Power emission over a distance of 10000m

Appendix B

DISTRIBUTION OF THE IMMISSION POWER FOR 10M

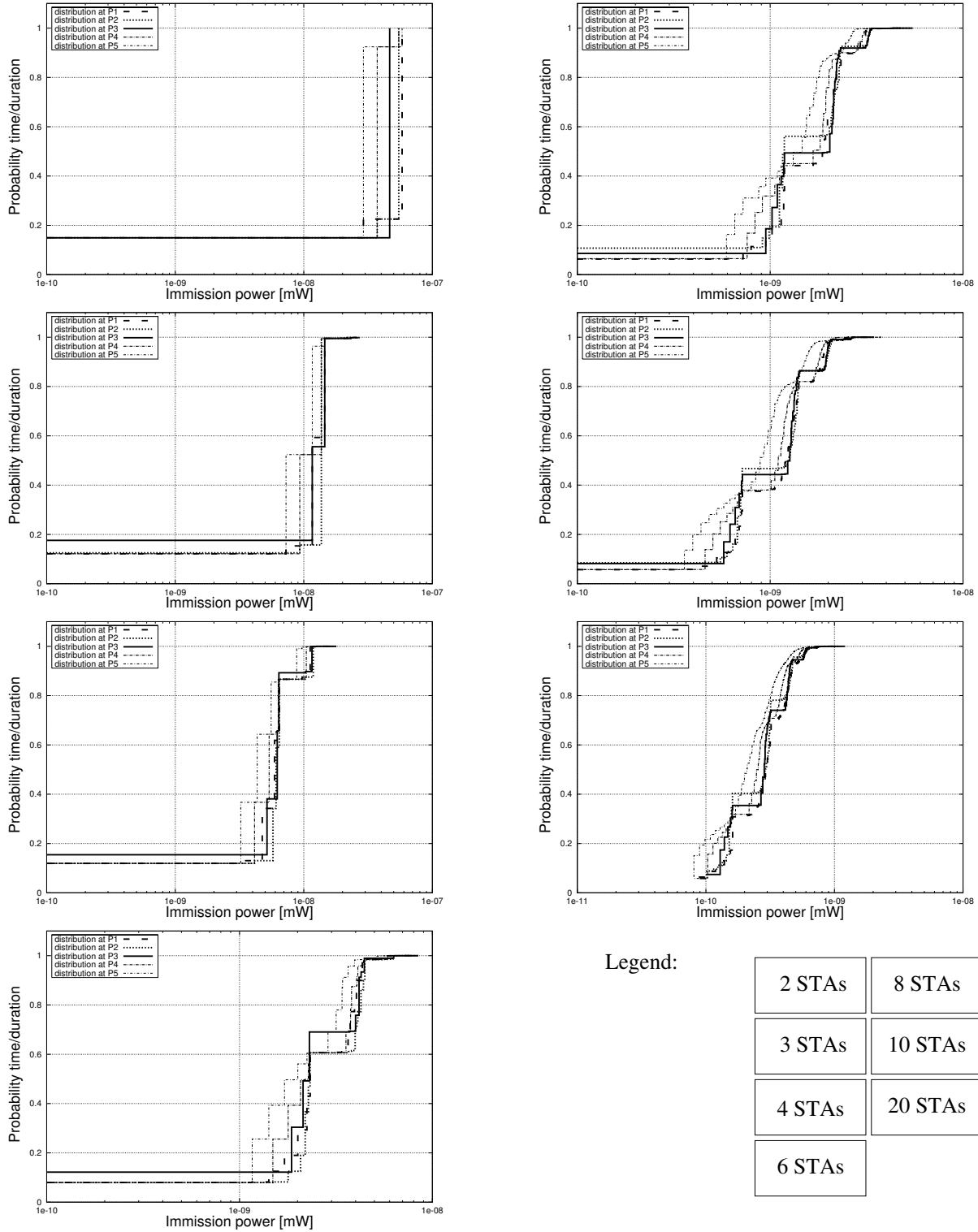


Figure B.1: Statistical distribution: distance - 10m, BER - 10^{-6} , speed - 1 MBit/s

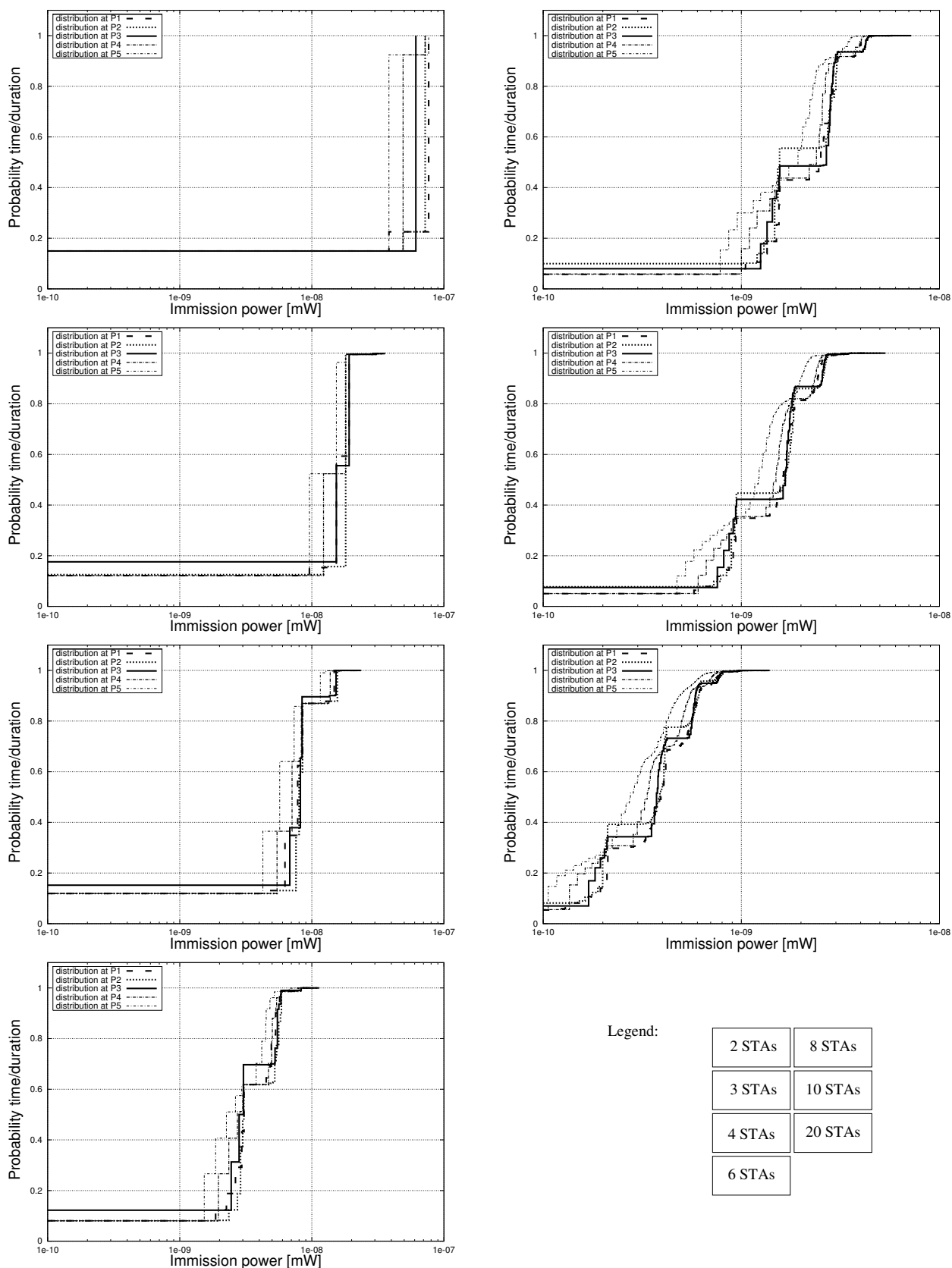


Figure B.2: Statistical distribution: distance - 10m, BER - 10^{-8} , speed - 1 MBit/s

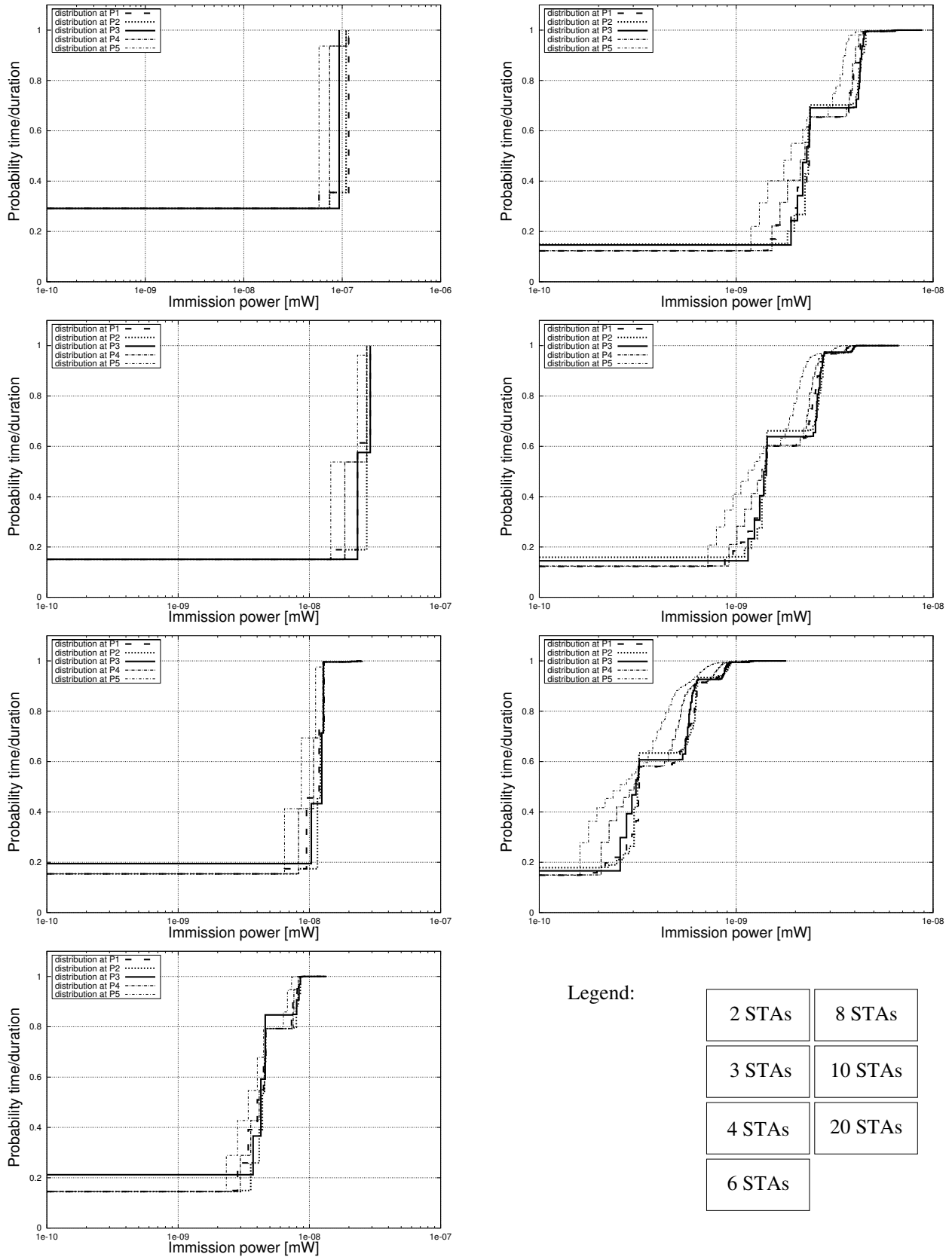


Figure B.3: Statistical distribution: distance - 10m, BER - 10^{-6} , speed - 2 MBit/s

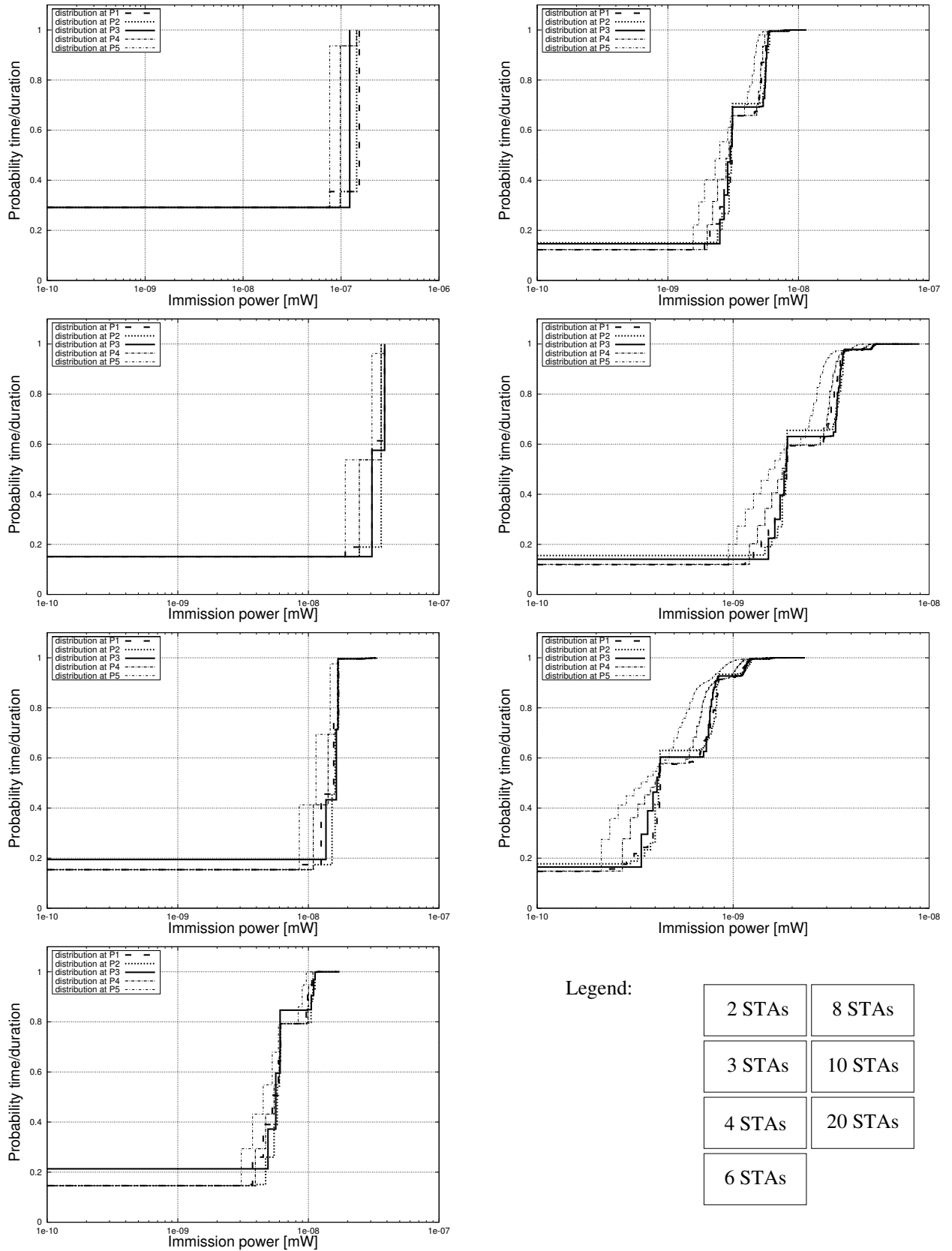


Figure B.4: Statistical distribution: distance - 10m, BER - 10^{-8} , speed - 2 MBit/s

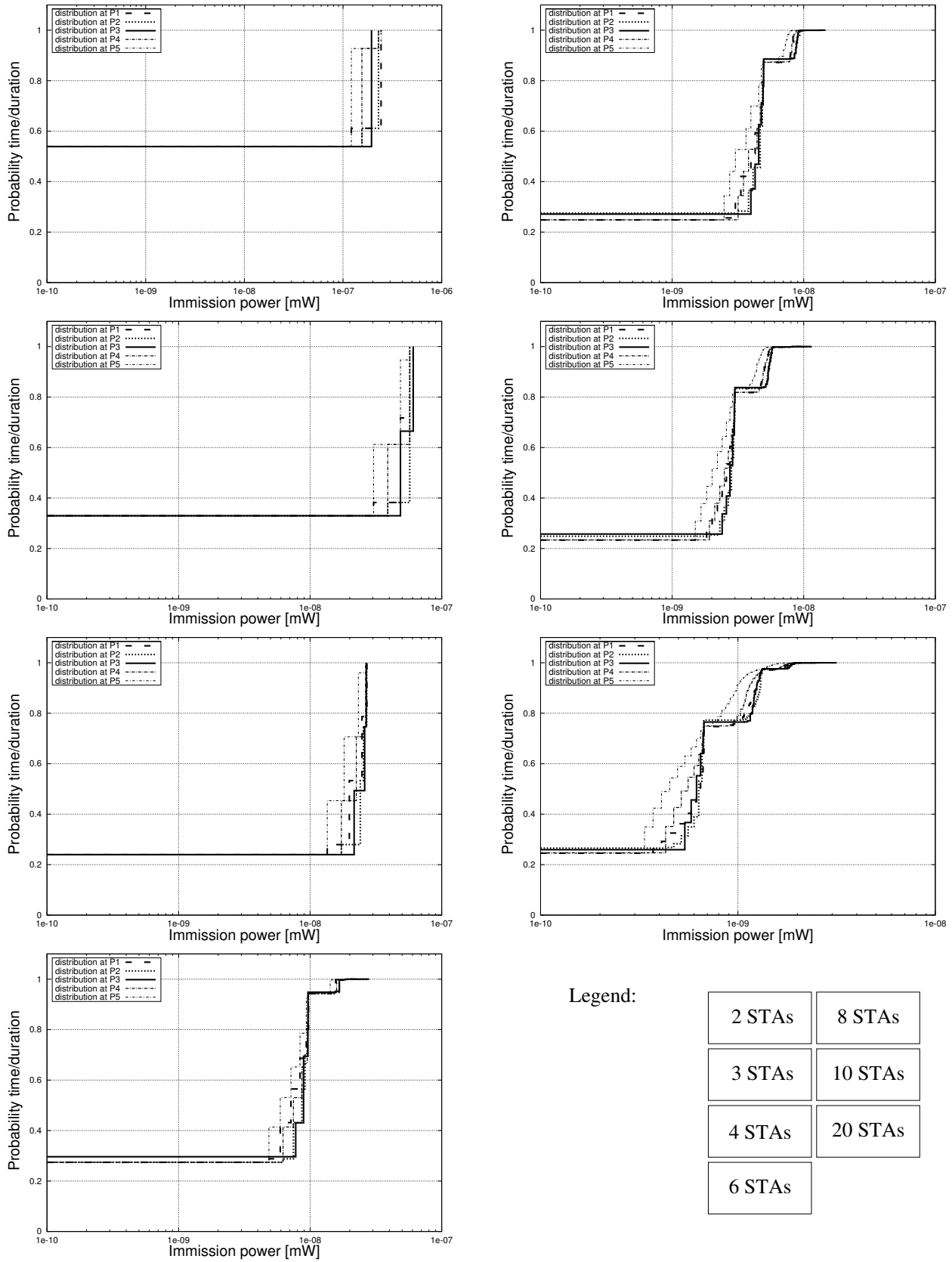


Figure B.5: Statistical distribution: distance - 10m, BER - 10^{-6} , speed - 5.5 MBit/s

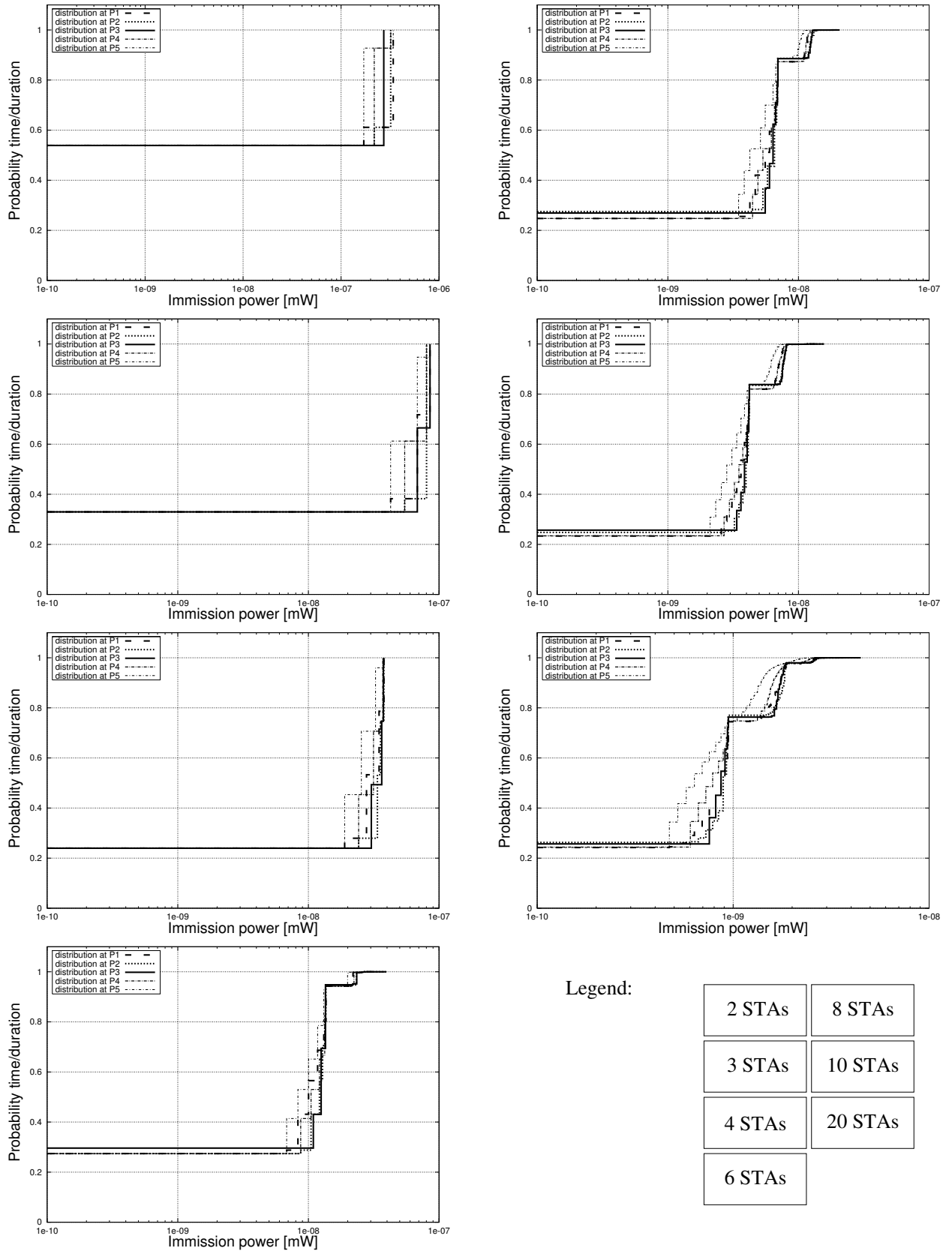


Figure B.6: Statistical distribution: distance - 10m, BER - 10^{-8} , speed - 5.5 MBit/s

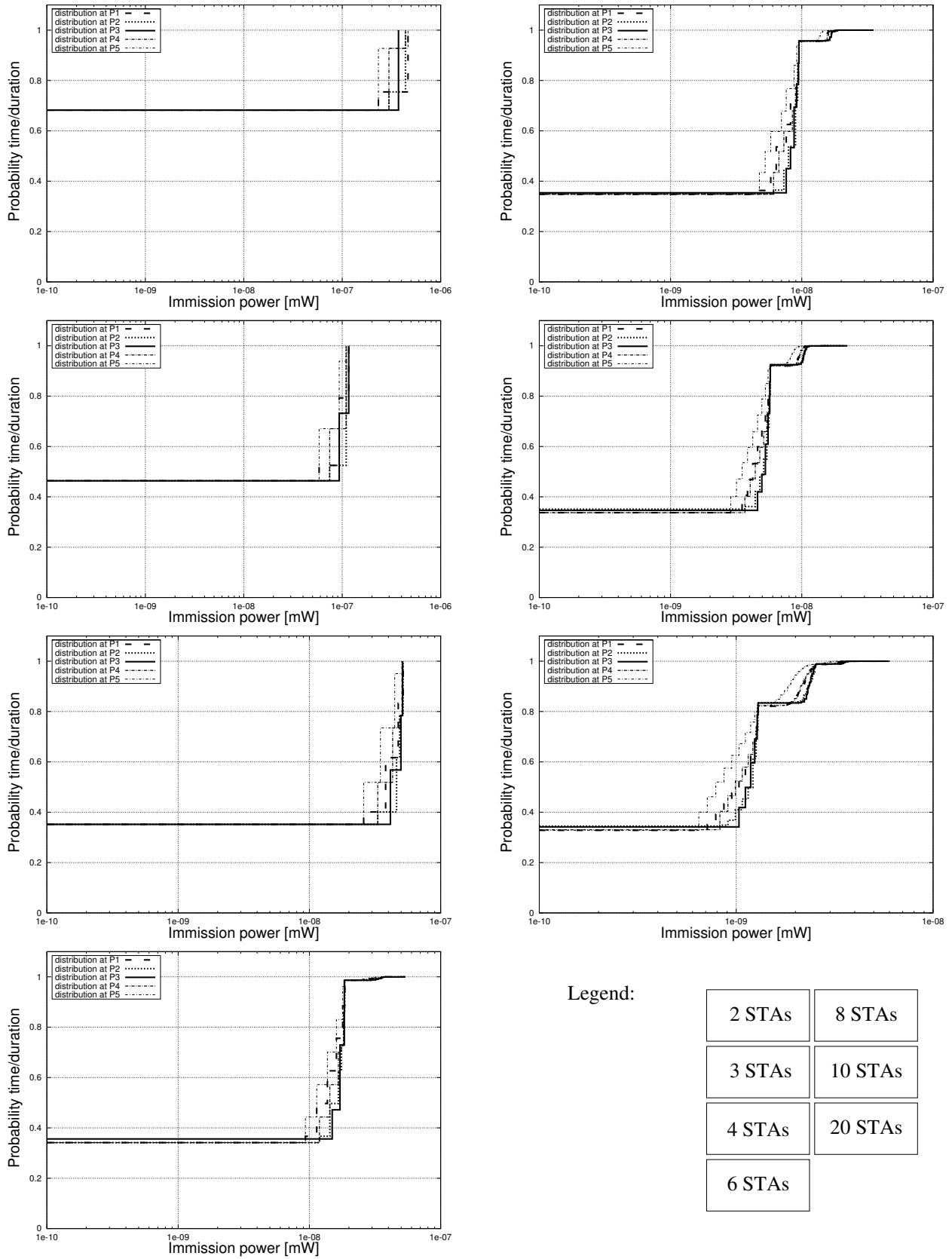


Figure B.7: Statistical distribution: distance - 10m, BER - 10^{-6} , speed - 11 MBit/s

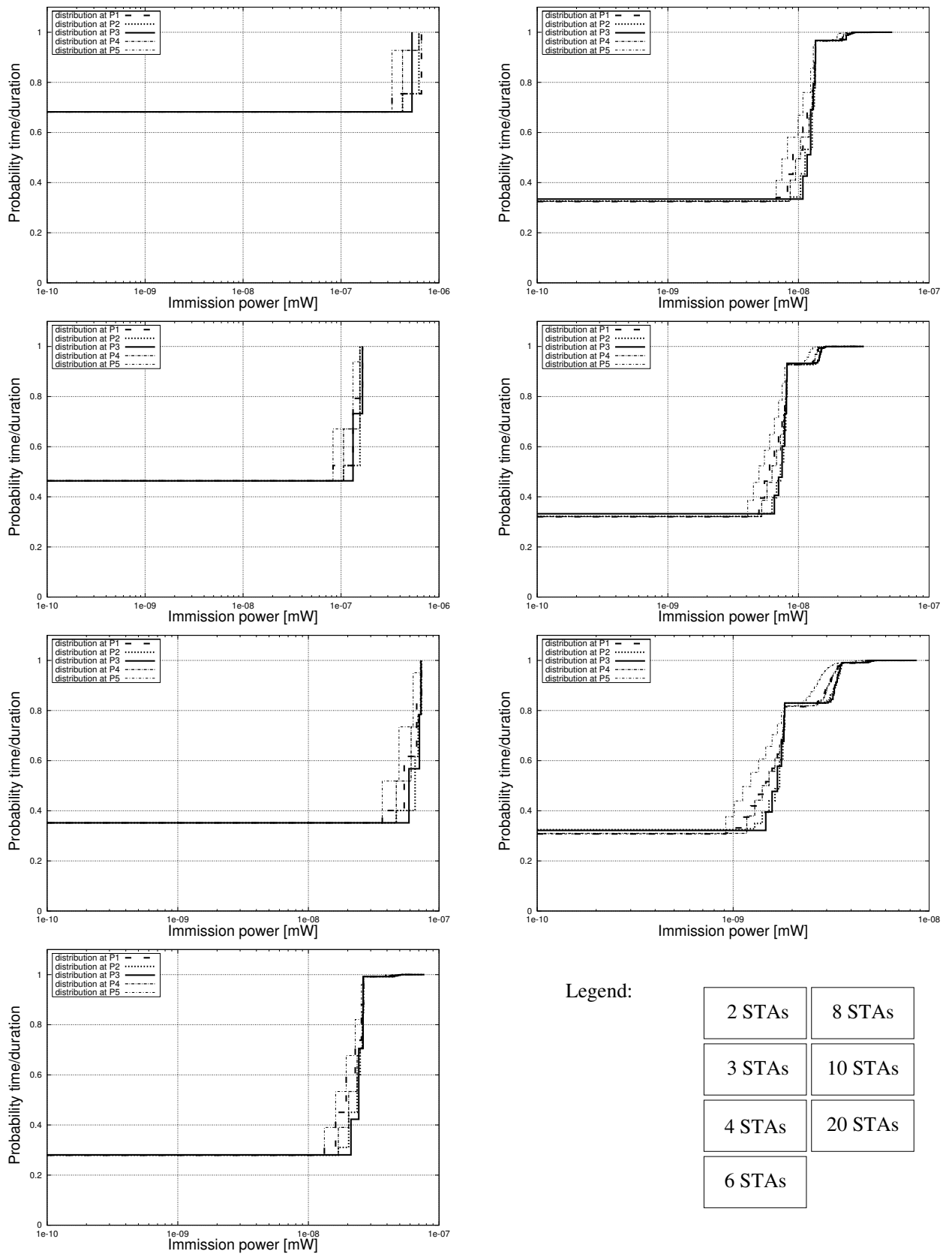


Figure B.8: Statistical distribution: distance - 10m, BER - 10^{-8} , speed - 11 MBit/s

Appendix C

DISTRIBUTION OF THE IMMISSION POWER FOR 50M

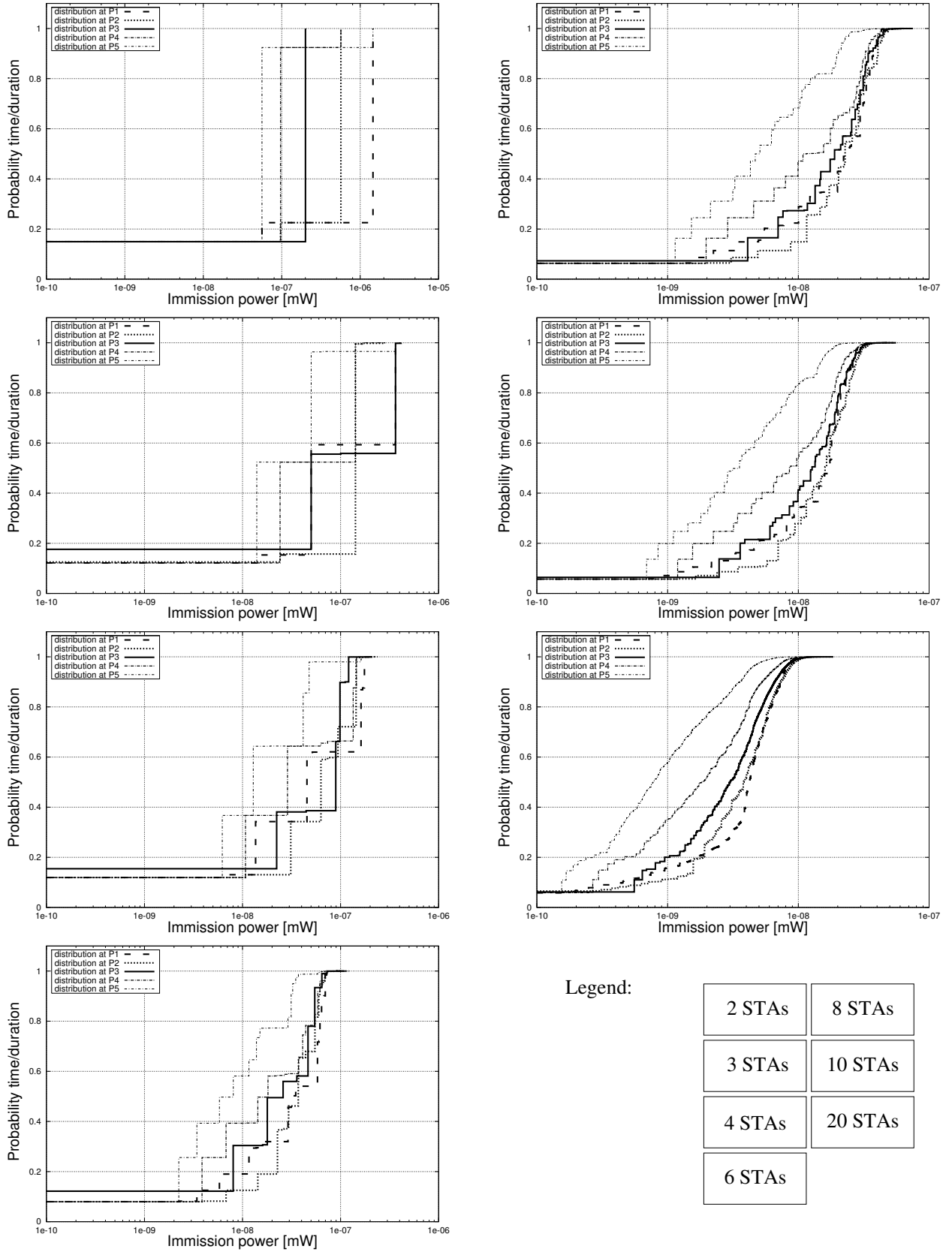


Figure C.1: Statistical distribution: distance - 50m, BER - 10^{-6} , speed - 1 MBit/s

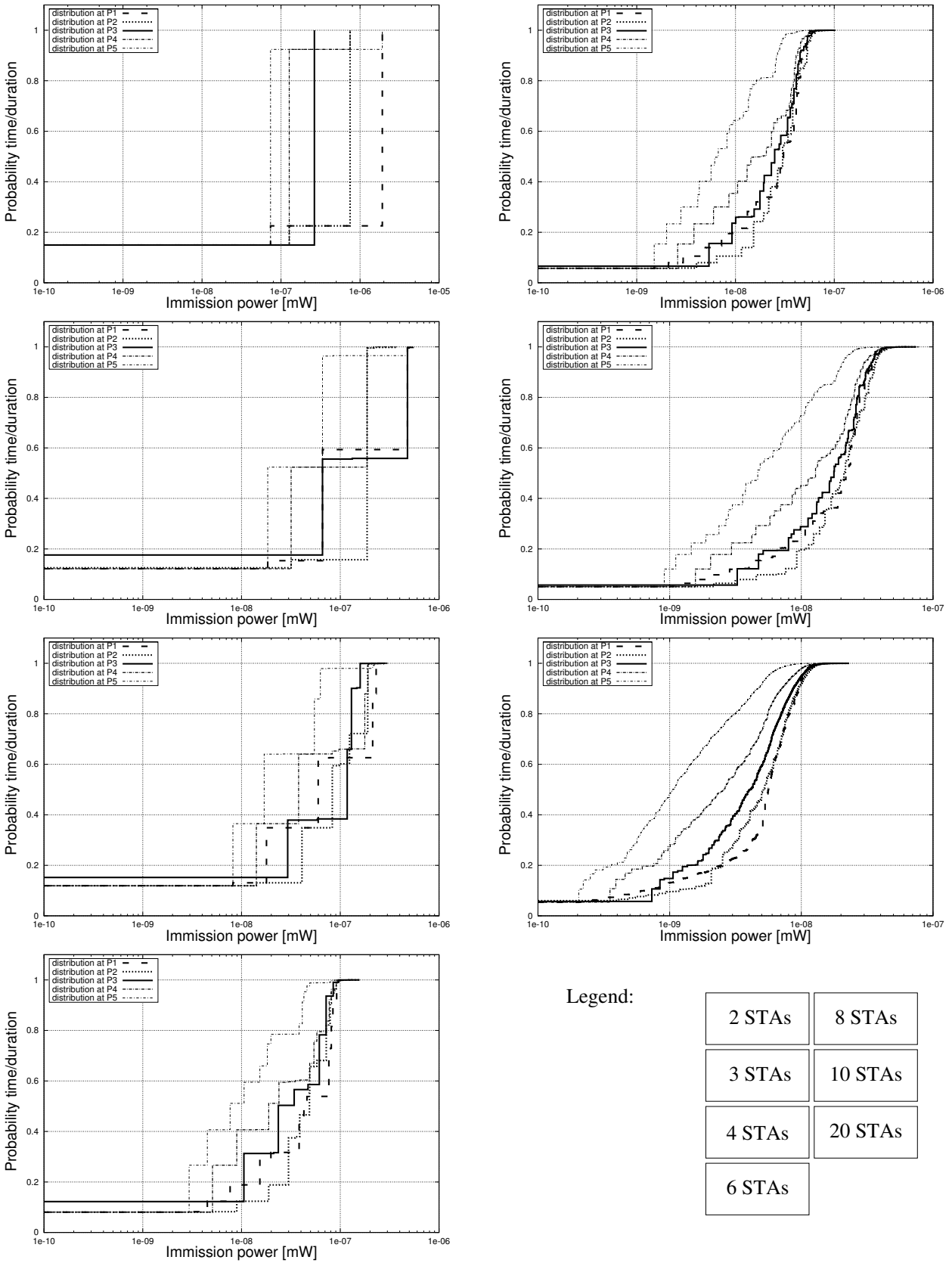


Figure C.2: Statistical distribution: distance - 50m, BER - 10^{-8} , speed - 1 MBit/s

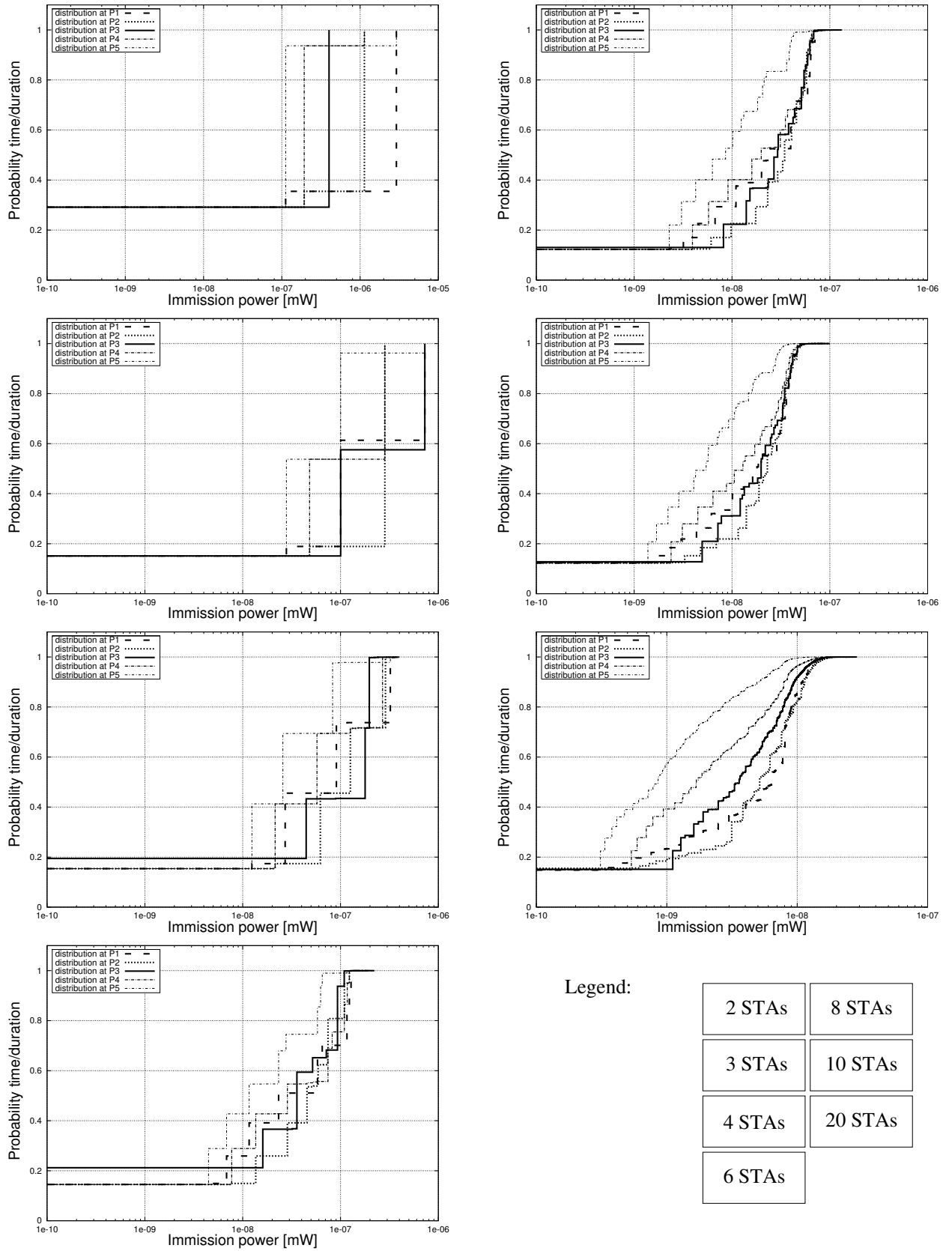


Figure C.3: Statistical distribution: distance - 50m, BER - 10^{-6} , speed - 2 MBit/s

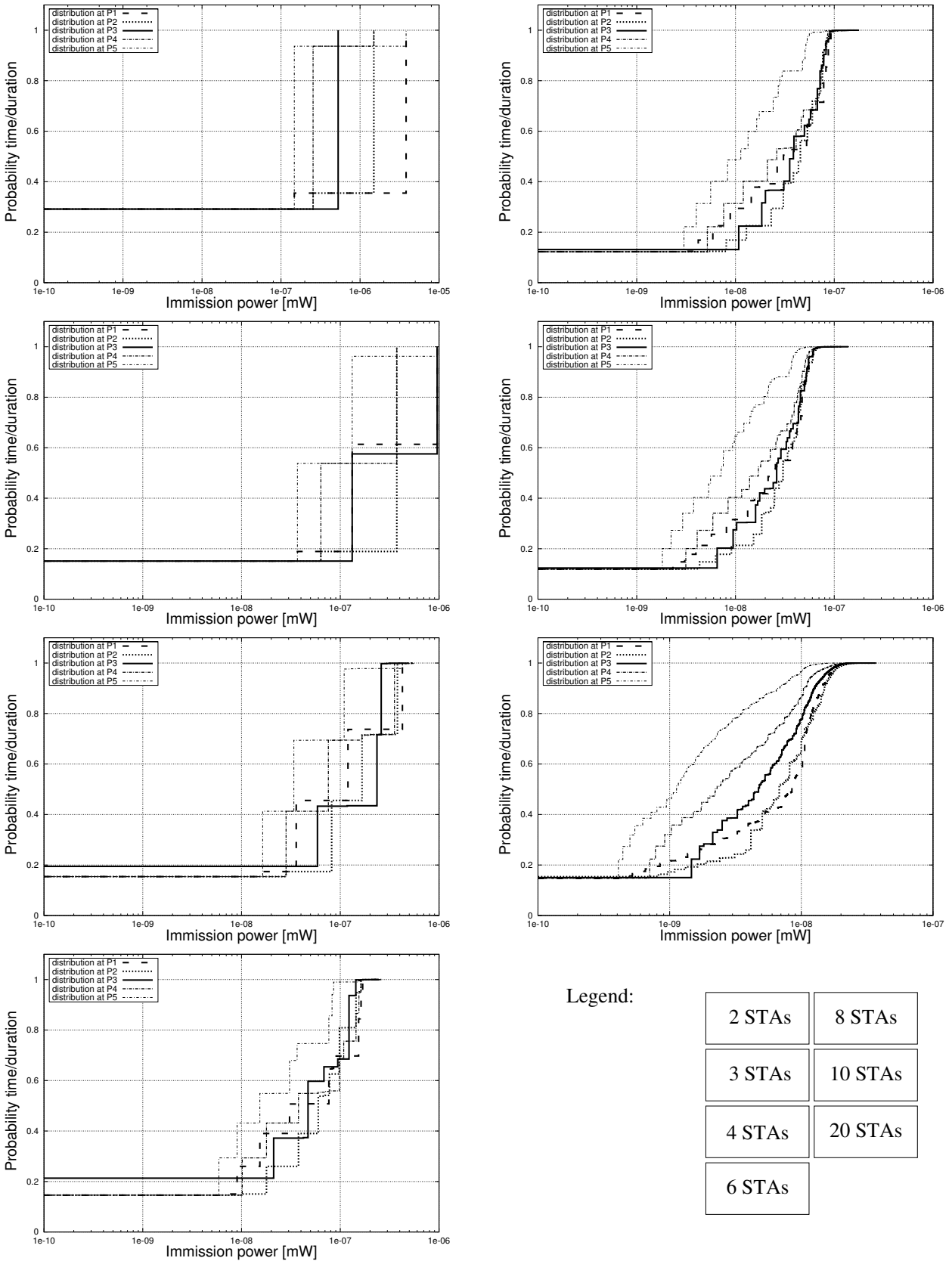


Figure C.4: Statistical distribution: distance - 50m, BER - 10^{-8} , speed - 2 MBit/s

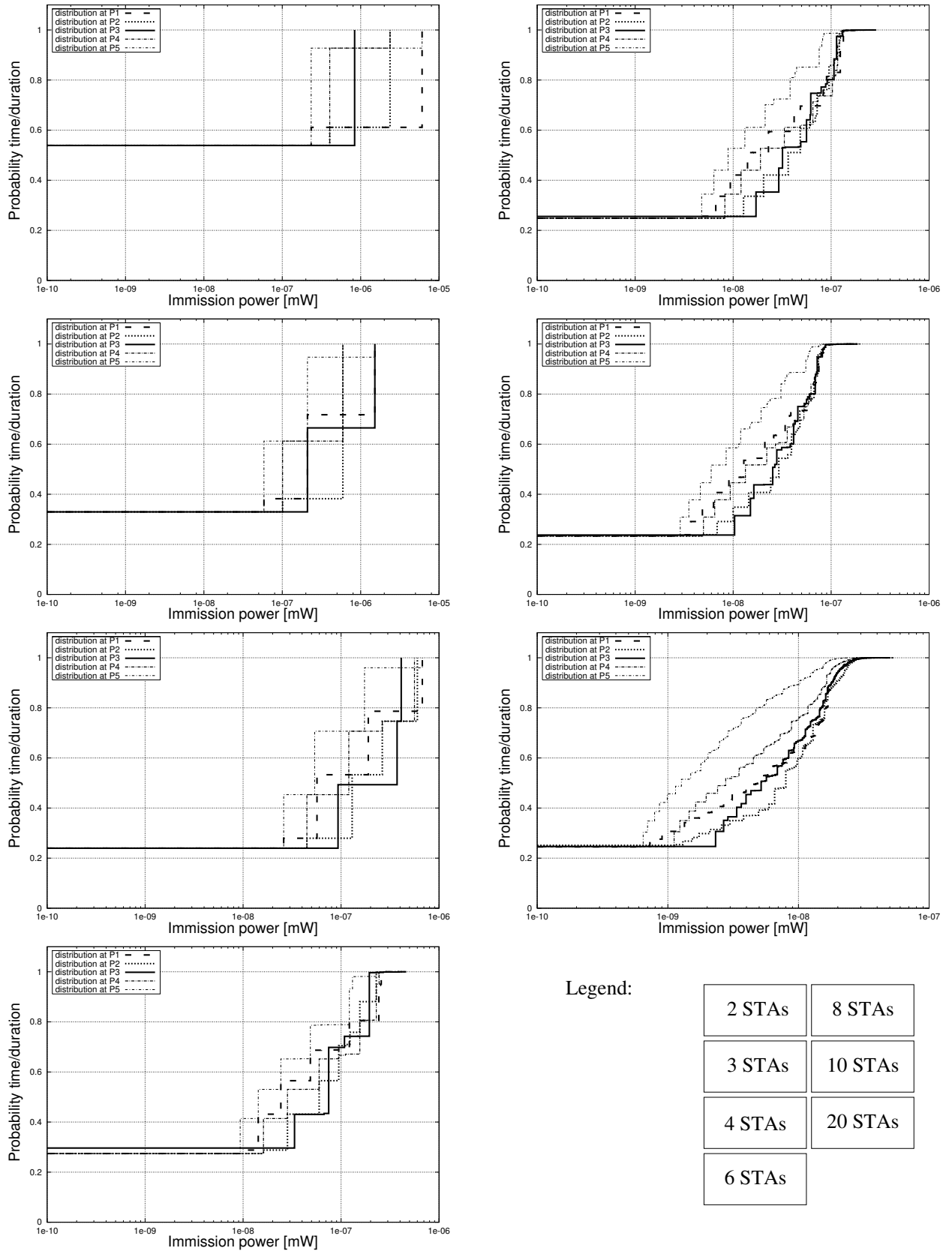


Figure C.5: Statistical distribution: distance - 50m, BER - 10^{-6} , speed - 5.5 MBit/s

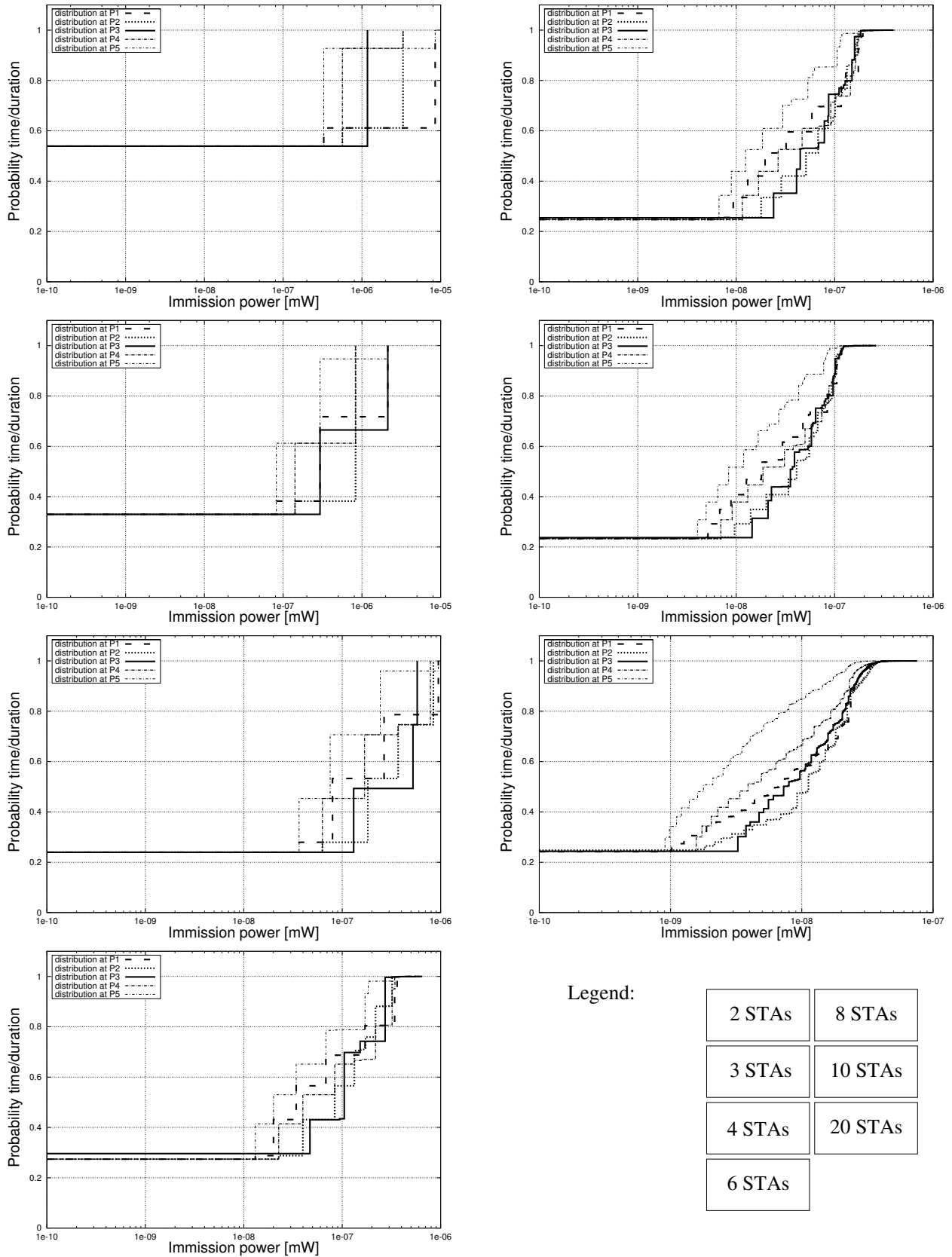


Figure C.6: Statistical distribution: distance - 50m, BER - 10^{-8} , speed - 5.5 MBit/s

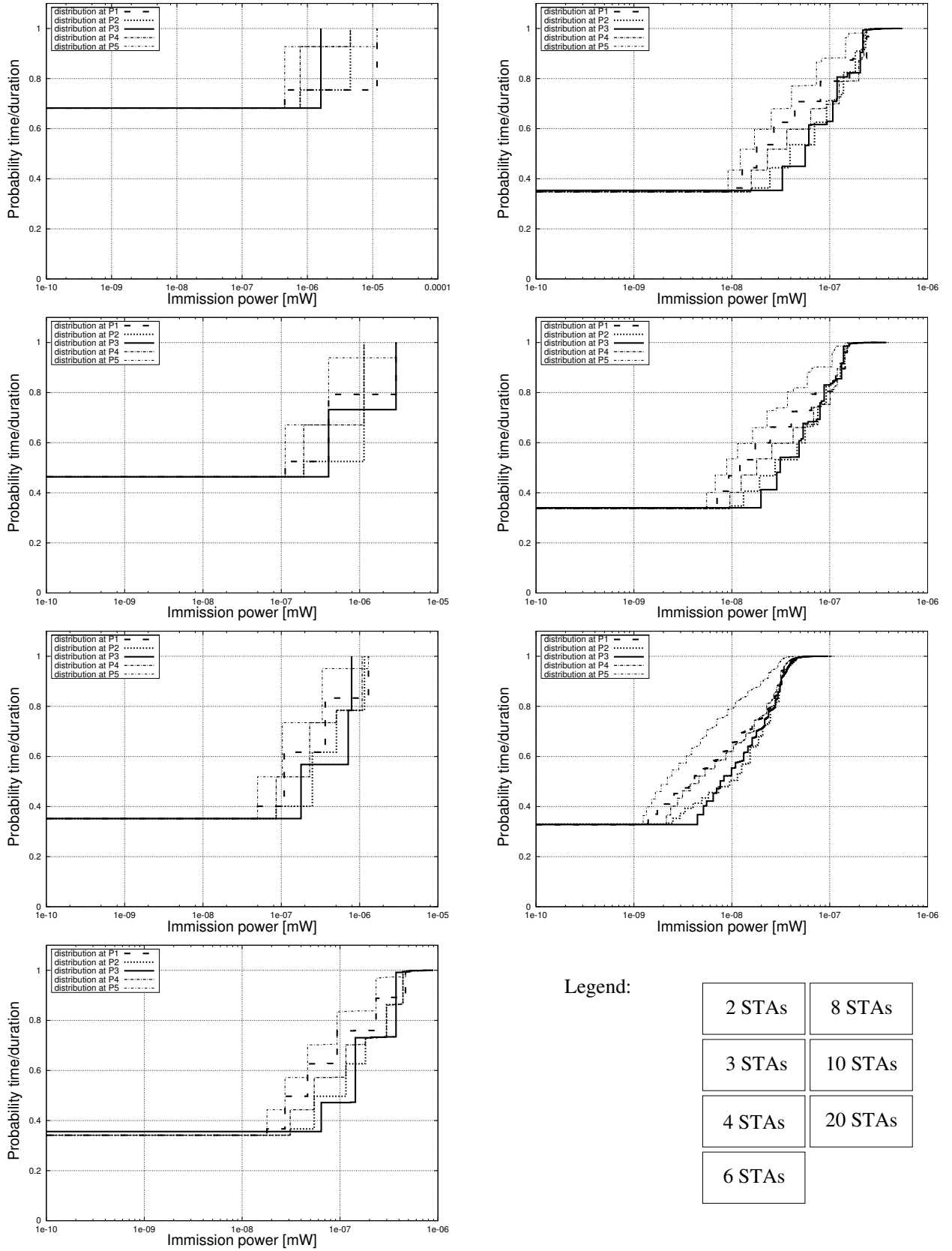


Figure C.7: Statistical distribution: distance - 50m, BER - 10^{-6} , speed - 11 MBit/s

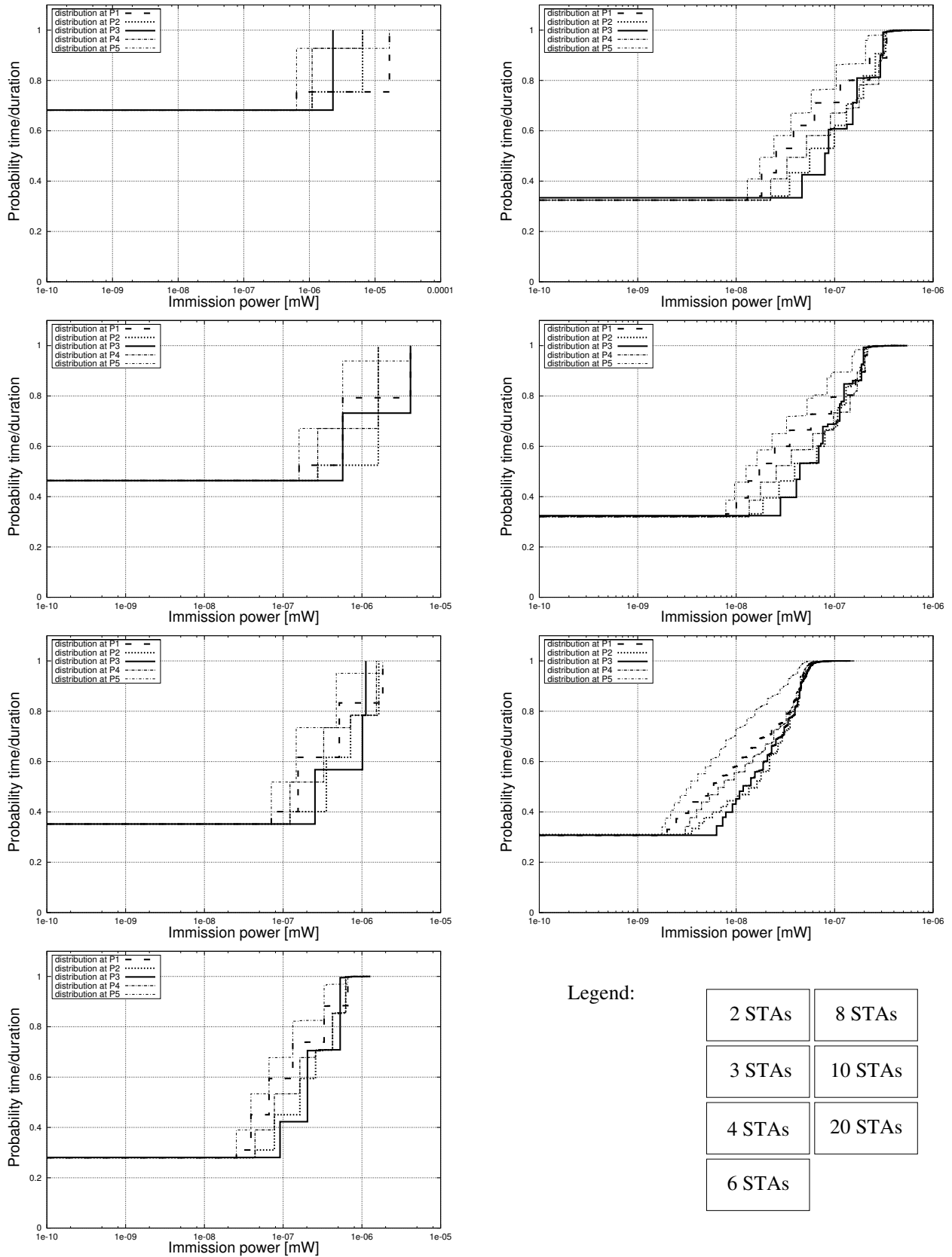


Figure C.8: Statistical distribution: distance - 50m, BER - 10^{-8} , speed - 11 MBit/s

Appendix D

DISTRIBUTION OF THE IMMISSION POWER FOR 100M

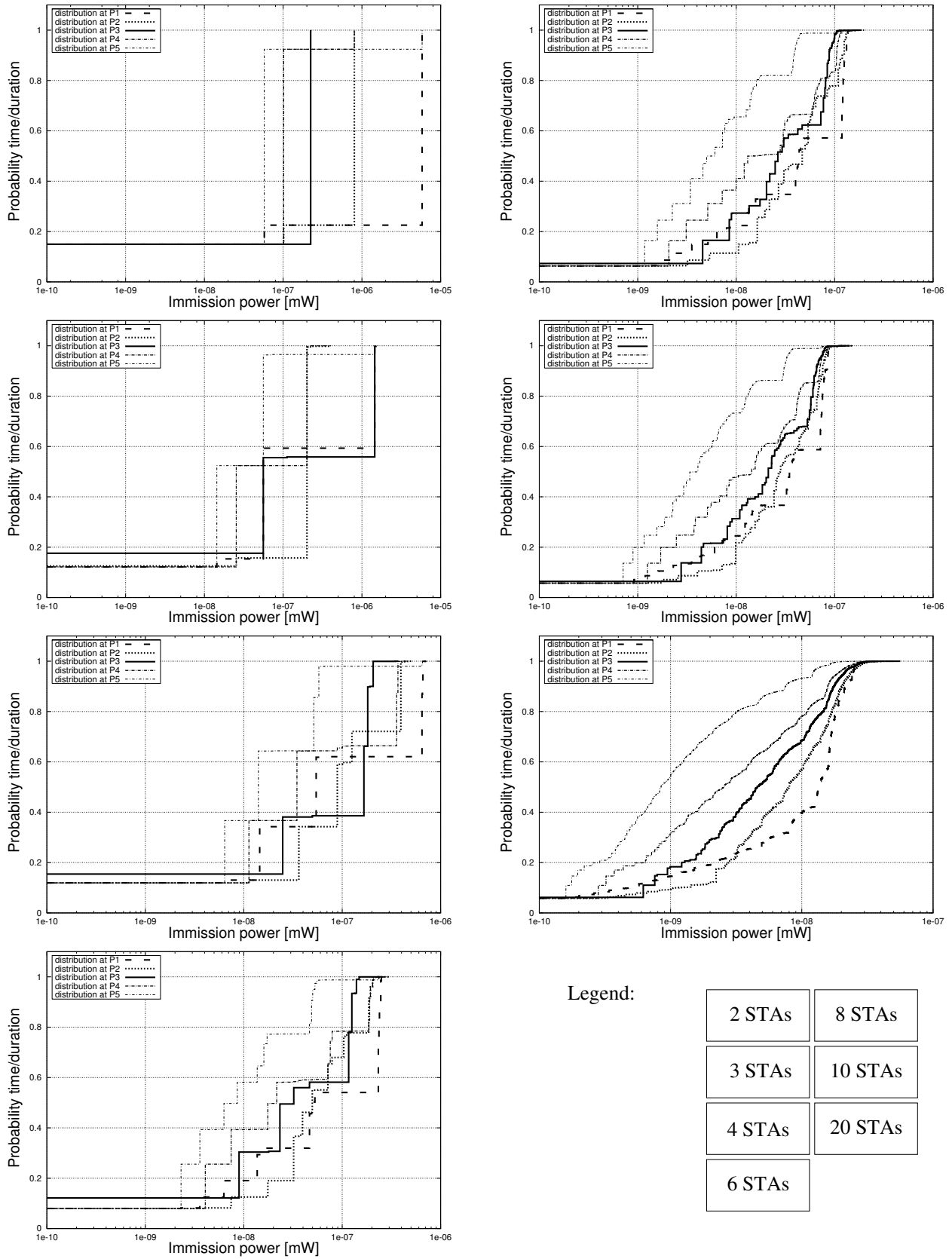


Figure D.1: Statistical distribution: distance - 100m, BER - 10^{-6} , speed - 1 MBit/s

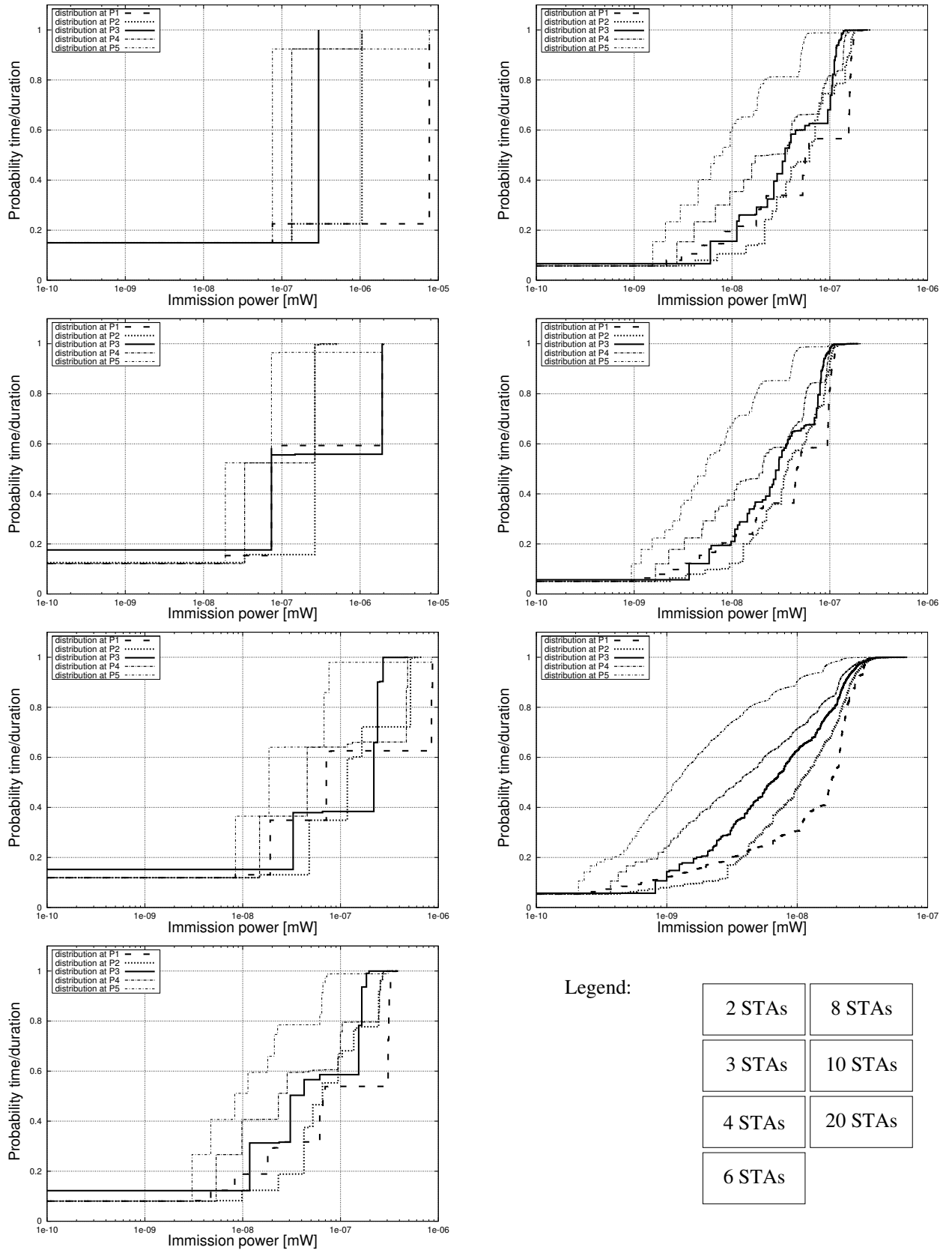


Figure D.2: Statistical distribution: distance - 100m, BER - 10^{-8} , speed - 1 MBit/s

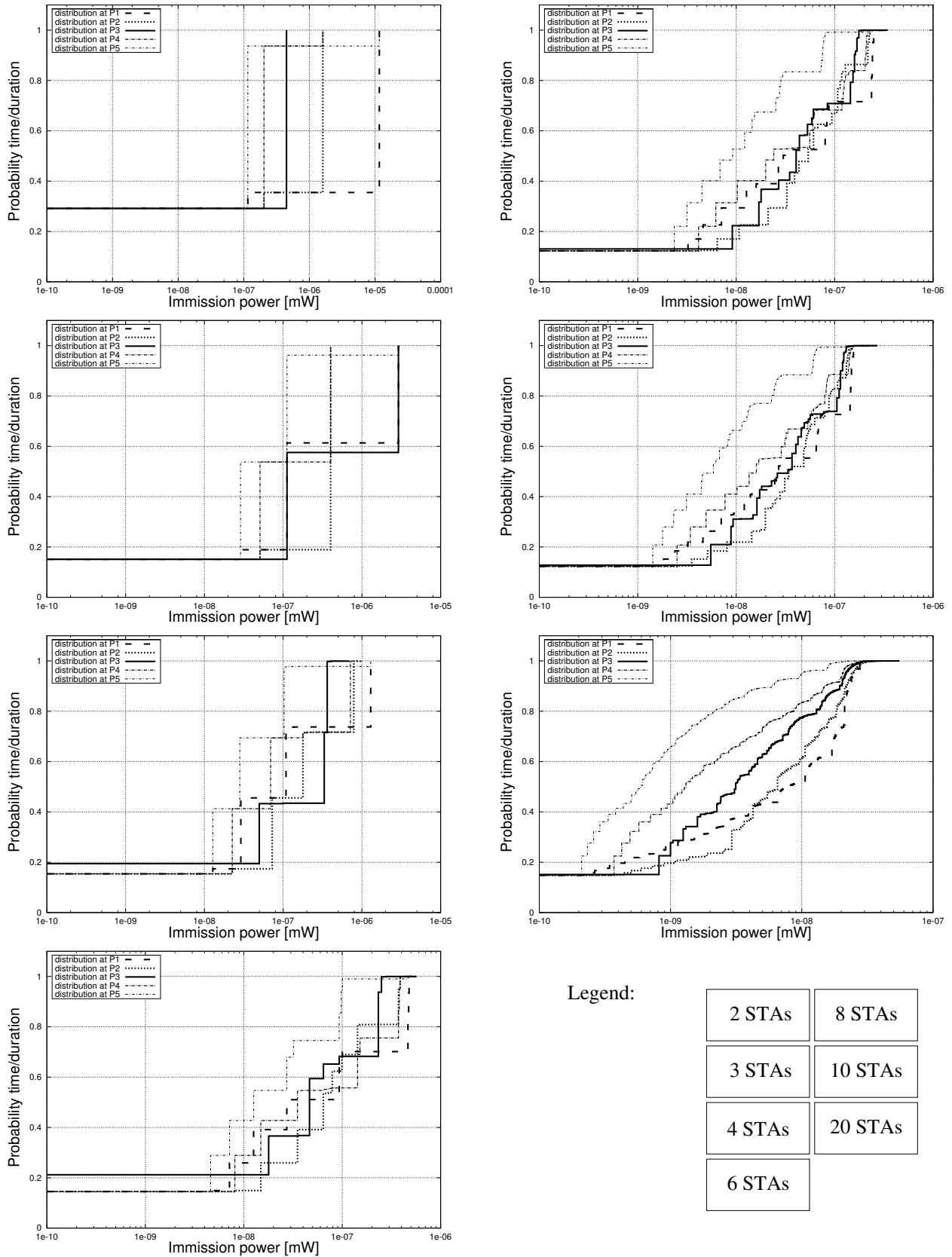


Figure D.3: Statistical distribution: distance - 100m, BER - 10^{-6} , speed - 2 MBit/s

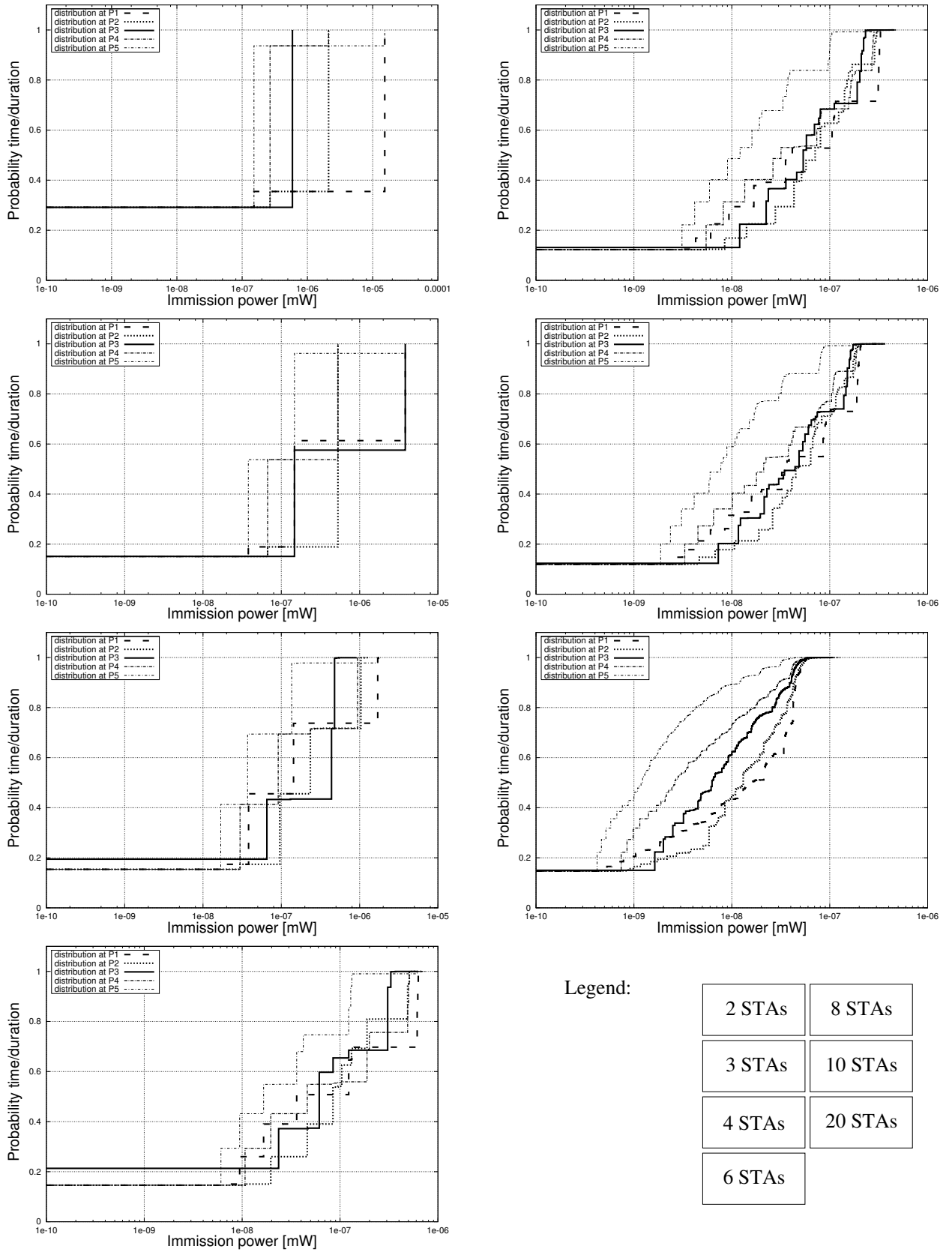


Figure D.4: Statistical distribution: distance - 100m, BER - 10^{-8} , speed - 2 MBit/s

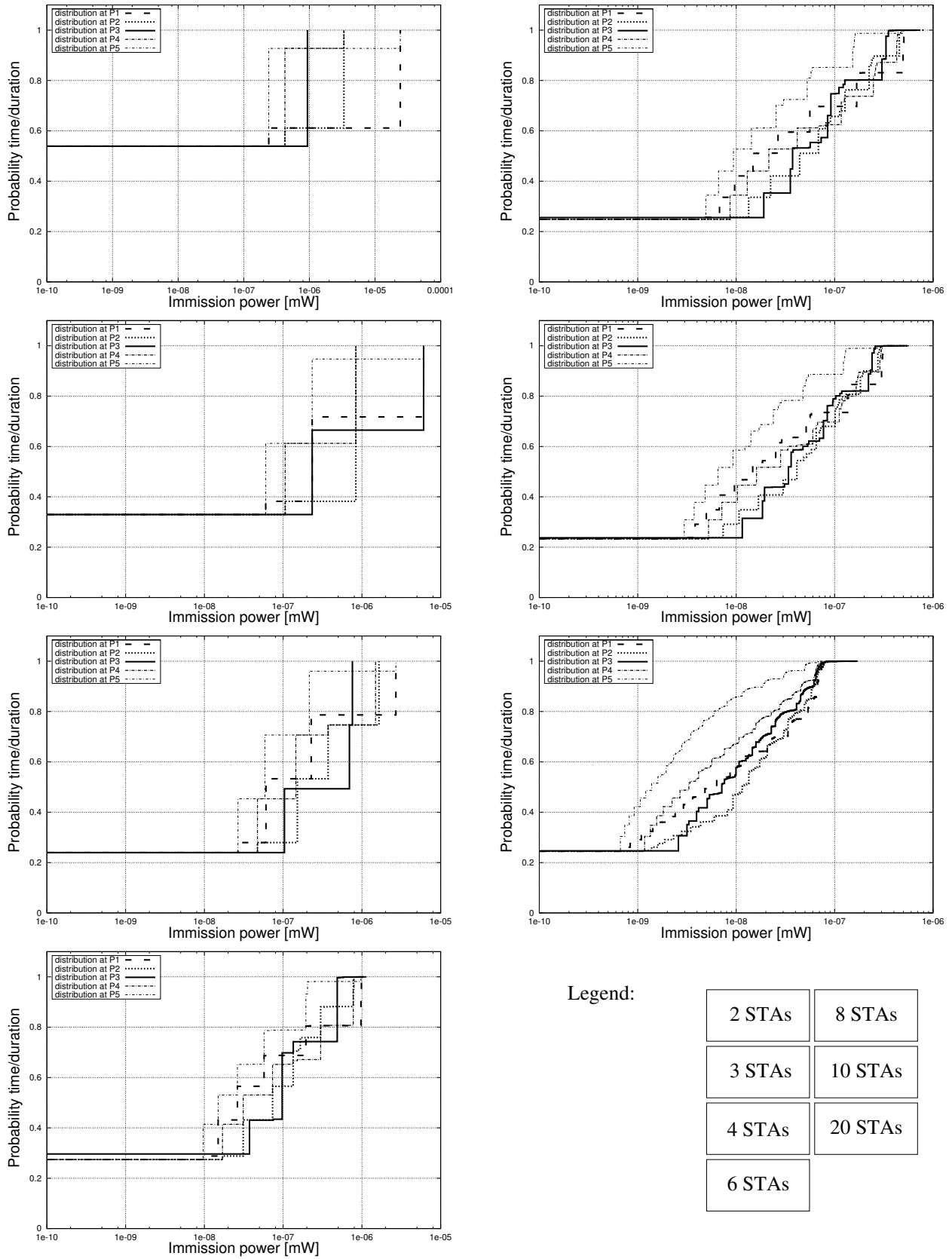


Figure D.5: Statistical distribution: distance - 100m, BER - 10^{-6} , speed - 5.5 MBit/s

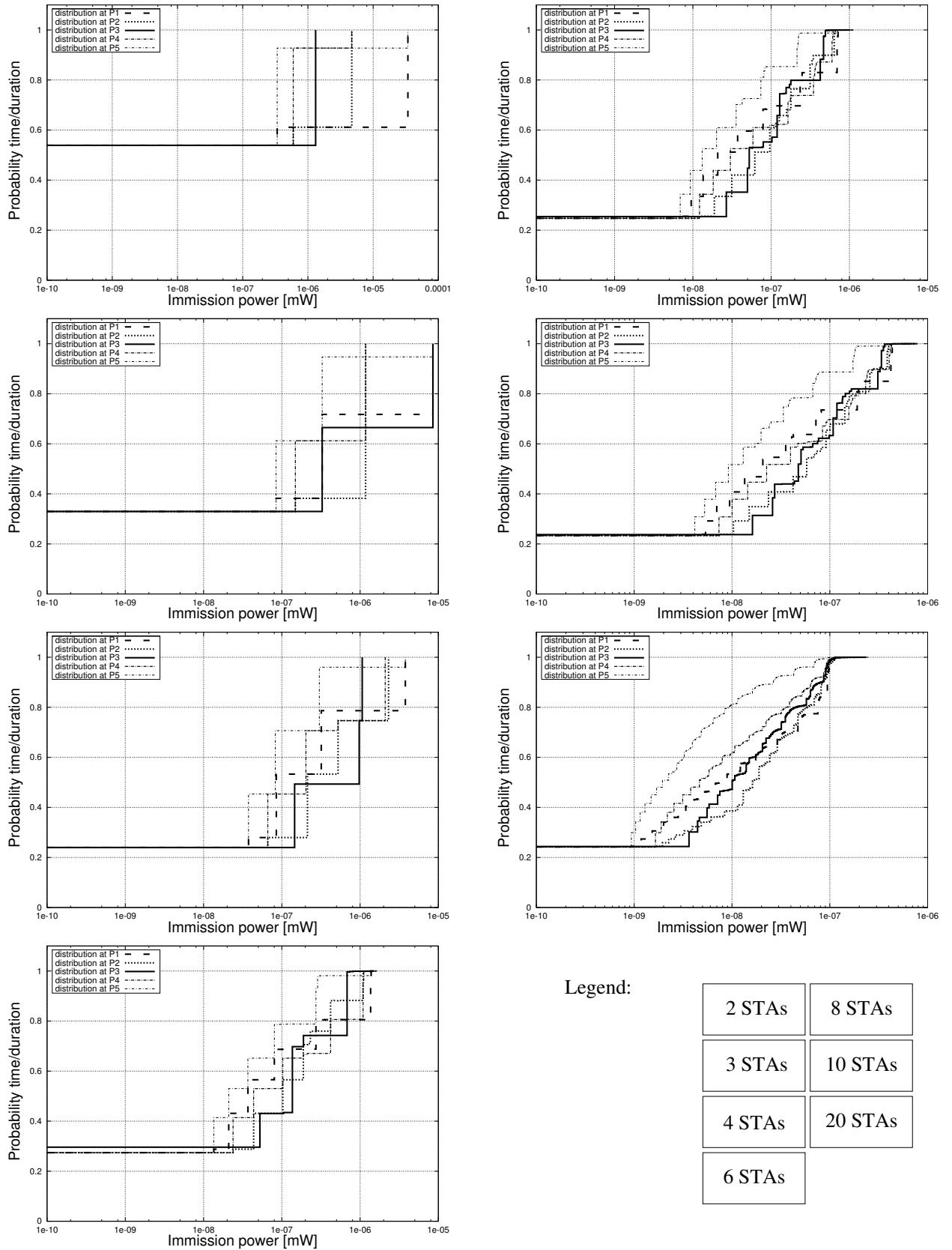


Figure D.6: Statistical distribution: distance - 100m, BER - 10^{-8} , speed - 5.5 MBit/s

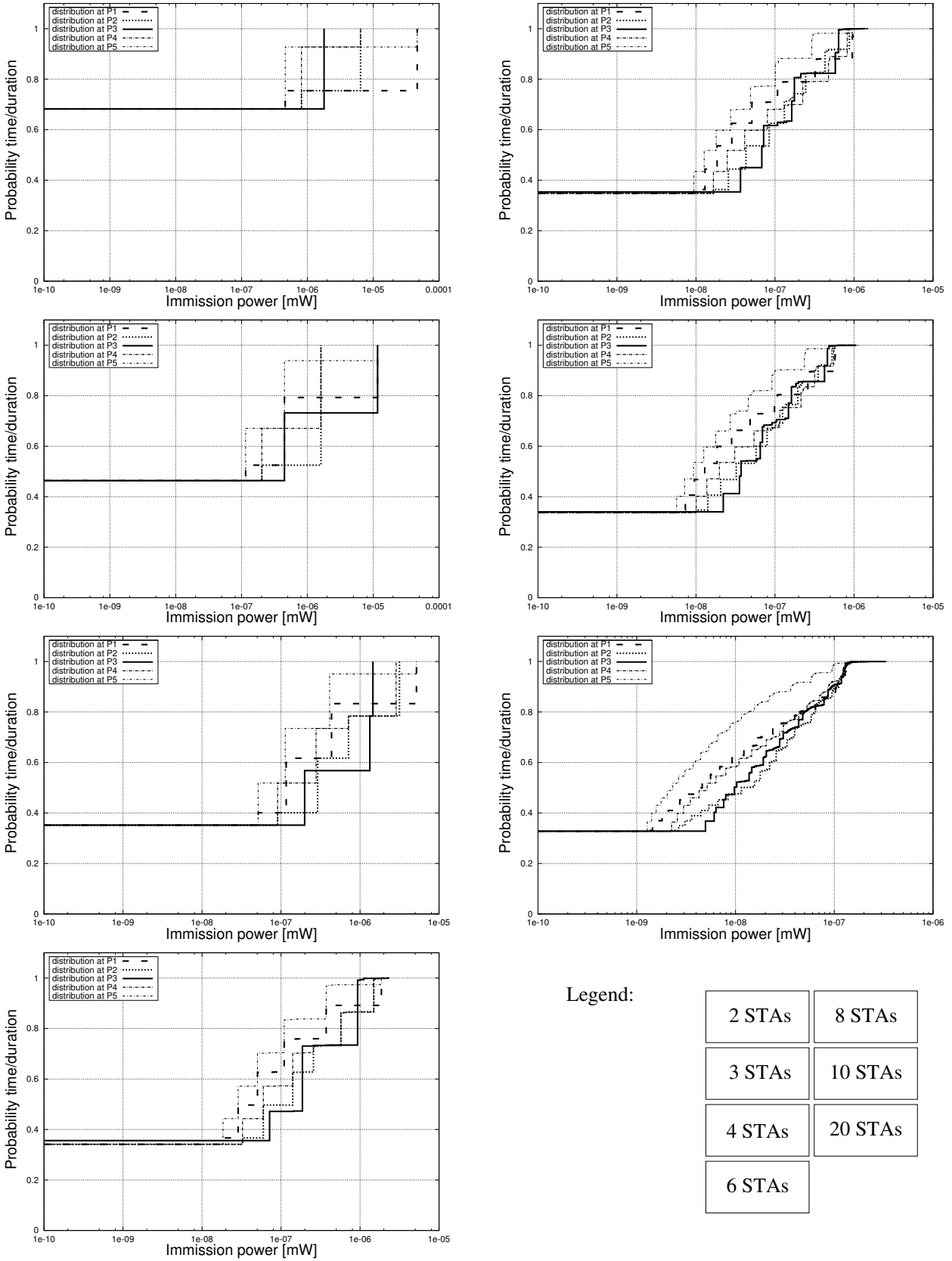


Figure D.7: Statistical distribution: distance - 100m, BER - 10^{-6} , speed - 11 MBit/s

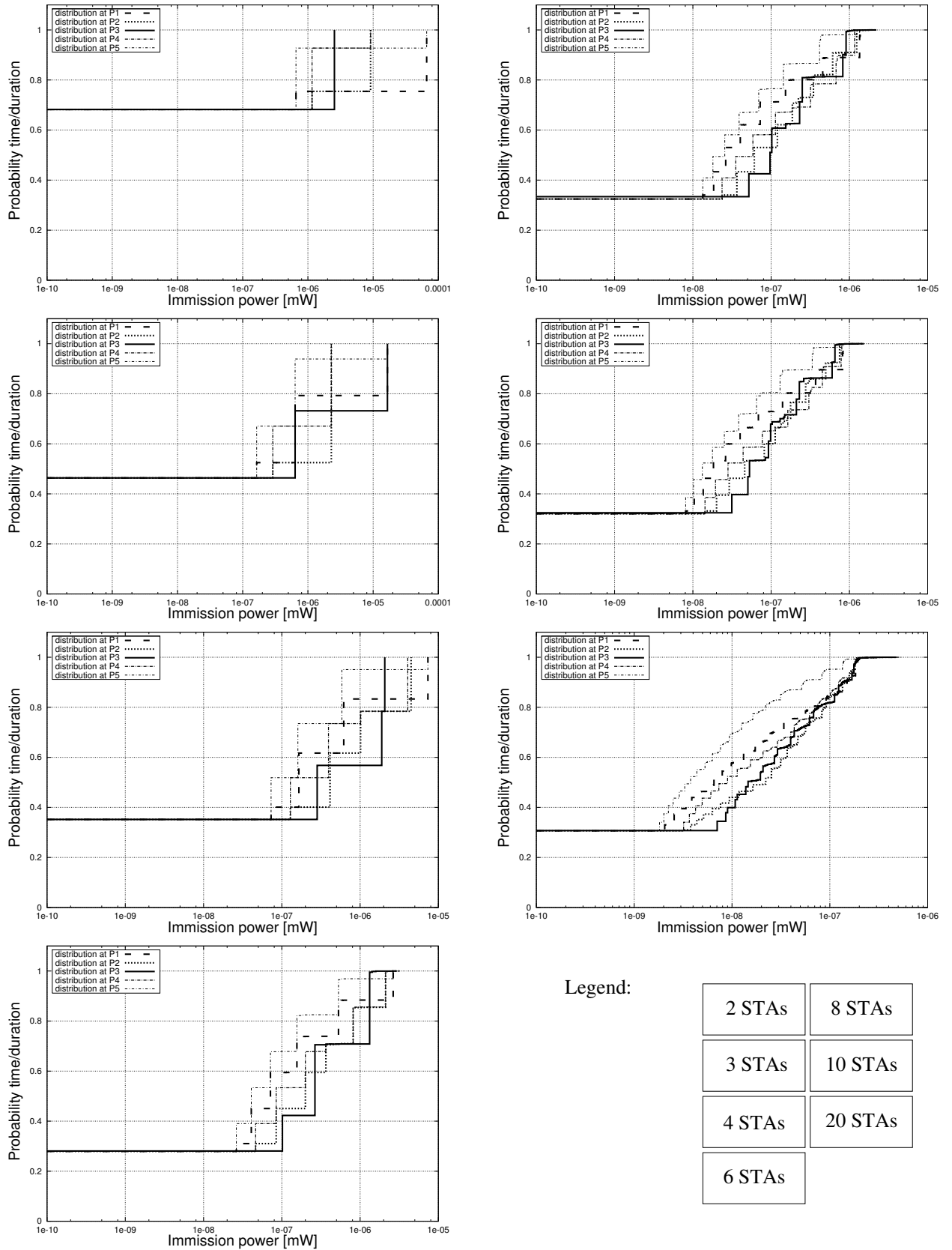


Figure D.8: Statistical distribution: distance - 100m, BER - 10^{-8} , speed - 11 MBit/s

Appendix E

DISTRIBUTION OF THE IMMISSION POWER FOR 500M

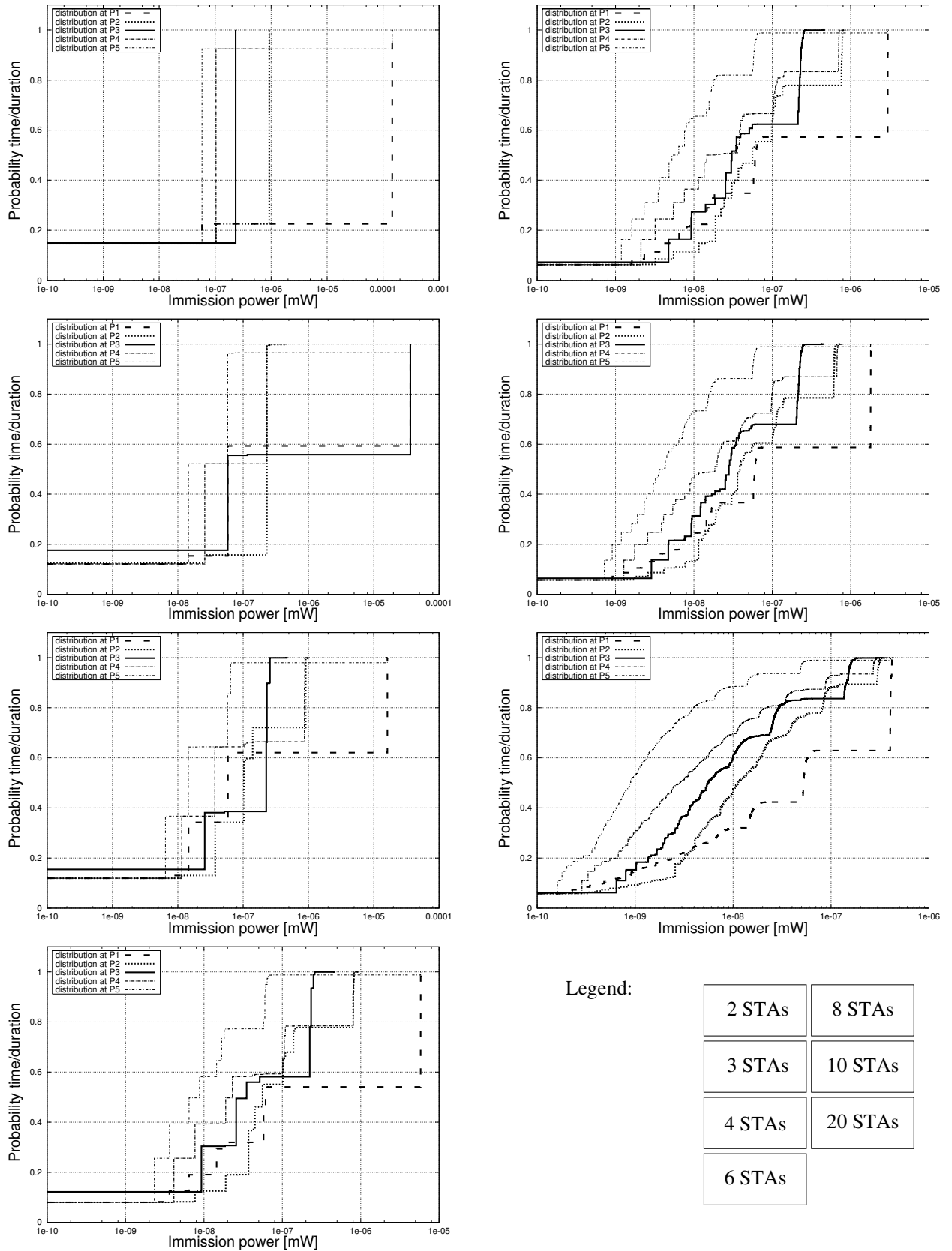


Figure E.1: Statistical distribution: distance - 500m, BER - 10^{-6} , speed - 1 MBit/s

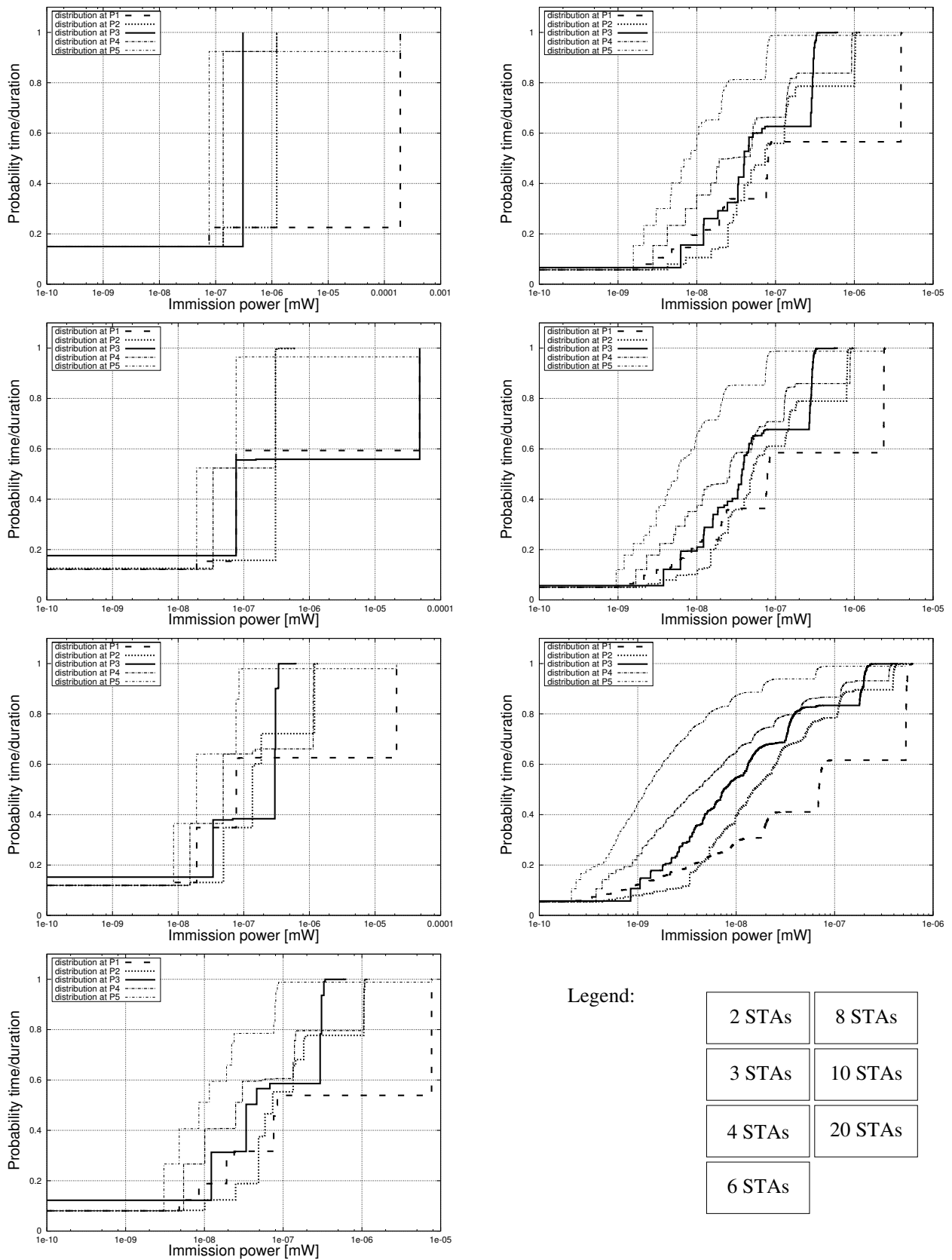


Figure E.2: Statistical distribution: distance - 500m, BER - 10^{-8} , speed - 1 MBit/s

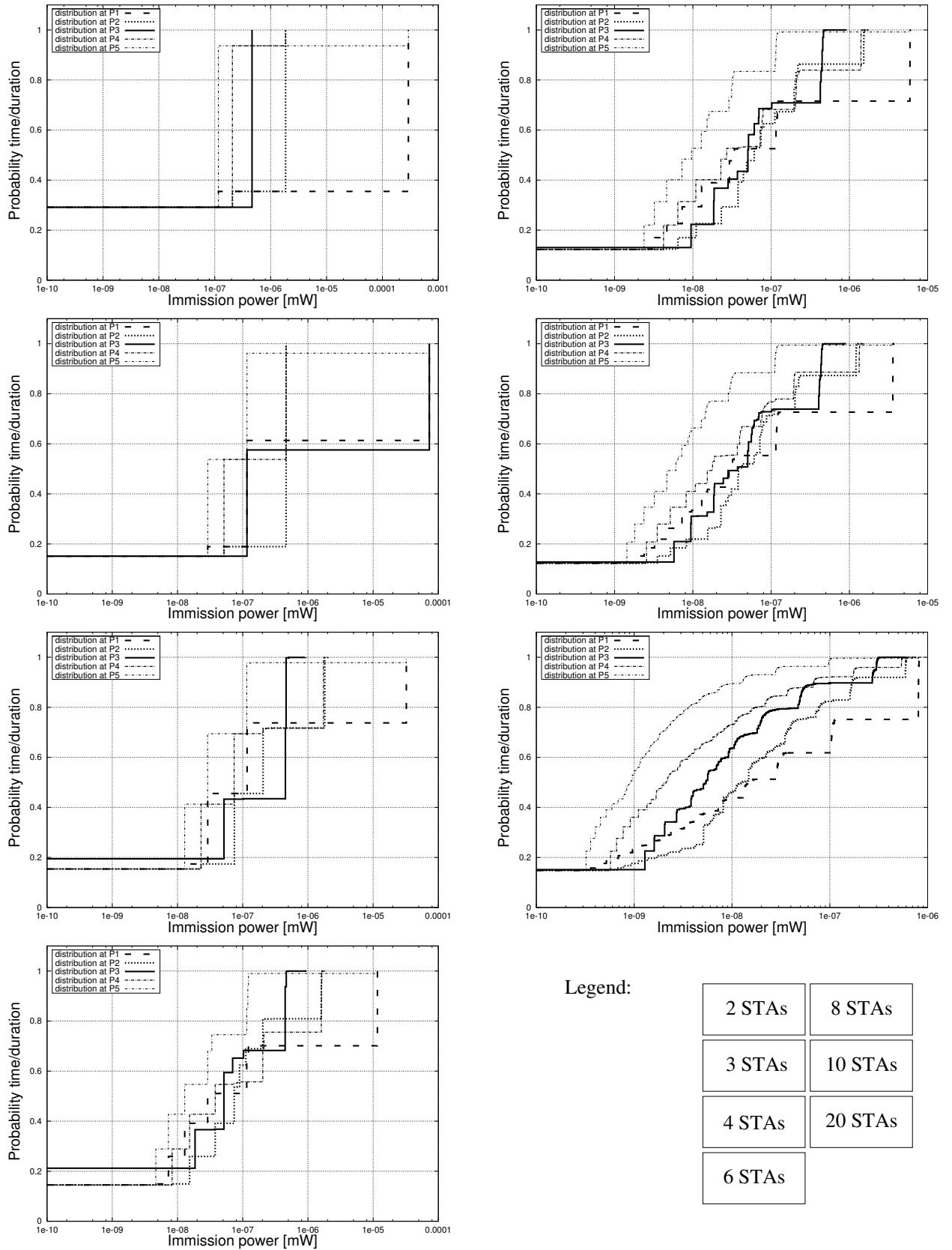


Figure E.3: Statistical distribution: distance - 500m, BER - 10^{-6} , speed - 2 MBit/s

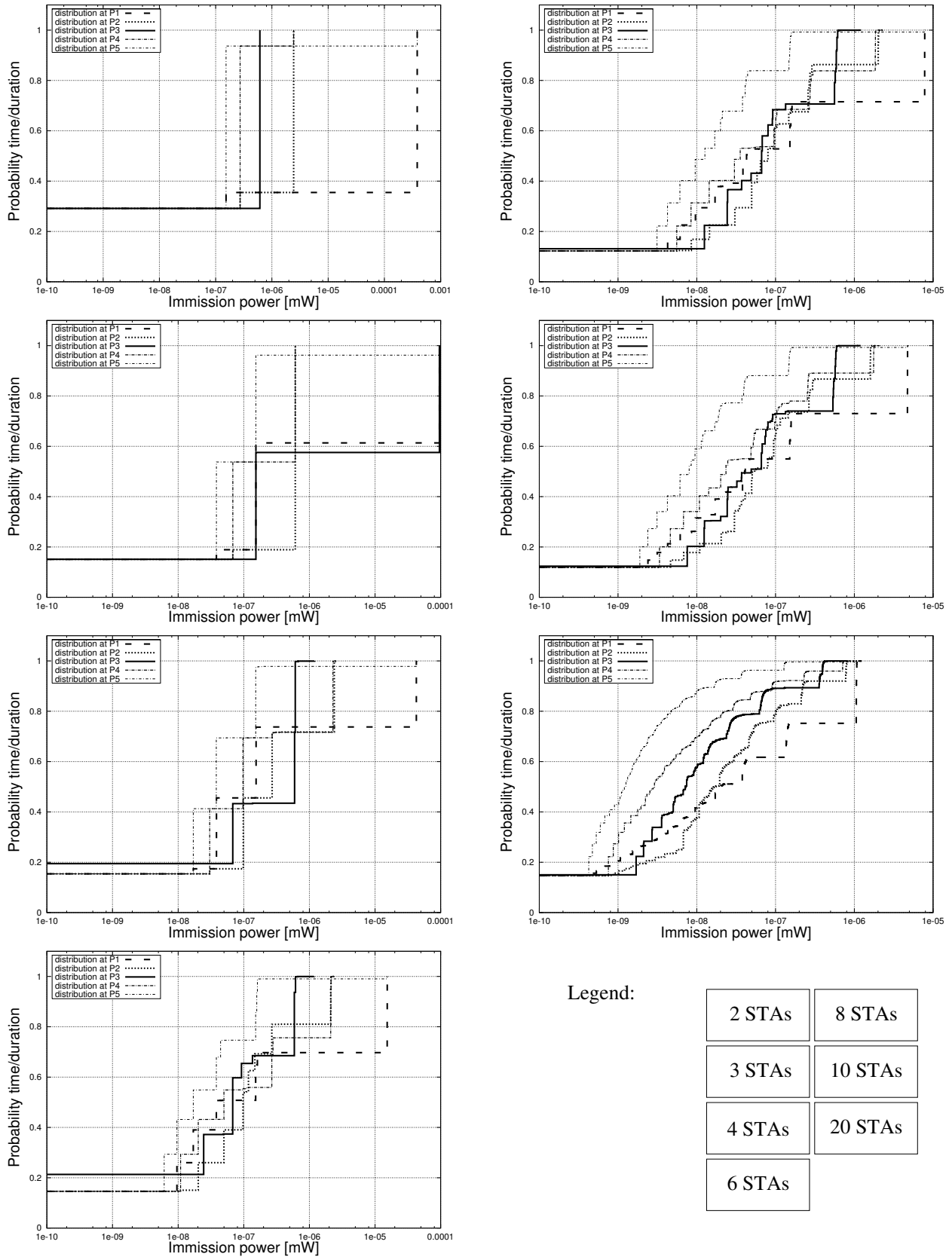


Figure E.4: Statistical distribution: distance - 500m, BER - 10^{-8} , speed - 2 MBit/s

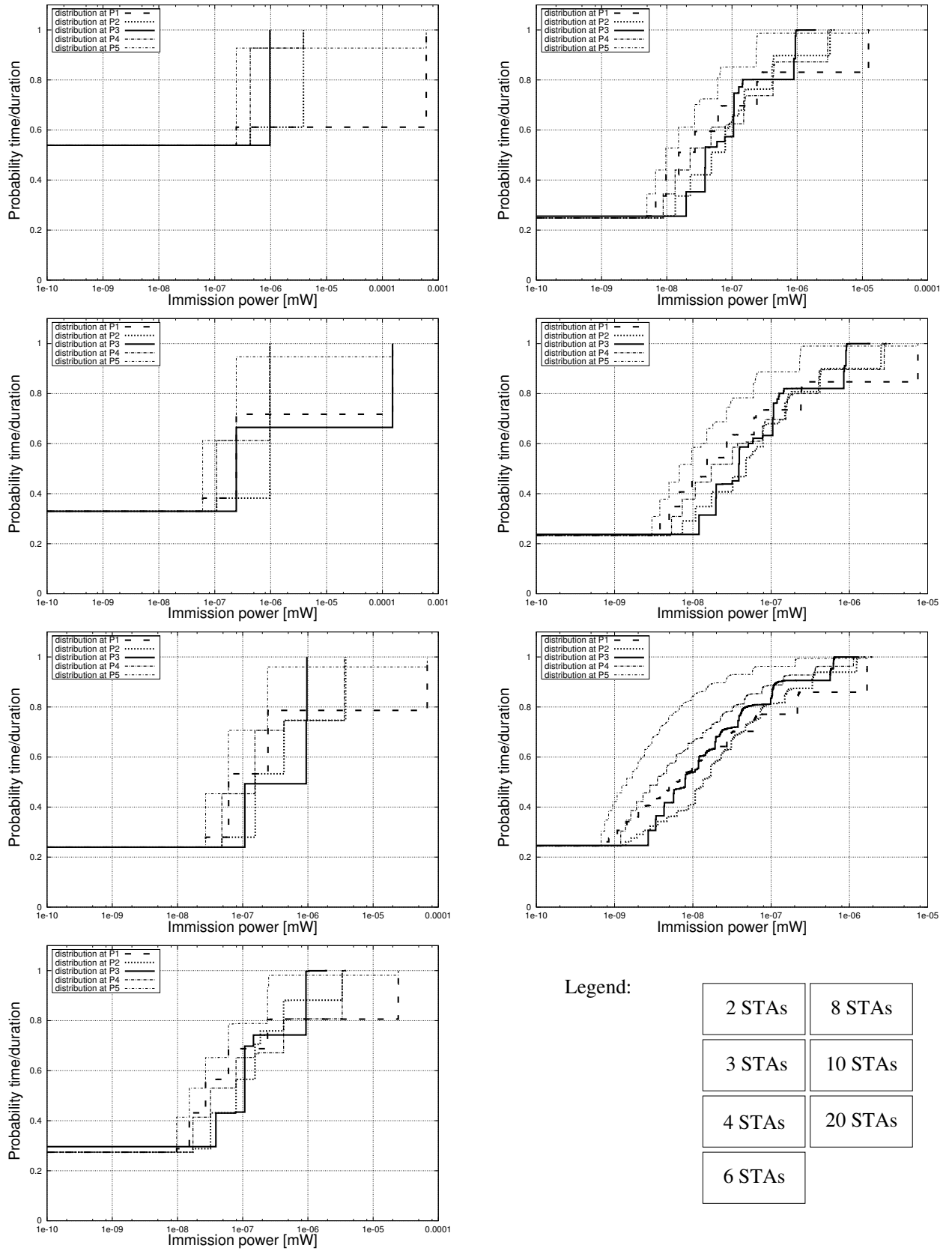


Figure E.5: Statistical distribution: distance - 500m, BER - 10^{-6} , speed - 5.5 MBit/s

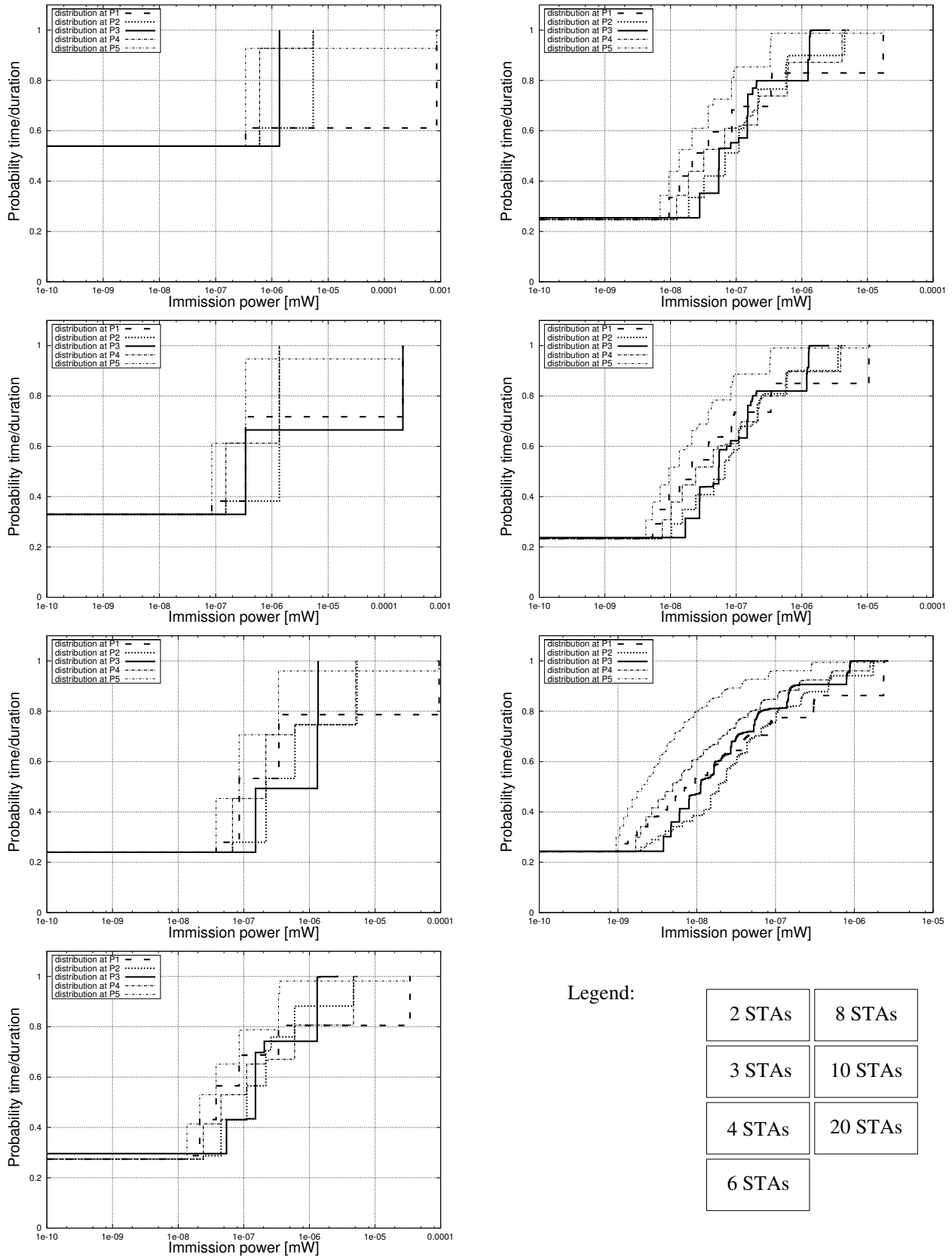


Figure E.6: Statistical distribution: distance - 500m, BER - 10^{-8} , speed - 5.5 MBit/s

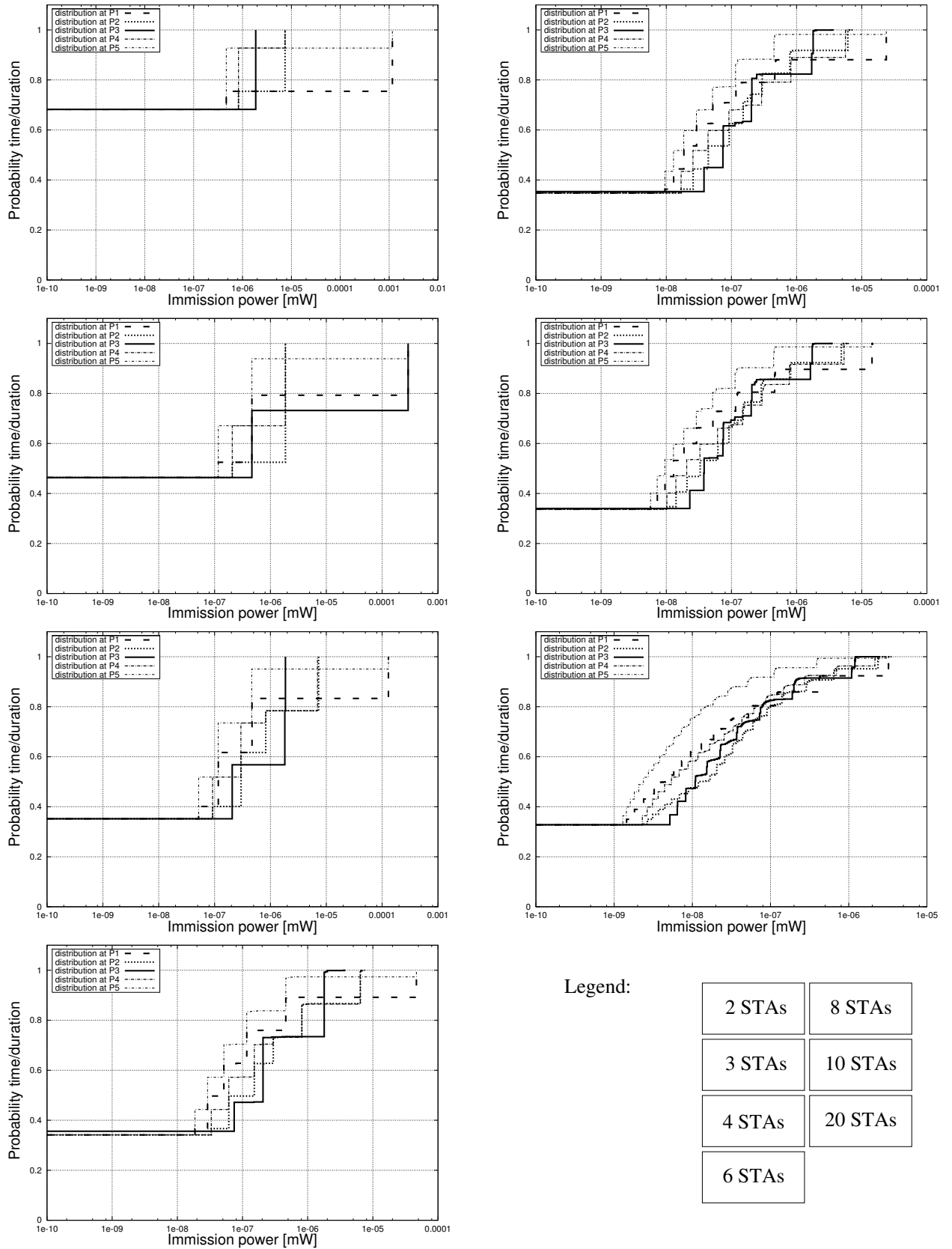


Figure E.7: Statistical distribution: distance - 500m, BER - 10^{-6} , speed - 11 MBit/s

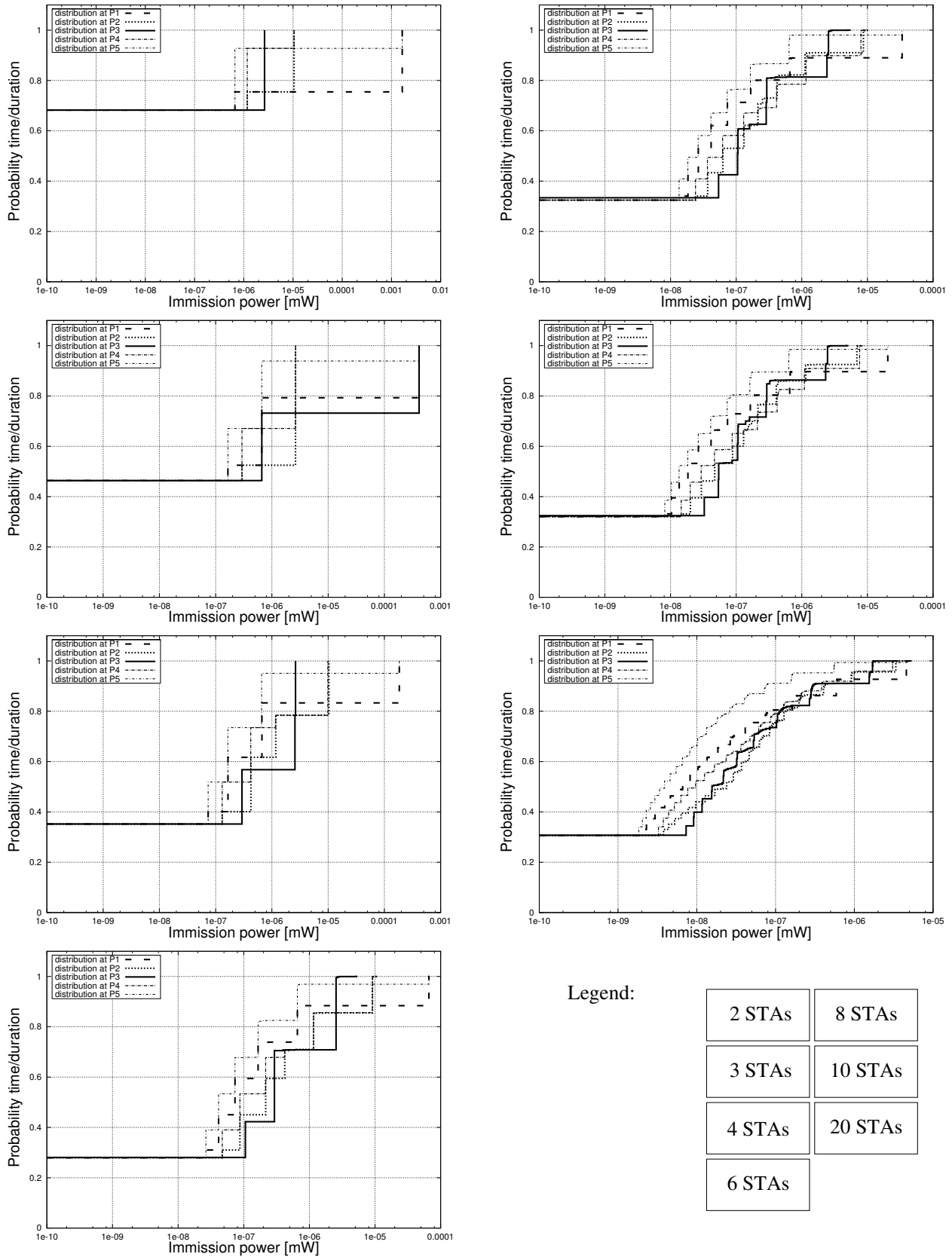


Figure E.8: Statistical distribution: distance - 500m, BER - 10^{-8} , speed - 11 MBit/s

Appendix F

DISTRIBUTION OF THE IMMISSION POWER FOR 1000M

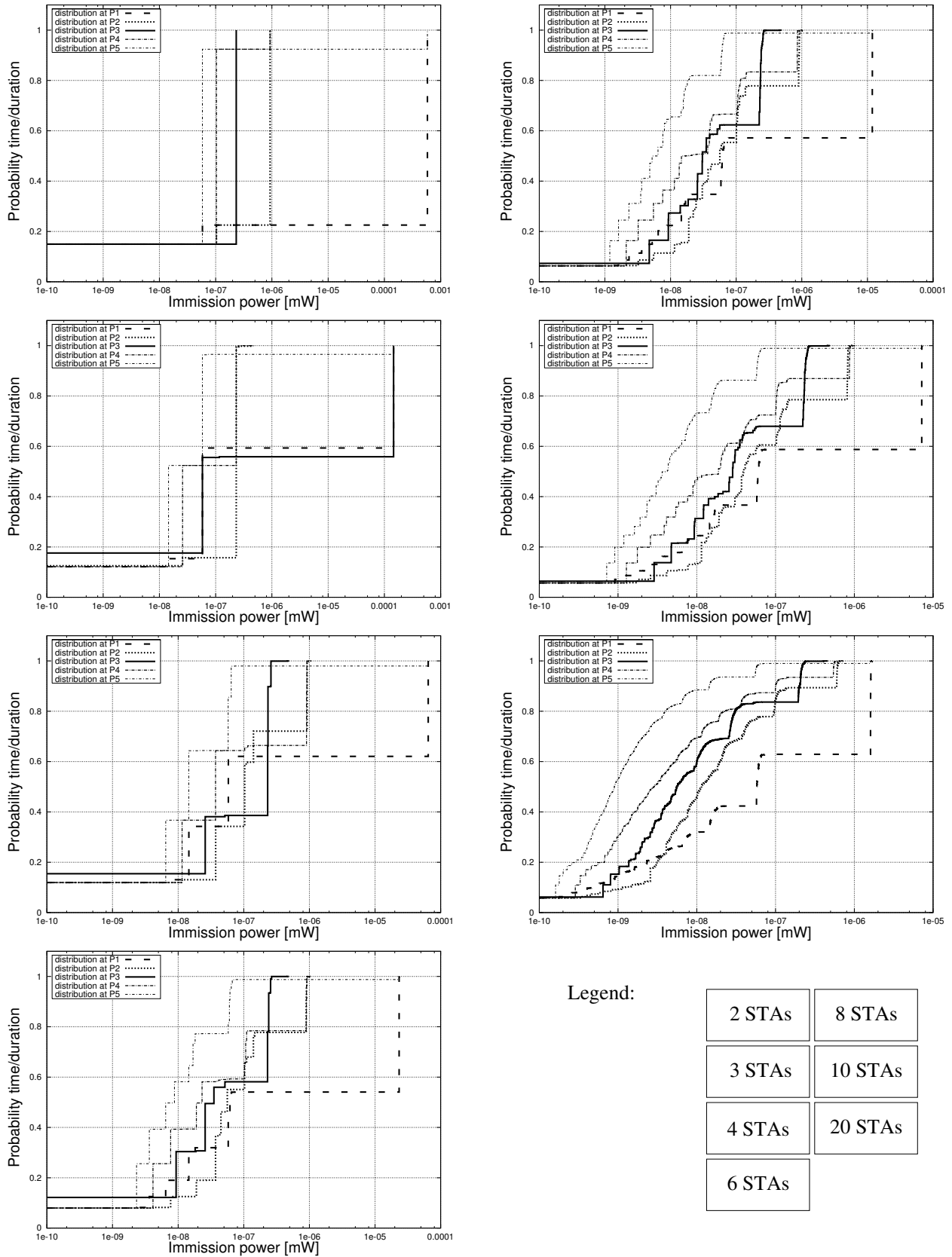


Figure F.1: Statistical distribution: distance - 1000m, BER - 10^{-6} , speed - 1 MBit/s

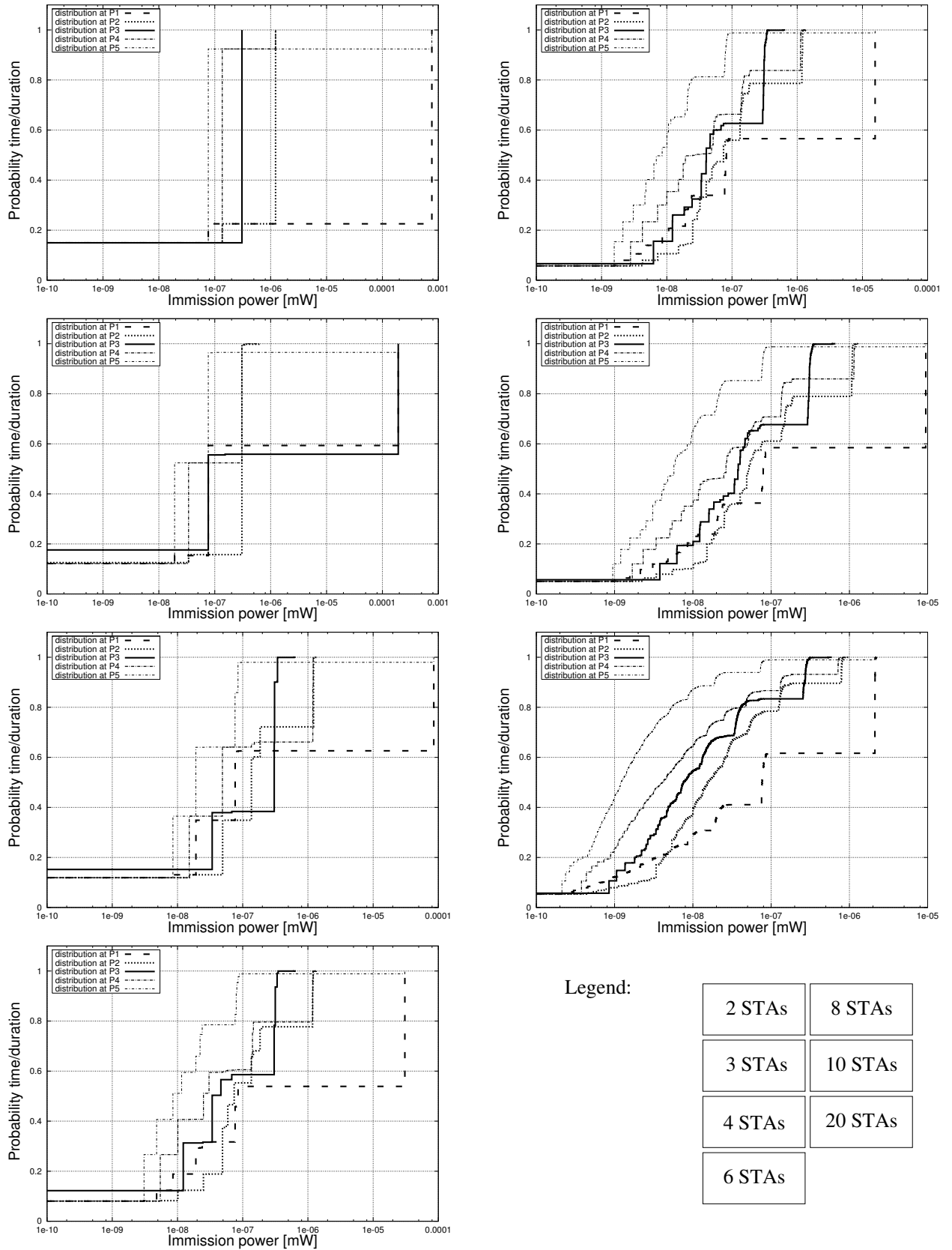


Figure F.2: Statistical distribution: distance - 1000m, BER - 10^{-8} , speed - 1 MBit/s

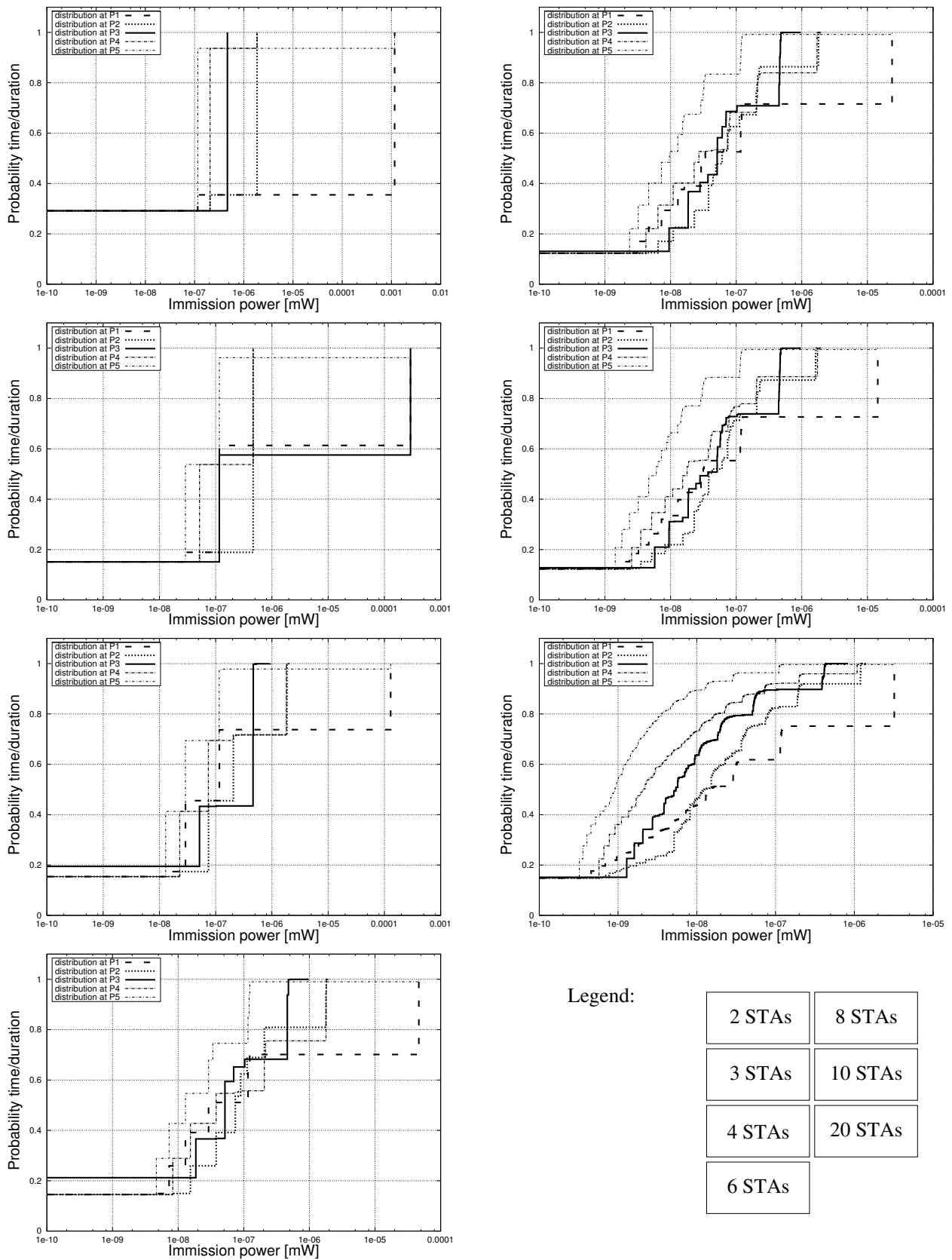


Figure F.3: Statistical distribution: distance - 1000m, BER - 10^{-6} , speed - 2 MBit/s

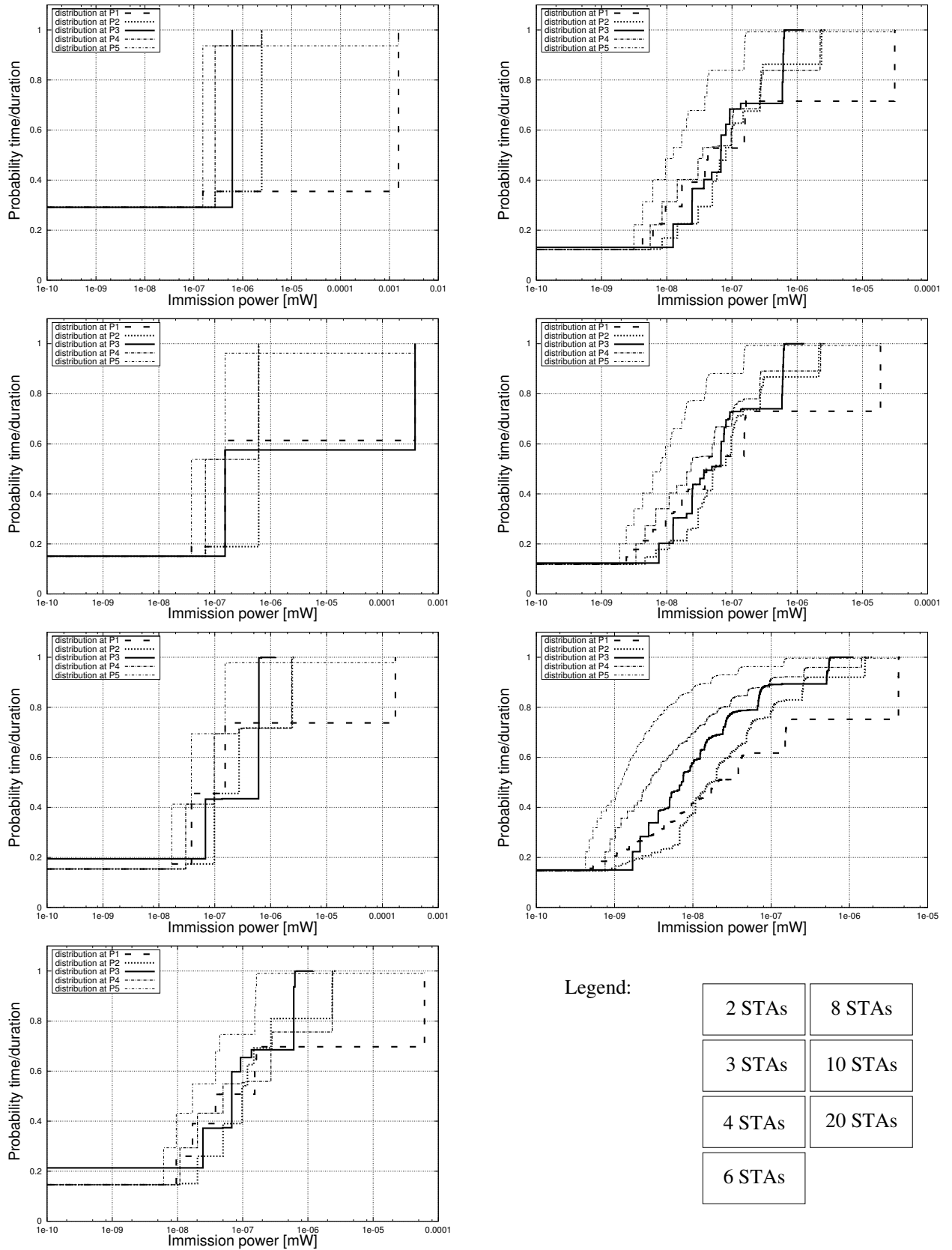


Figure F.4: Statistical distribution: distance - 1000m, BER - 10^{-8} , speed - 2 MBit/s

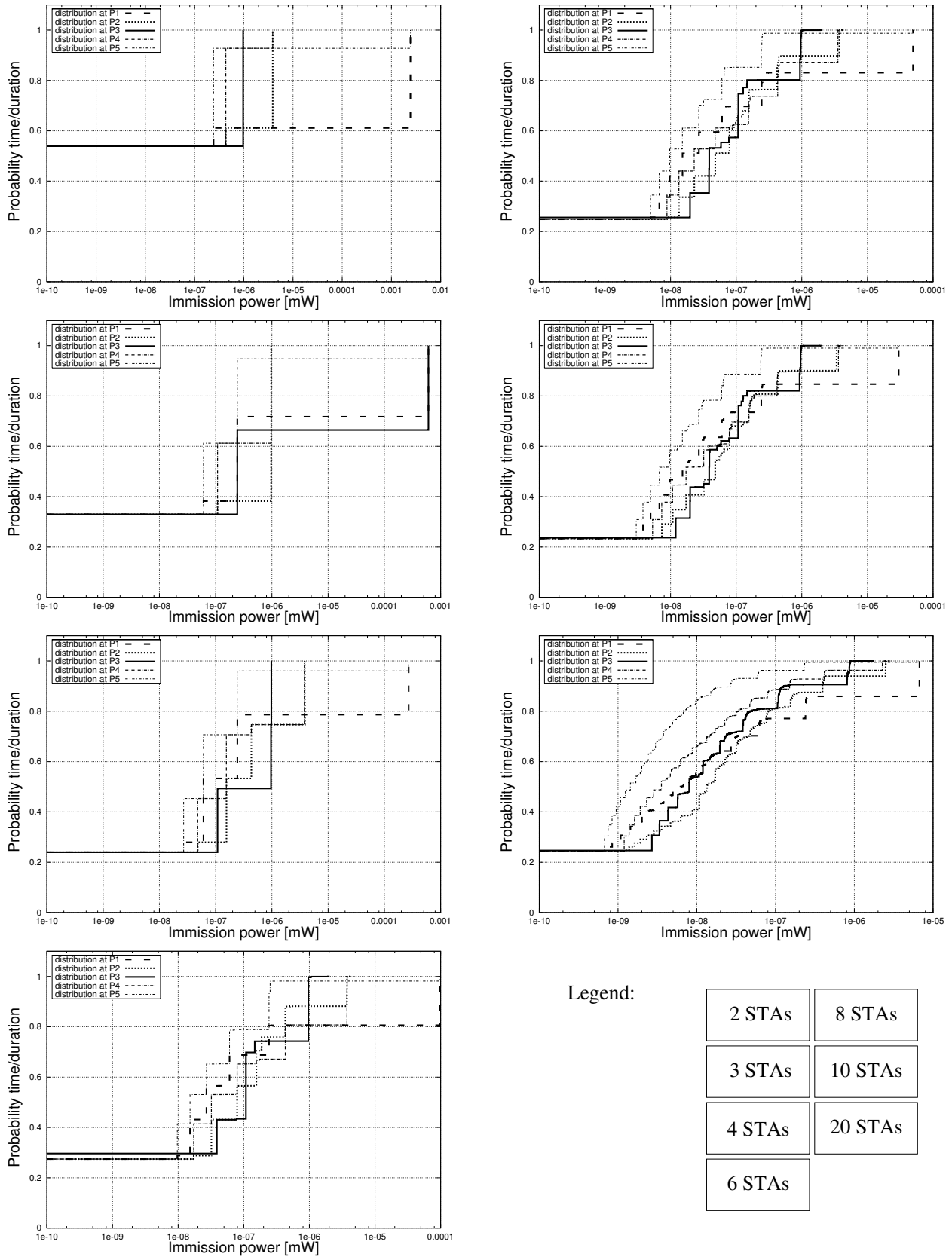


Figure F.5: Statistical distribution: distance - 1000m, BER - 10^{-6} , speed - 5.5 MBit/s

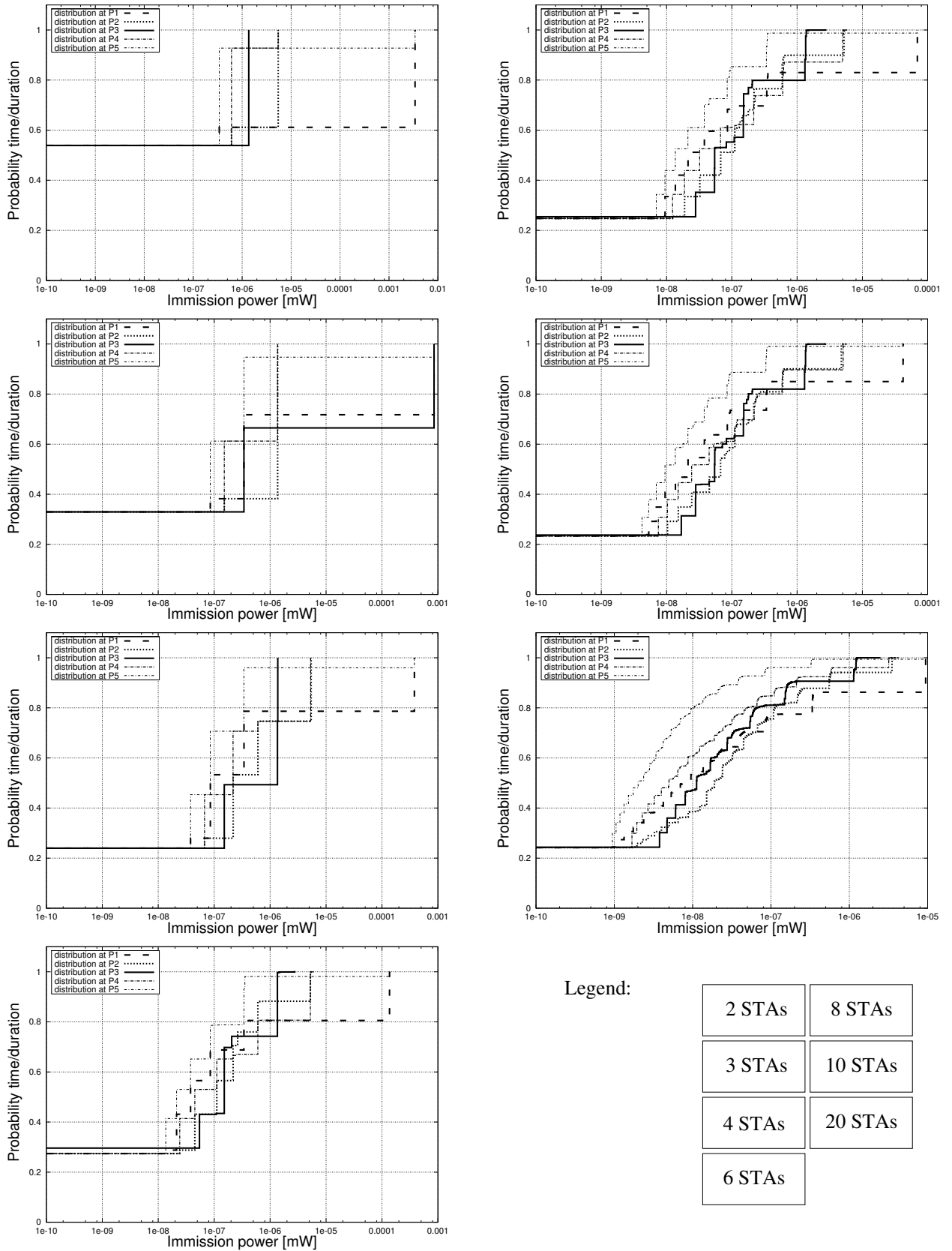


Figure F.6: Statistical distribution: distance - 1000m, BER - 10^{-8} , speed - 5.5 MBit/s

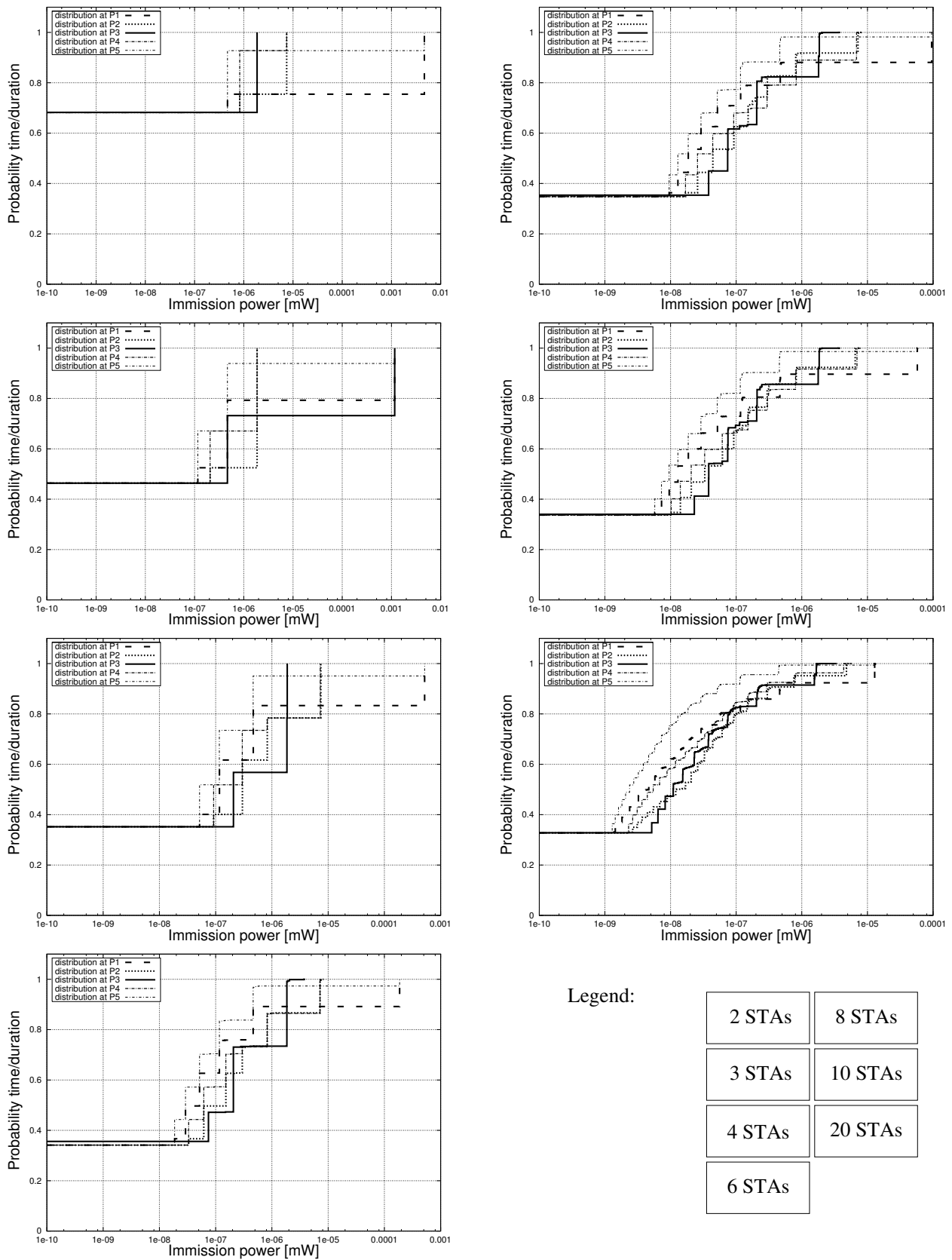


Figure F.7: Statistical distribution: distance - 1000m, BER - 10^{-6} , speed - 11 MBit/s

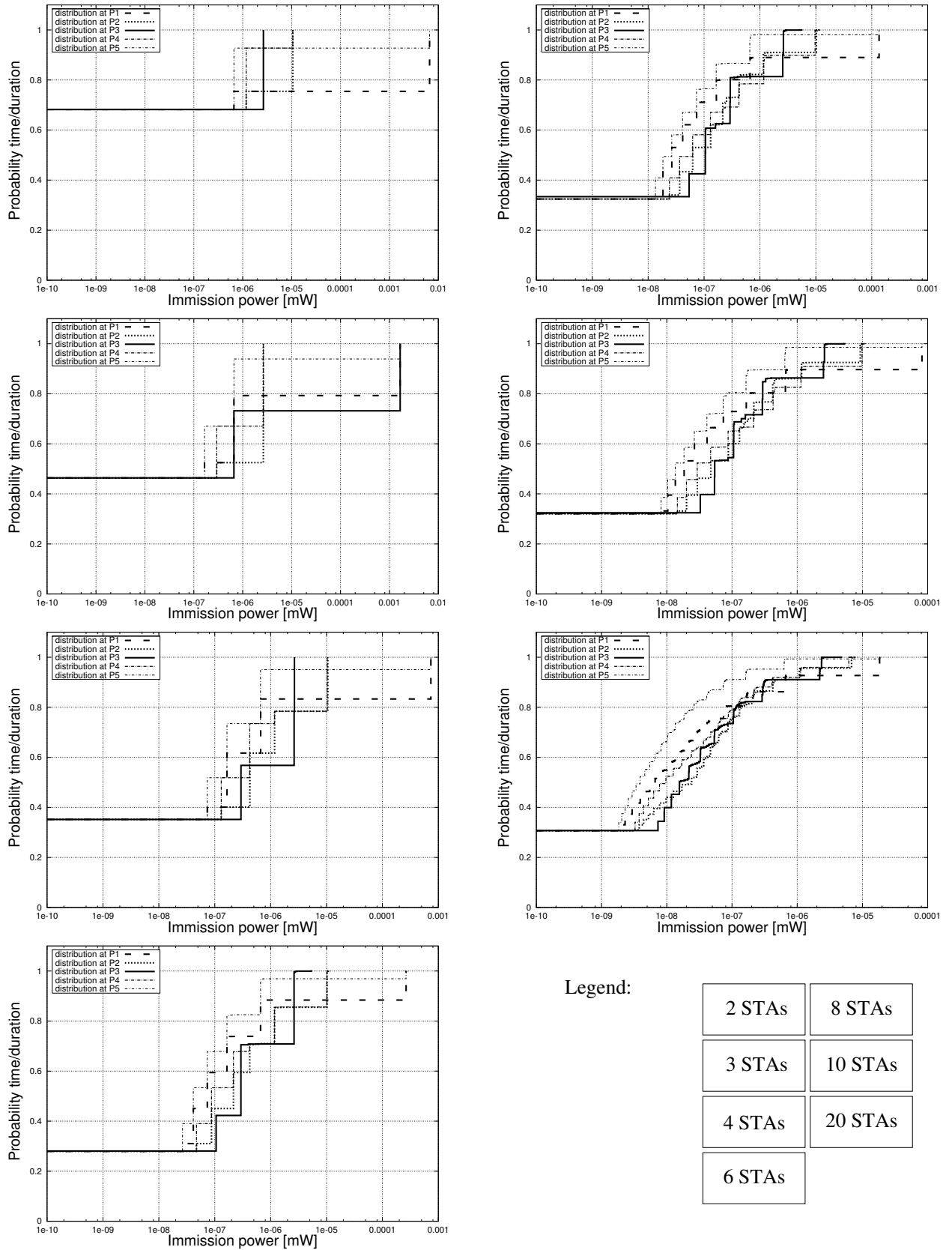


Figure F.8: Statistical distribution: distance - 1000m, BER - 10^{-8} , speed - 11 MBit/s

Appendix G

DISTRIBUTION OF THE IMMISSION POWER FOR 5000M

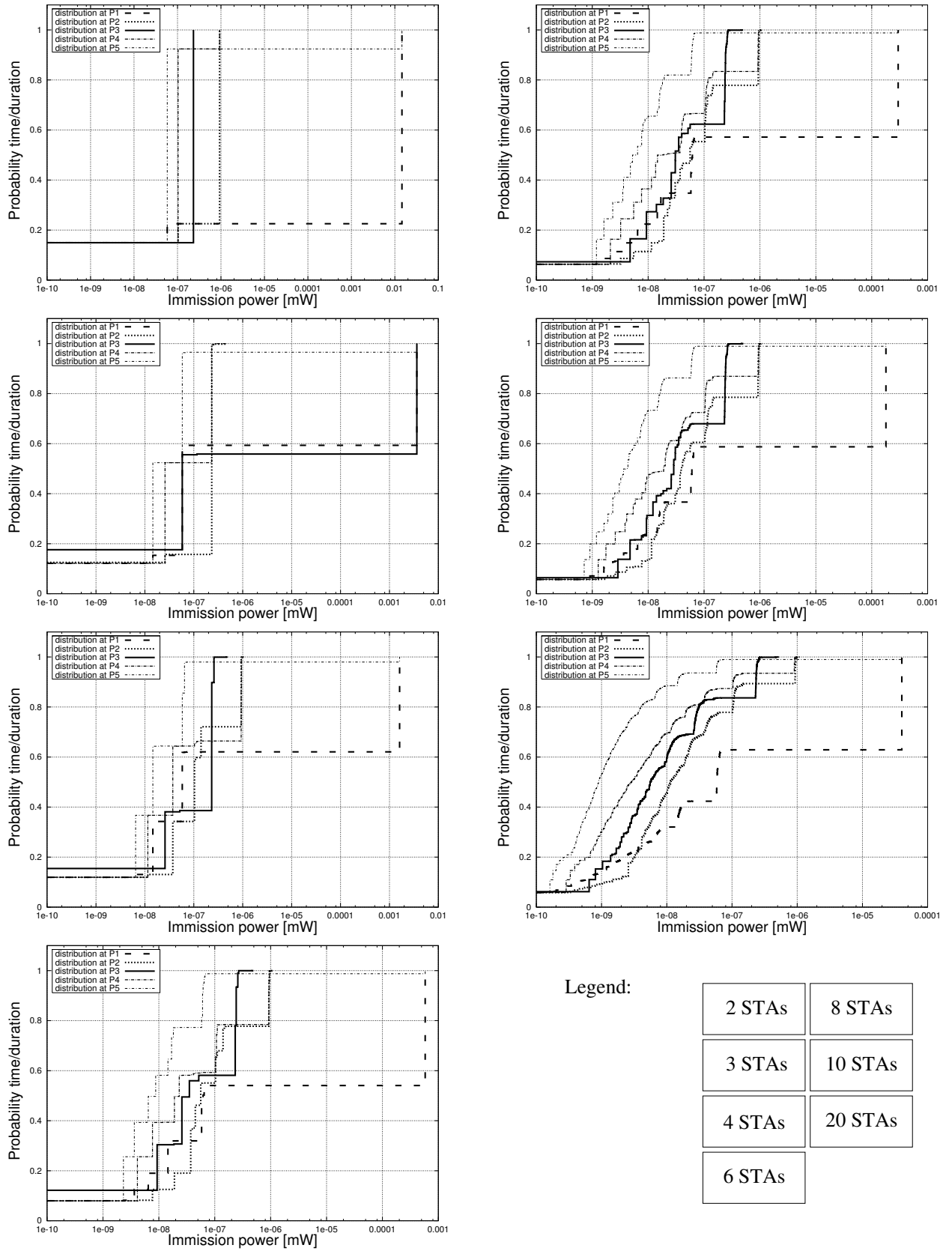


Figure G.1: Statistical distribution: distance - 5000m, BER - 10^{-6} , speed - 1 MBit/s

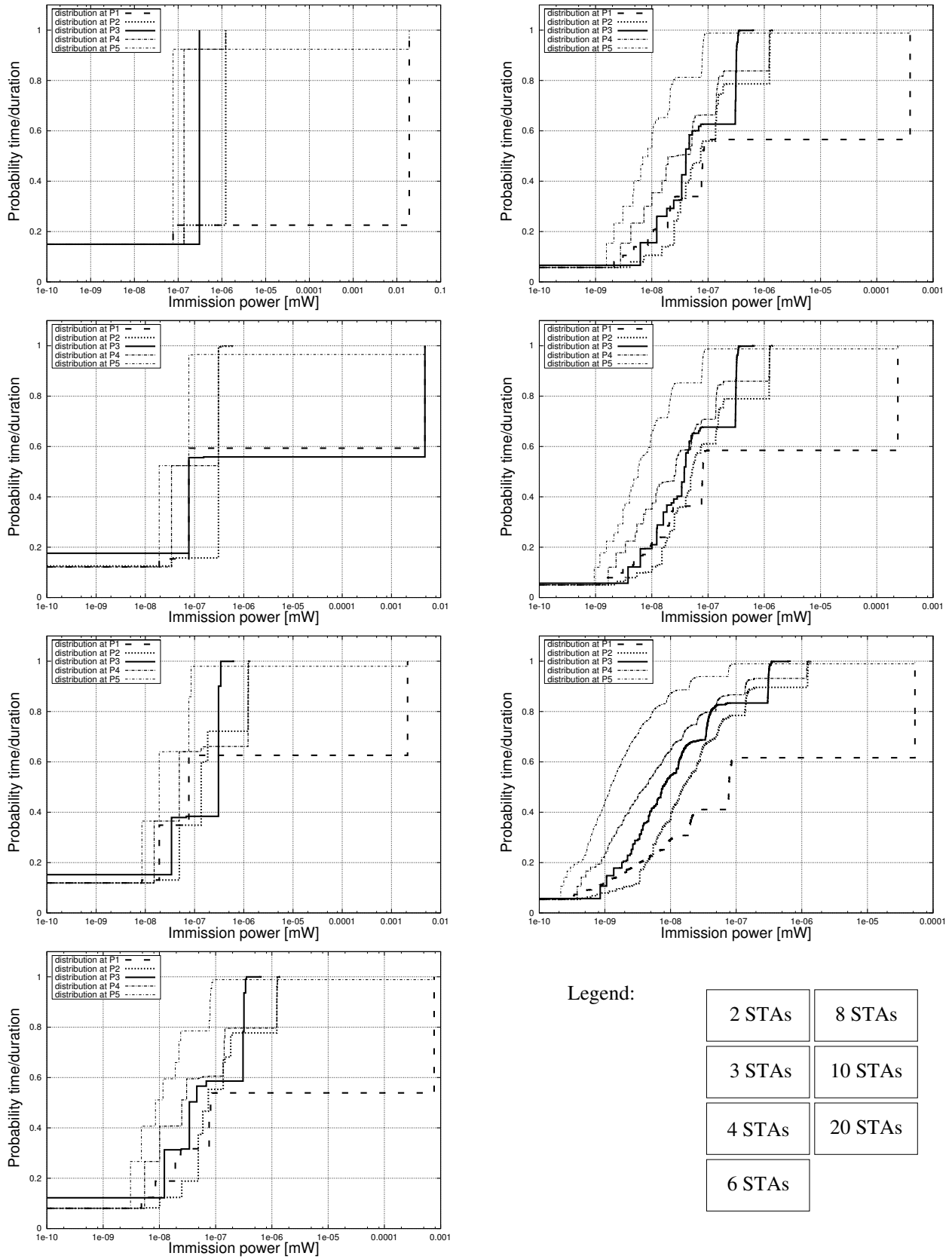


Figure G.2: Statistical distribution: distance - 5000m, BER - 10^{-8} , speed - 1 MBit/s

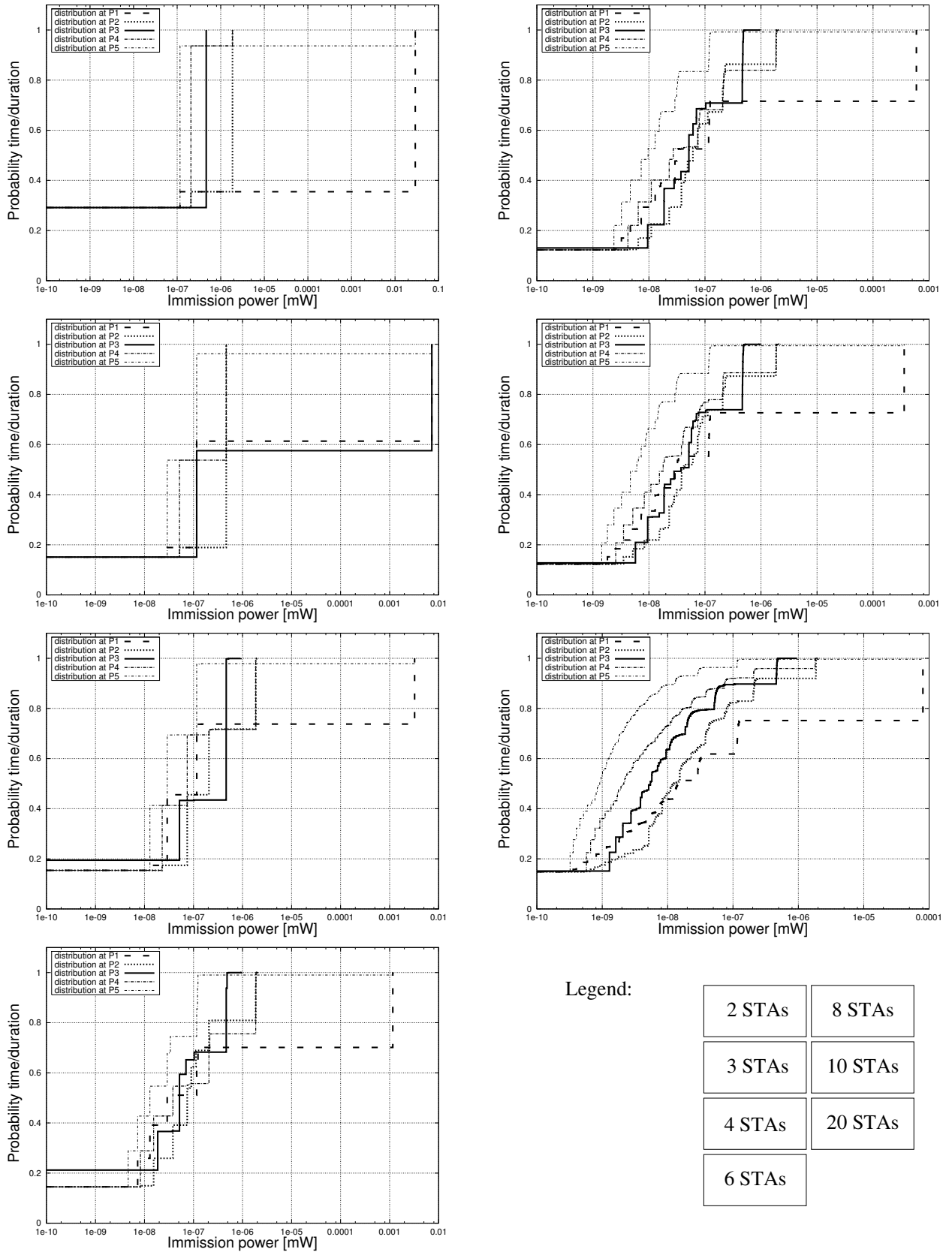


Figure G.3: Statistical distribution: distance - 5000m, BER - 10^{-6} , speed - 2 MBit/s

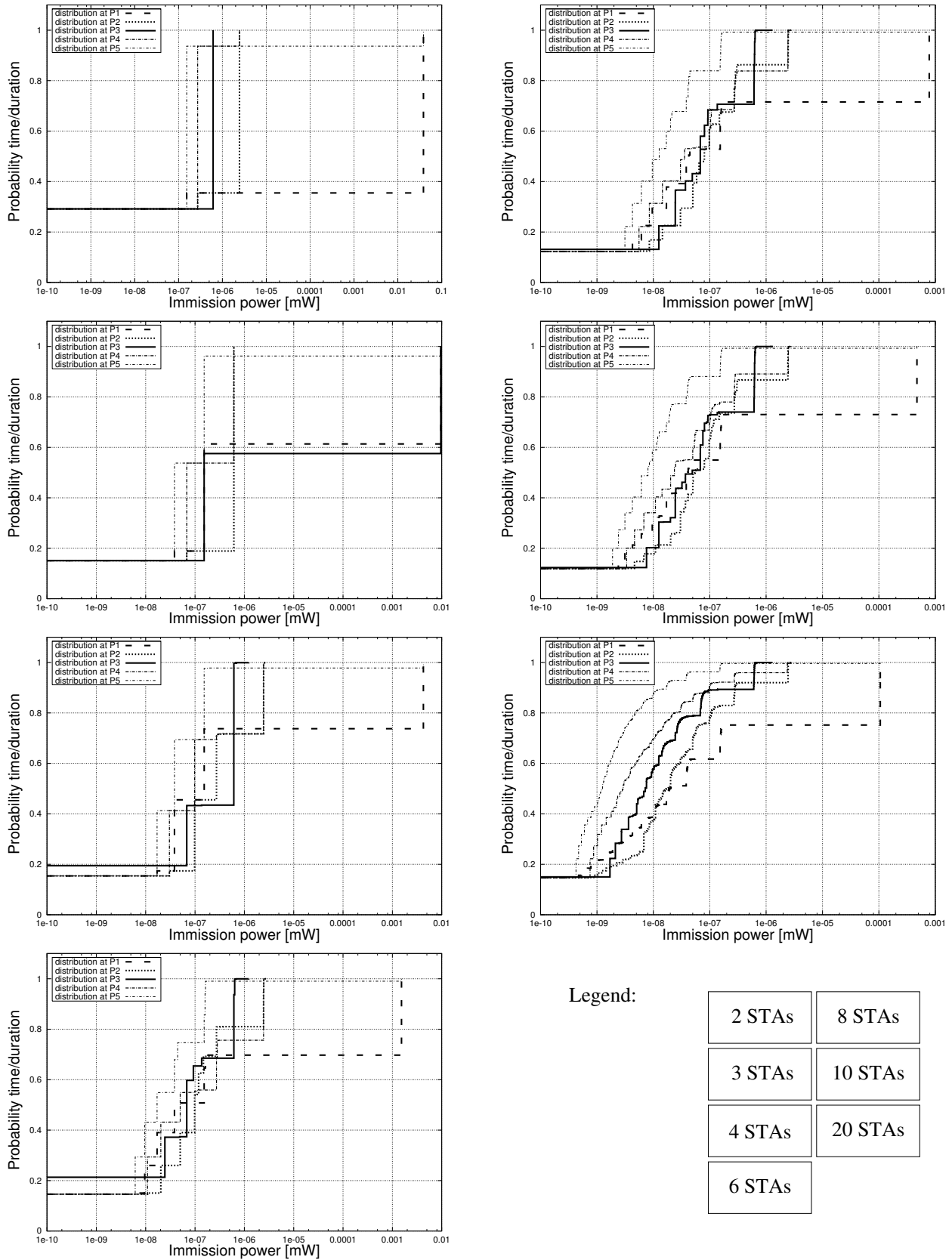


Figure G.4: Statistical distribution: distance - 5000m, BER - 10^{-8} , speed - 2 MBit/s

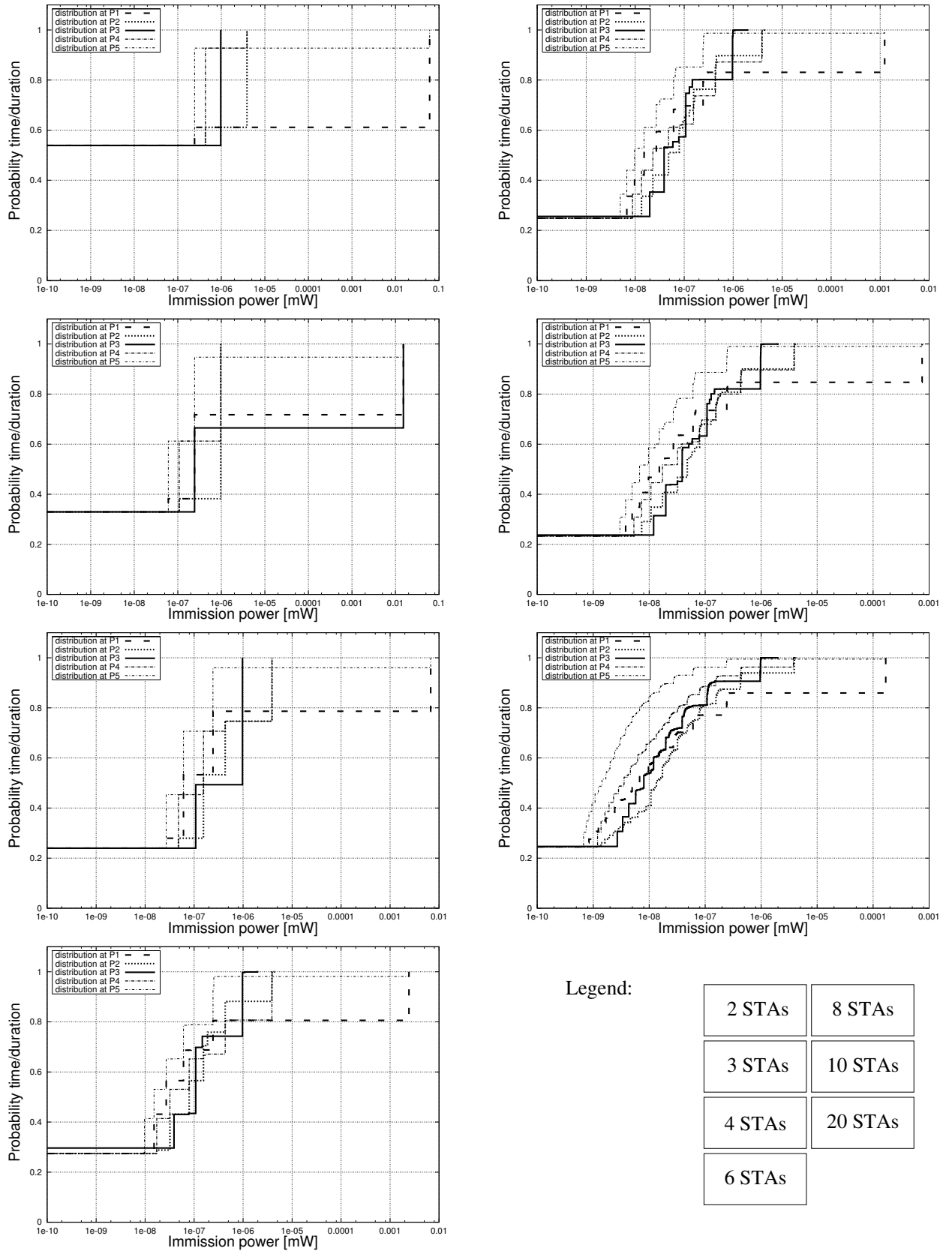


Figure G.5: Statistical distribution: distance - 5000m, BER - 10^{-6} , speed - 5.5 MBit/s

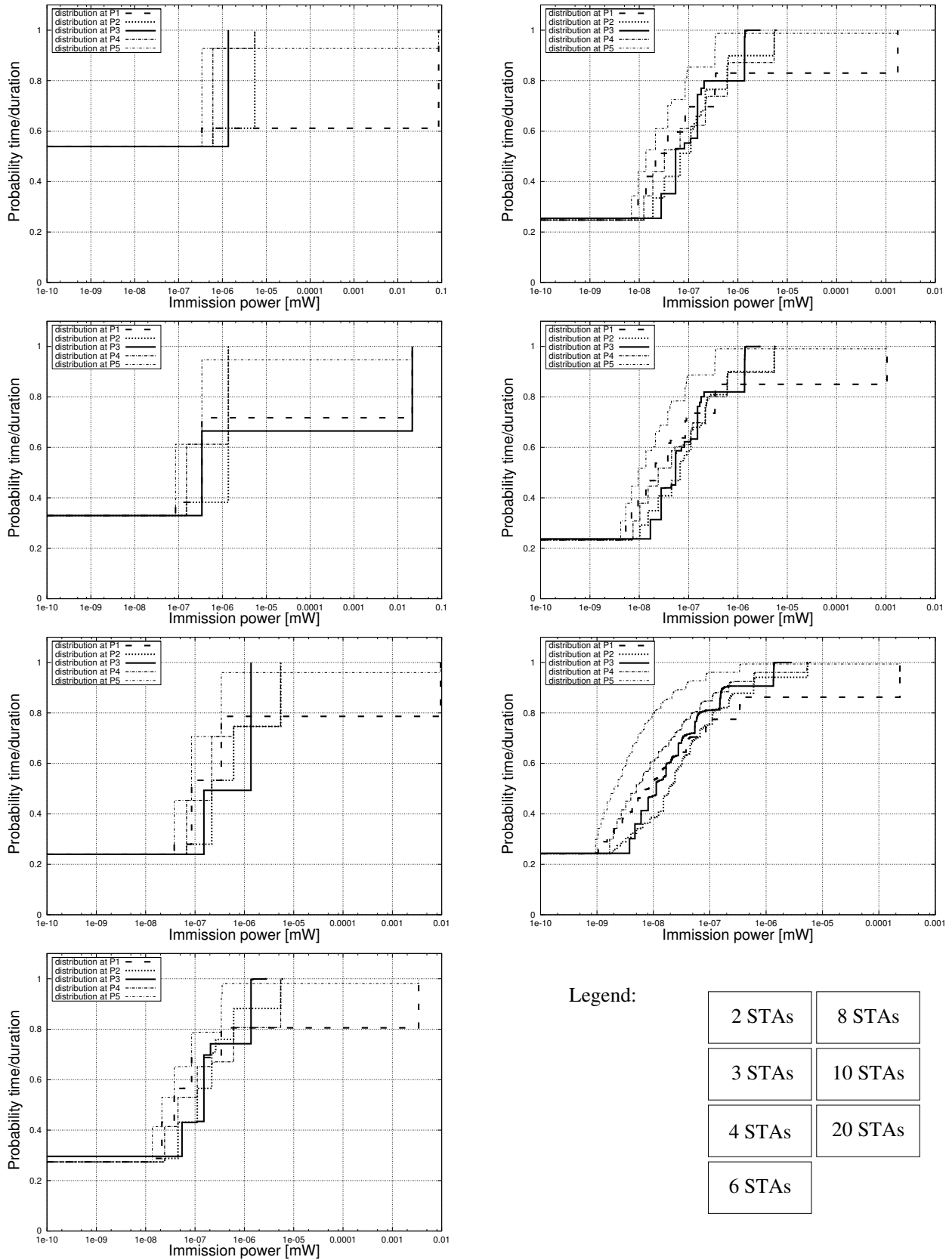


Figure G.6: Statistical distribution: distance - 5000m, BER - 10^{-8} , speed - 5.5 MBit/s

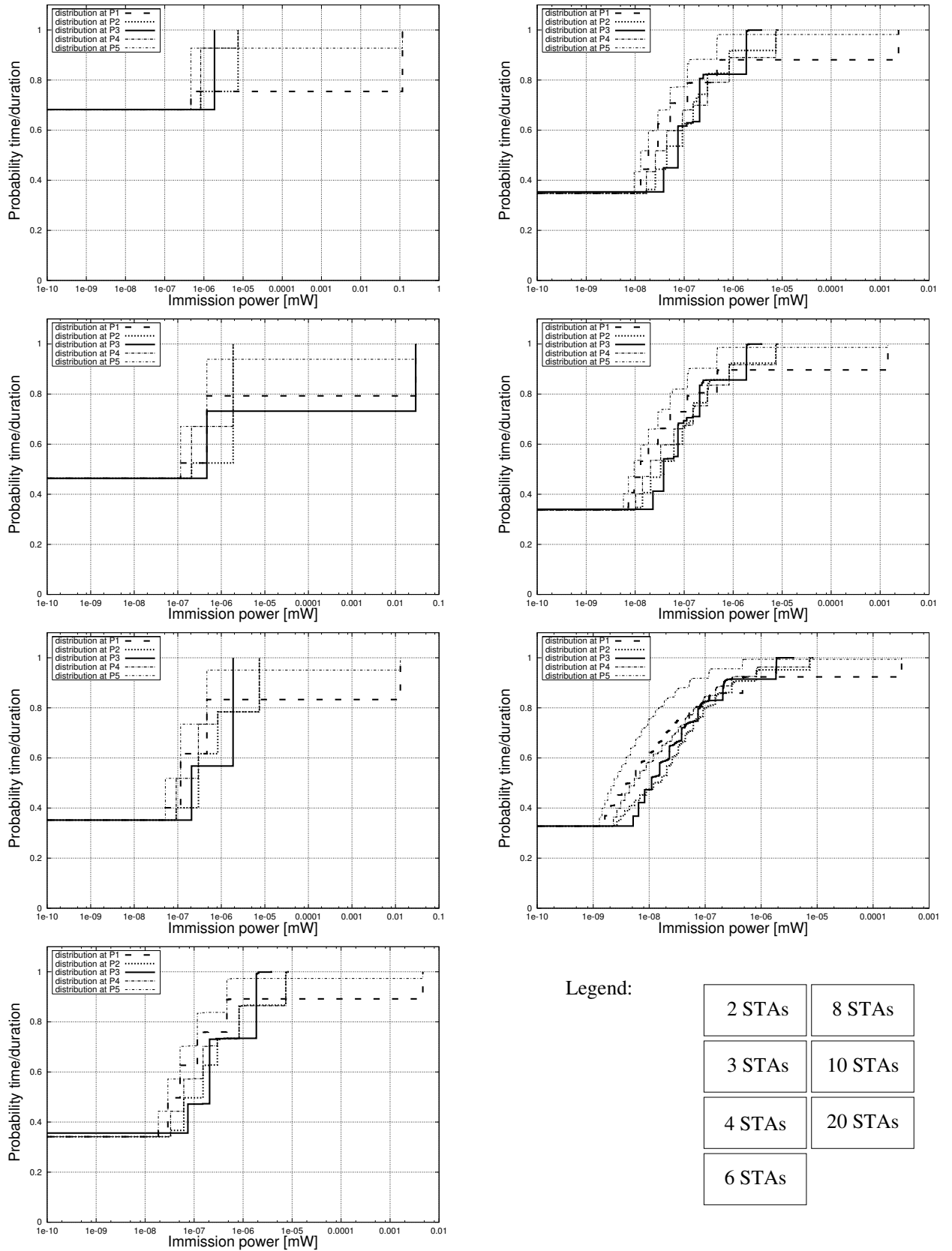


Figure G.7: Statistical distribution: distance - 5000m, BER - 10^{-6} , speed - 11 MBit/s

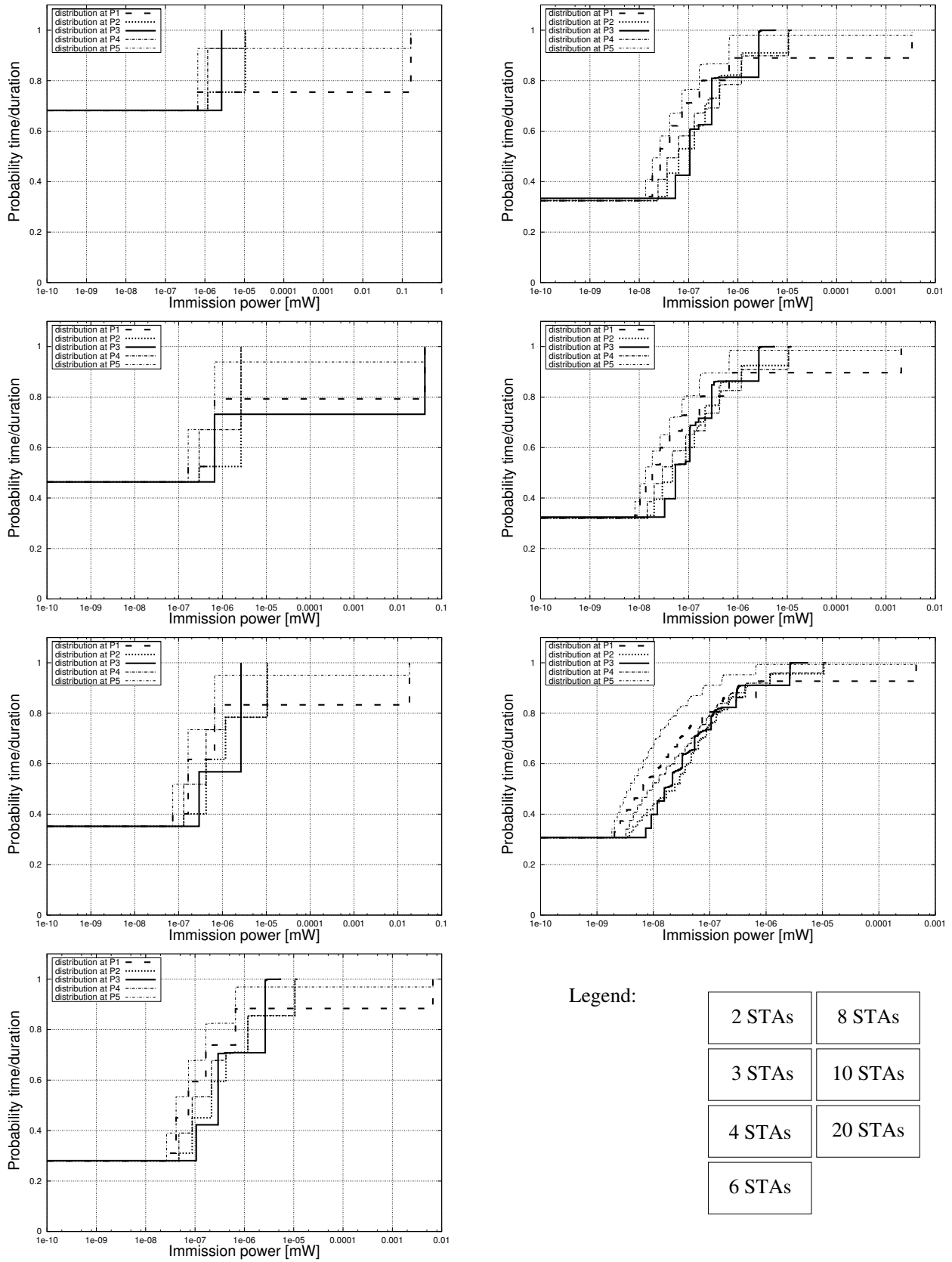


Figure G.8: Statistical distribution: distance - 5000m, BER - 10^{-8} , speed - 11 MBit/s

Appendix H

DISTRIBUTION OF THE IMMISSION POWER FOR 10000M

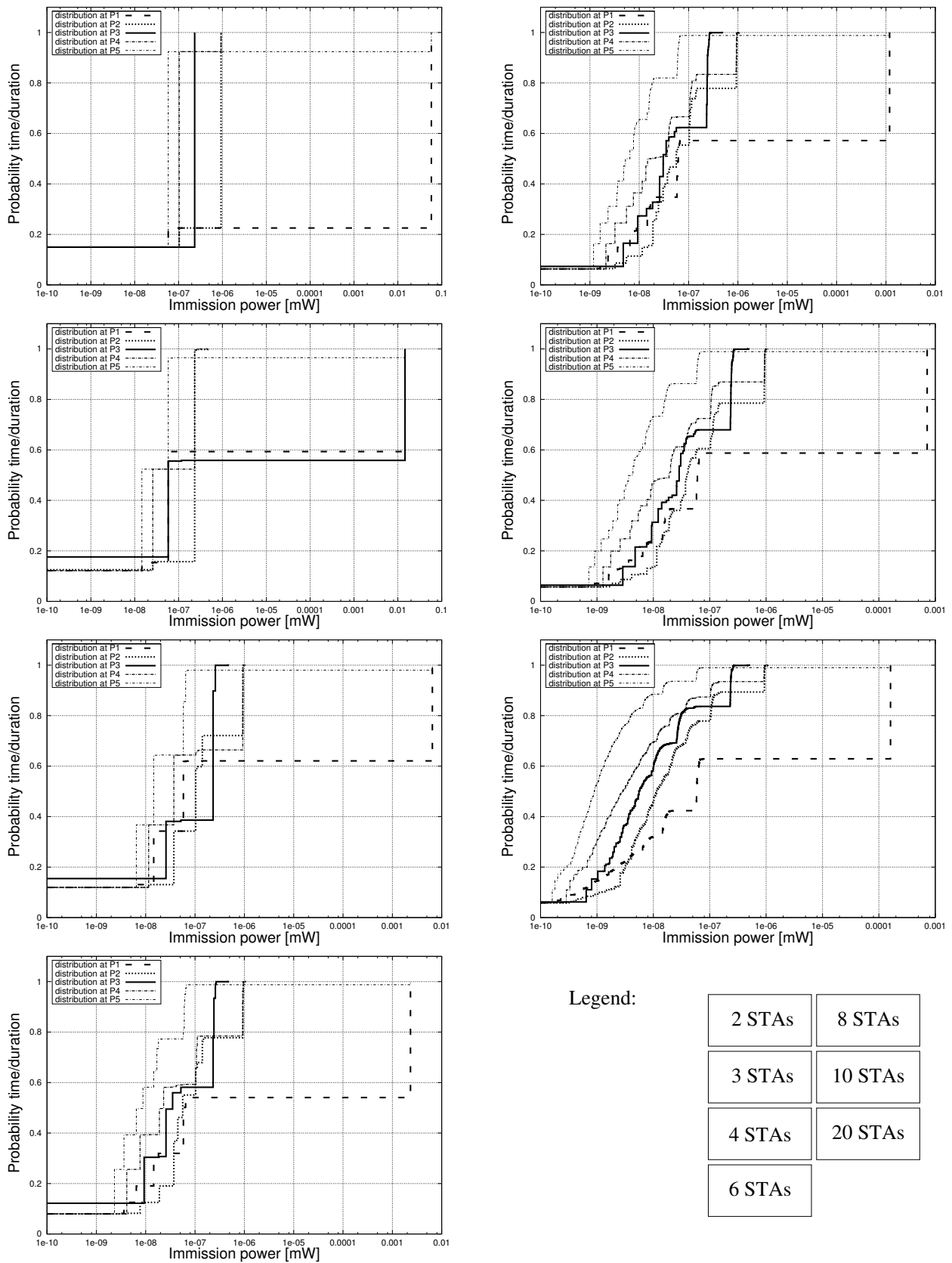


Figure H.1: Statistical distribution: distance - 10000m, BER - 10^{-6} , speed - 1 MBit/s

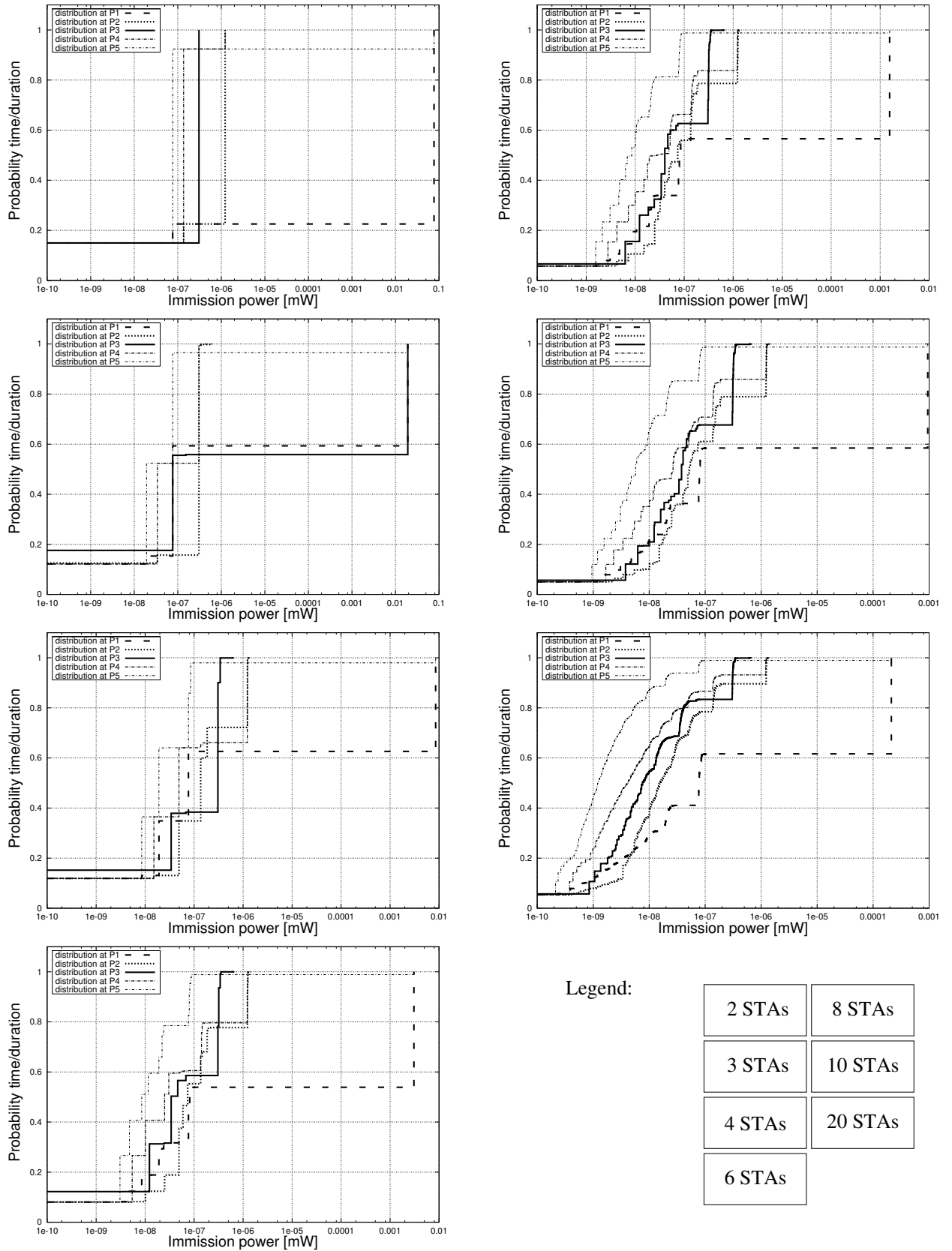


Figure H.2: Statistical distribution: distance - 10000m, BER - 10^{-8} , speed - 1 MBit/s

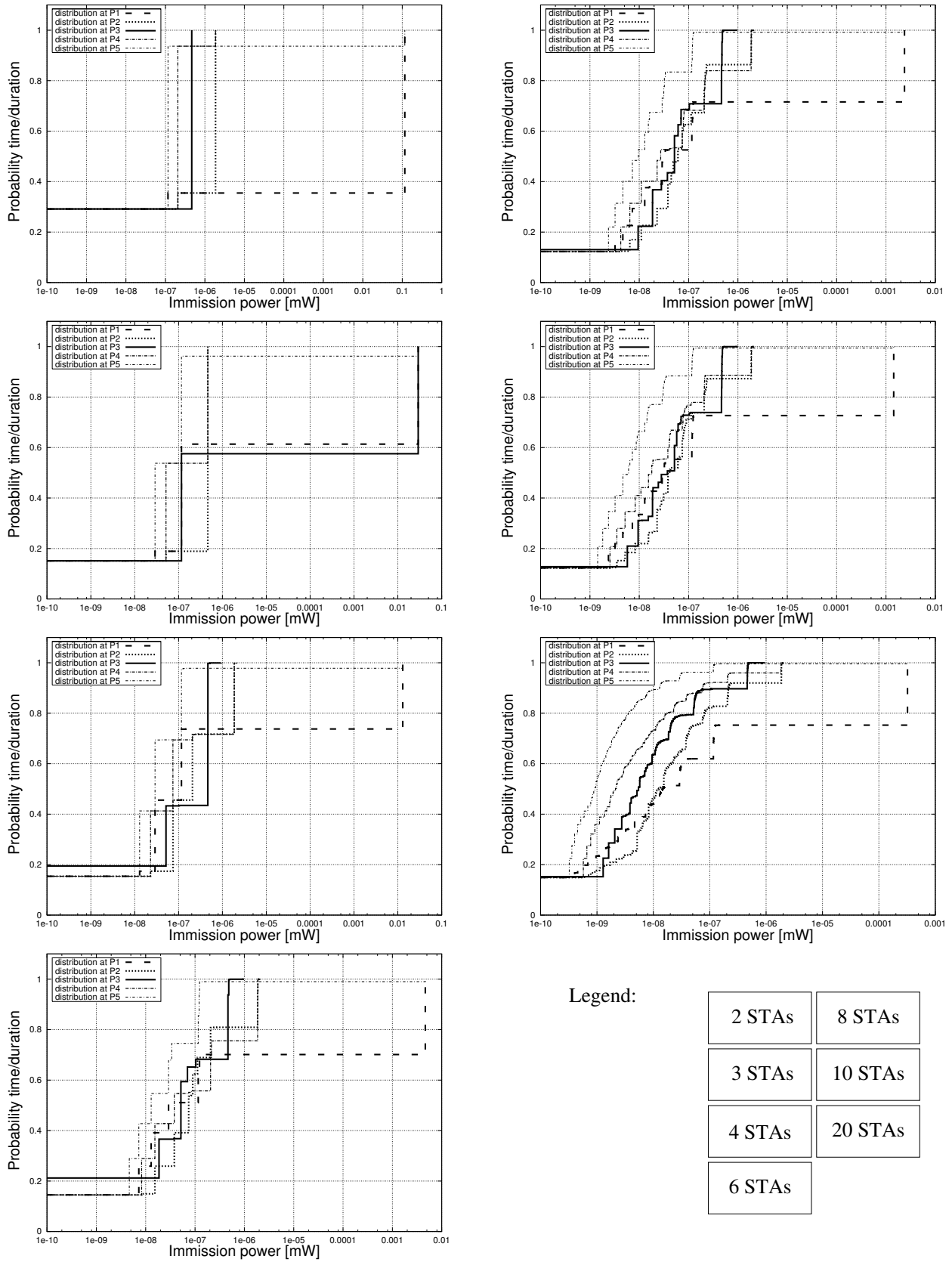


Figure H.3: Statistical distribution: distance - 10000m, BER - 10^{-6} , speed - 2 MBit/s

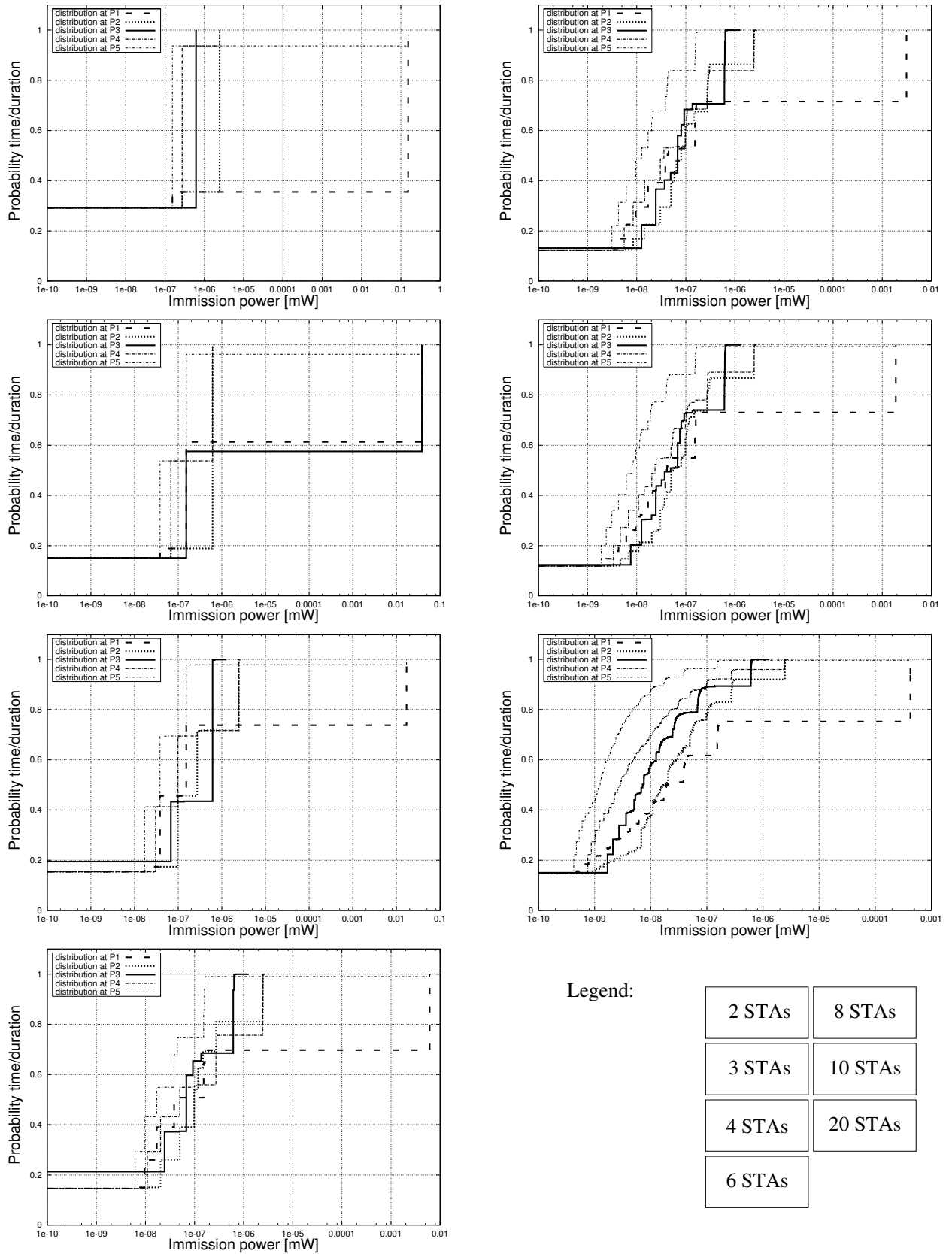


Figure H.4: Statistical distribution: distance - 10000m, BER - 10^{-8} , speed - 2 MBit/s

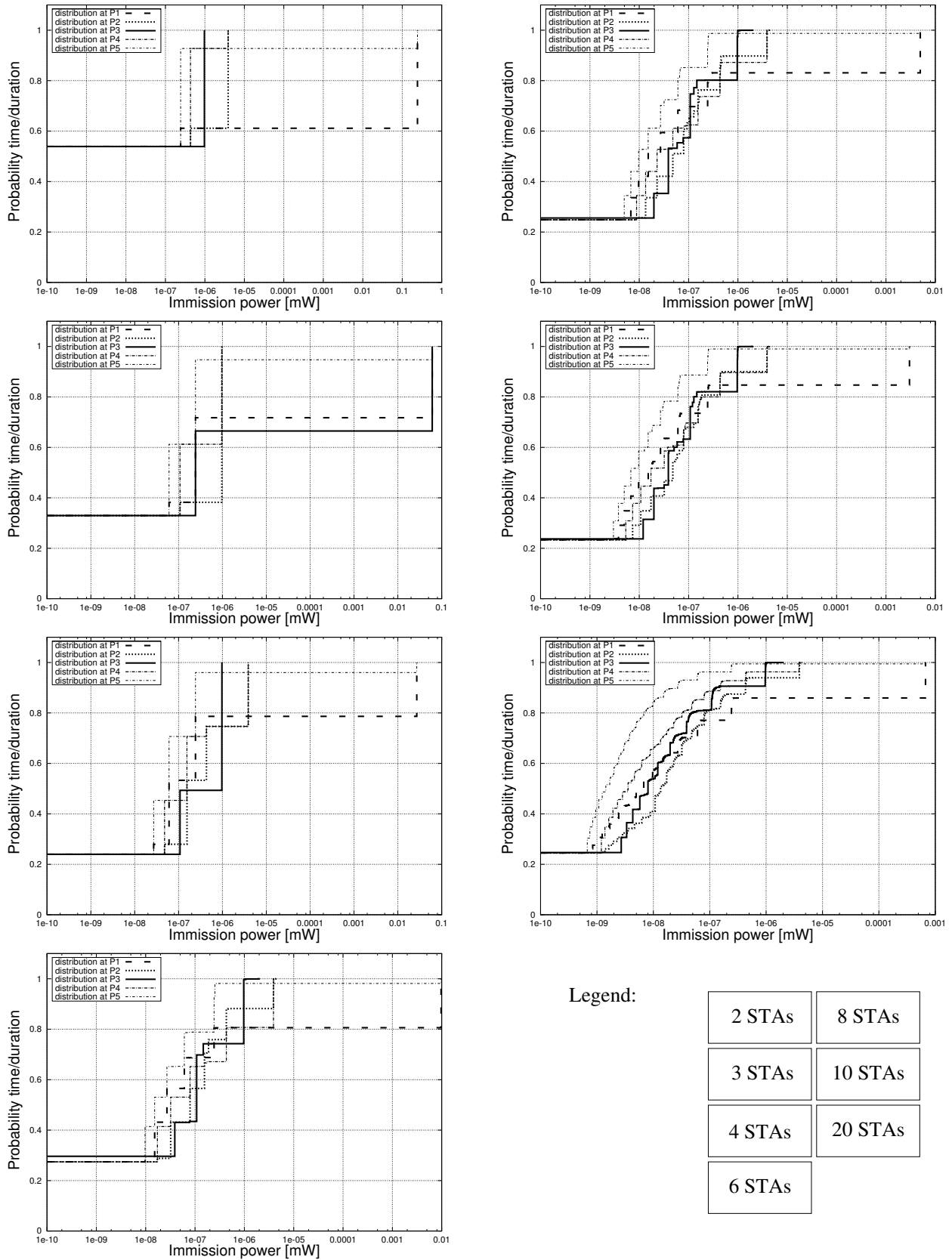


Figure H.5: Statistical distribution: distance - 10000m, BER - 10^{-6} , speed - 5.5 MBit/s

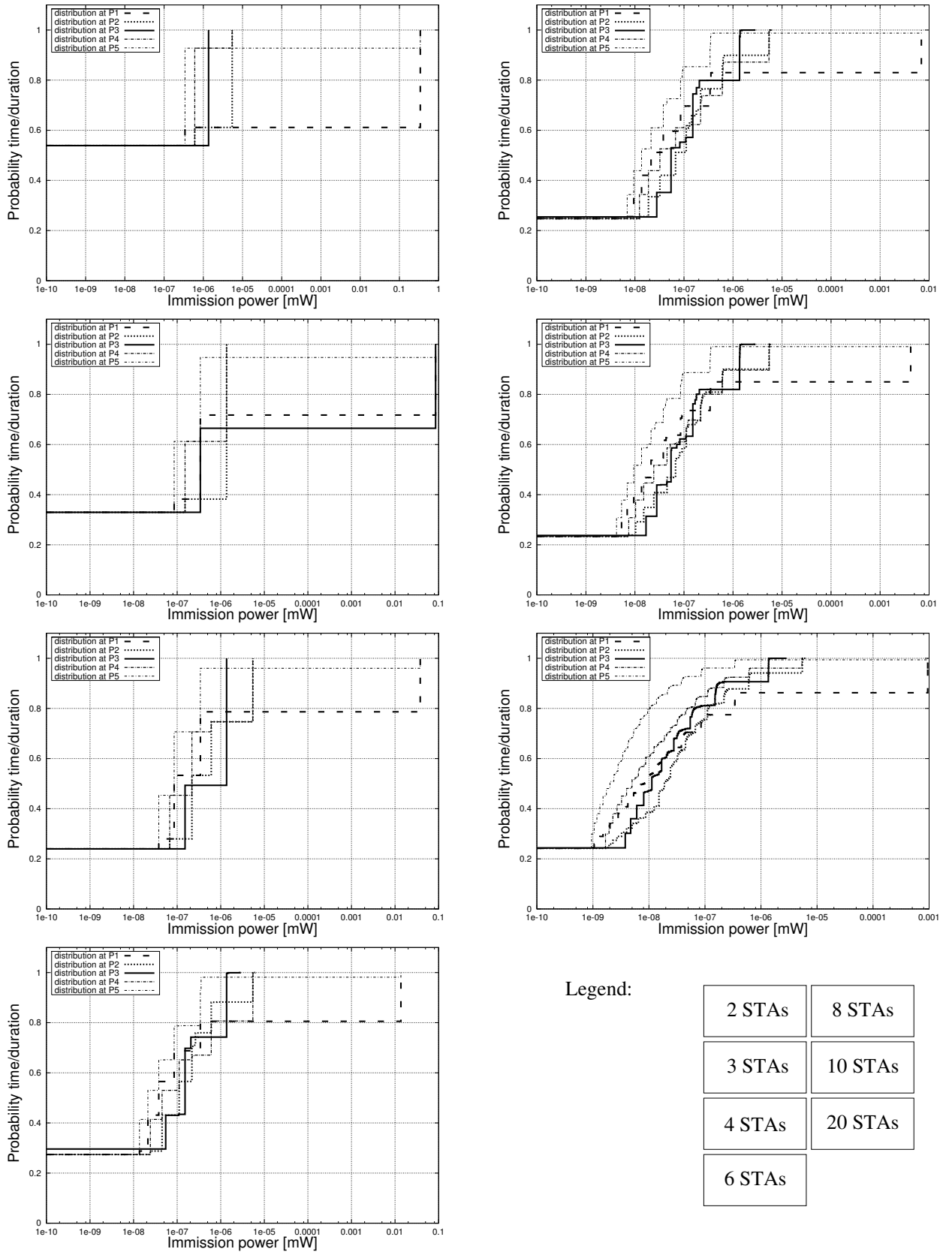


Figure H.6: Statistical distribution: distance - 10000m, BER - 10^{-8} , speed - 5.5 MBit/s

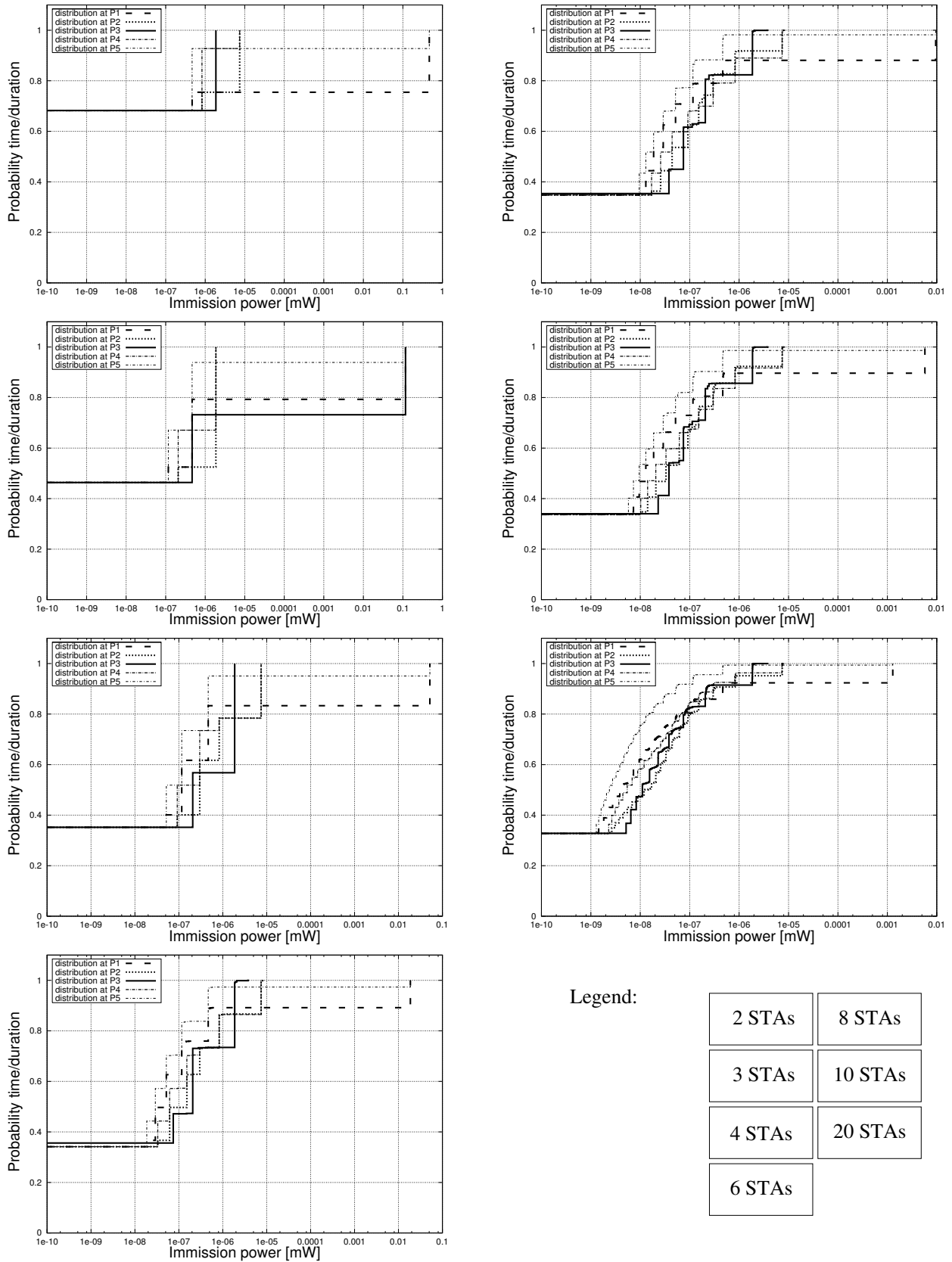


Figure H.7: Statistical distribution: distance - 10000m, BER - 10^{-6} , speed - 11 MBit/s

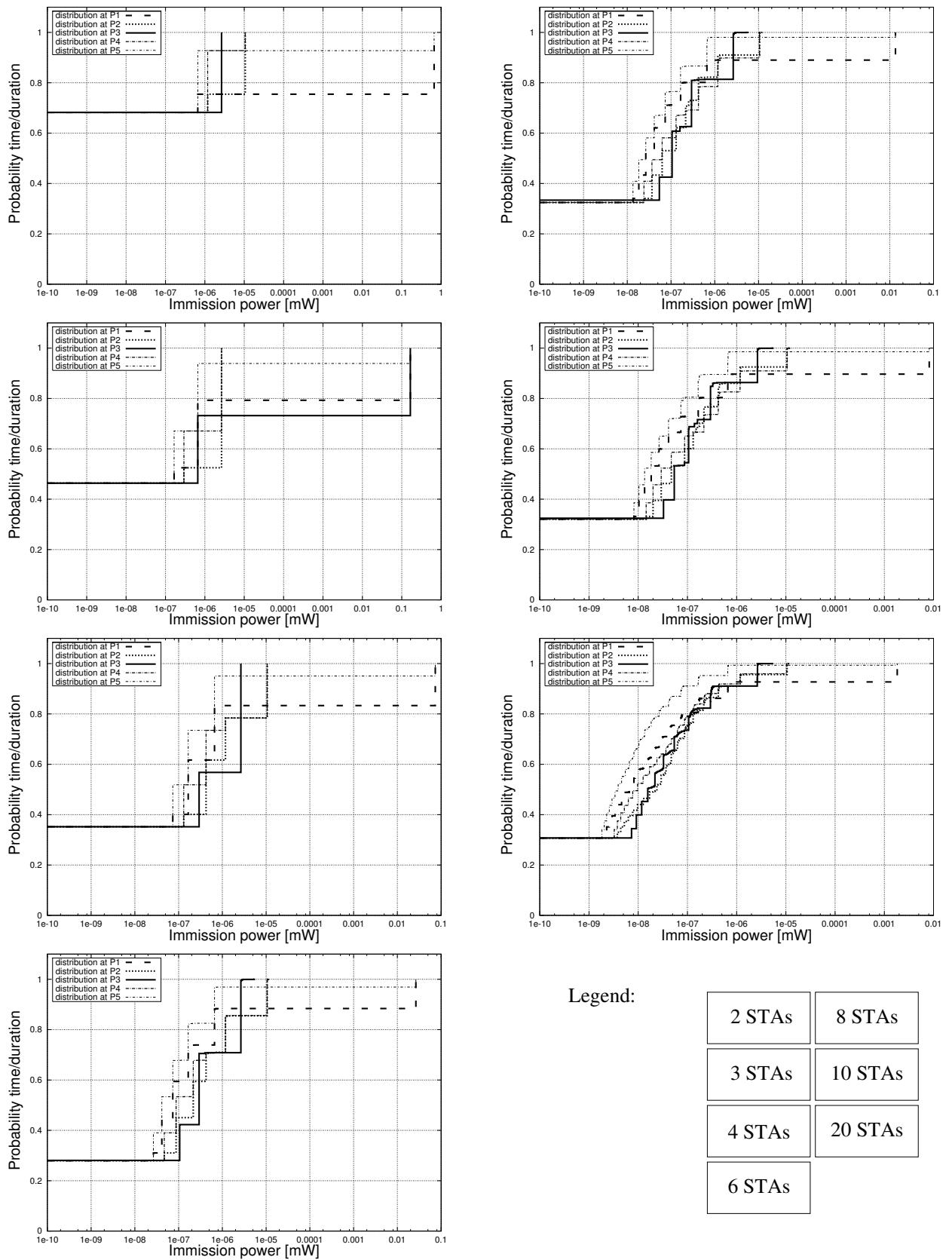


Figure H.8: Statistical distribution: distance - 10000m, BER - 10^{-8} , speed - 11 MBit/s

Appendix I

TABLES OF THE IMMISSION POWER FOR 10M

Speed [MBit/s]	P	Immission power in [mW]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	4.7261e-08	1.1305e-08	5.7681e-09	2.6720e-09	1.6608e-09	1.1145e-09	2.9026e-10
	2	4.5230e-08	1.1883e-08	6.1243e-09	2.8420e-09	1.5401e-09	1.0678e-09	2.6695e-10
	3	3.9577e-08	1.0926e-08	5.6304e-09	2.5150e-09	1.6081e-09	1.0586e-09	2.7415e-10
	4	3.2992e-08	1.0304e-08	5.3151e-09	2.5180e-09	1.5188e-09	1.0269e-09	2.5519e-10
	5	2.6945e-08	8.5988e-09	4.4384e-09	2.1361e-09	1.2937e-09	8.6738e-10	2.1766e-10
	mv	3.8401e-08	1.0603e-08	5.4553e-09	2.5366e-09	1.5243e-09	1.0270e-09	2.6084e-10
2	1	7.8742e-08	2.1670e-08	9.5788e-09	4.1221e-09	2.5035e-09	1.6305e-09	3.9319e-10
	2	7.5358e-08	2.2906e-08	1.0281e-08	4.4671e-09	2.5115e-09	1.6106e-09	3.7923e-10
	3	6.5939e-08	2.2221e-08	9.6608e-09	3.9730e-09	2.5116e-09	1.6334e-09	3.7719e-10
	4	5.4969e-08	1.9852e-08	9.0584e-09	4.1518e-09	2.3970e-09	1.5451e-09	3.4669e-10
	5	4.4893e-08	1.6600e-08	7.5892e-09	3.5847e-09	2.0459e-09	1.3077e-09	2.9034e-10
	mv	6.3980e-08	2.0650e-08	9.2337e-09	4.0598e-09	2.3939e-09	1.5455e-09	3.5733e-10
5.5	1	1.0324e-07	3.5042e-08	1.7608e-08	6.2272e-09	3.6637e-09	2.4102e-09	6.0715e-10
	2	1.0015e-07	3.7354e-08	1.9031e-08	6.8235e-09	3.7811e-09	2.5393e-09	6.1683e-10
	3	8.9628e-08	3.6641e-08	1.8822e-08	6.7036e-09	3.8050e-09	2.5072e-09	6.1210e-10
	4	7.7002e-08	3.3149e-08	1.7080e-08	6.4876e-09	3.6509e-09	2.4104e-09	5.6818e-10
	5	6.4815e-08	2.8061e-08	1.4445e-08	5.6458e-09	3.1444e-09	2.0615e-09	4.8160e-10
	mv	8.6965e-08	3.4050e-08	1.7397e-08	6.3775e-09	3.6090e-09	2.3857e-09	5.7717e-10
11	1	1.3129e-07	5.2679e-08	2.8415e-08	1.0201e-08	5.5013e-09	3.5768e-09	9.4274e-10
	2	1.2928e-07	5.6666e-08	3.0900e-08	1.1321e-08	5.9952e-09	3.8211e-09	9.8667e-10
	3	1.1852e-07	5.6235e-08	3.0796e-08	1.1344e-08	5.9986e-09	3.8806e-09	9.9119e-10
	4	1.0497e-07	5.1541e-08	2.8183e-08	1.0872e-08	5.6206e-09	3.6530e-09	9.3416e-10
	5	9.0937e-08	4.4170e-08	2.4029e-08	9.4550e-09	4.8550e-09	3.1355e-09	8.0463e-10
	mv	1.1500e-07	5.2258e-08	2.8465e-08	1.0639e-08	5.5941e-09	3.6134e-09	9.3188e-10

Table I.1: Immission power at 10m distance (BER 10^{-6})

Speed [MBit/s]	P	Immission power in [mW]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	6.2263e-08	1.4894e-08	7.5638e-09	3.4940e-09	2.1887e-09	1.4864e-09	3.8426e-10
	2	5.9587e-08	1.5654e-08	8.0393e-09	3.7100e-09	2.0311e-09	1.4272e-09	3.5428e-10
	3	5.2139e-08	1.4394e-08	7.4162e-09	3.2883e-09	2.1146e-09	1.4104e-09	3.6350e-10
	4	4.3464e-08	1.3575e-08	6.9911e-09	3.2724e-09	2.0030e-09	1.3755e-09	3.3822e-10
	5	3.5498e-08	1.1328e-08	5.8411e-09	2.7711e-09	1.7048e-09	1.1671e-09	2.8885e-10
	mv	5.0590e-08	1.3969e-08	7.1703e-09	3.3072e-09	2.0084e-09	1.3733e-09	3.4582e-10
2	1	1.0374e-07	2.8548e-08	1.2619e-08	5.4296e-09	3.2920e-09	2.1573e-09	5.2048e-10
	2	9.9277e-08	3.0177e-08	1.3545e-08	5.8789e-09	3.3000e-09	2.1308e-09	5.0264e-10
	3	8.6868e-08	2.9275e-08	1.2727e-08	5.2240e-09	3.3058e-09	2.1648e-09	4.9952e-10
	4	7.2416e-08	2.6153e-08	1.1933e-08	5.4561e-09	3.1519e-09	2.0429e-09	4.5949e-10
	5	5.9143e-08	2.1869e-08	9.9980e-09	4.7091e-09	2.6864e-09	1.7296e-09	3.8499e-10
	mv	8.4288e-08	2.7204e-08	1.2164e-08	5.3395e-09	3.1472e-09	2.0451e-09	4.7343e-10
5.5	1	1.4490e-07	4.9186e-08	2.4715e-08	8.7440e-09	5.1453e-09	3.3731e-09	8.5158e-10
	2	1.4056e-07	5.2431e-08	2.6713e-08	9.5815e-09	5.3056e-09	3.5608e-09	8.6697e-10
	3	1.2580e-07	5.1430e-08	2.6419e-08	9.4127e-09	5.3570e-09	3.5180e-09	8.6075e-10
	4	1.0808e-07	4.6529e-08	2.3973e-08	9.1113e-09	5.1320e-09	3.3761e-09	8.0020e-10
	5	9.0976e-08	3.9387e-08	2.0275e-08	7.9297e-09	4.4150e-09	2.8855e-09	6.8001e-10
	mv	1.2207e-07	4.7793e-08	2.4419e-08	8.9558e-09	5.0710e-09	3.3427e-09	8.1190e-10
11	1	1.8645e-07	7.4814e-08	4.0354e-08	1.5690e-08	7.9273e-09	5.1172e-09	1.3673e-09
	2	1.8360e-07	8.0476e-08	4.3884e-08	1.7417e-08	8.6674e-09	5.6099e-09	1.4361e-09
	3	1.6832e-07	7.9864e-08	4.3735e-08	1.7774e-08	8.6632e-09	5.5589e-09	1.4459e-09
	4	1.4908e-07	7.3197e-08	4.0024e-08	1.6733e-08	8.1795e-09	5.2654e-09	1.3697e-09
	5	1.2915e-07	6.2730e-08	3.4125e-08	1.4555e-08	7.0867e-09	4.5339e-09	1.1830e-09
	mv	1.6332e-07	7.4216e-08	4.0424e-08	1.6434e-08	8.1048e-09	5.2171e-09	1.3604e-09

Table I.2: Immission power at 10m distance (BER 10^{-8})

Speed [MBit/s]	P	99% percentil of imission power in [mW]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	5.8164e-08	2.1812e-08	1.1215e-08	5.7510e-09	3.2768e-09	2.5556e-09	7.1728e-10
	2	5.4743e-08	2.2992e-08	1.1840e-08	6.2514e-09	3.2872e-09	2.0944e-09	6.2878e-10
	3	4.6531e-08	2.3266e-08	1.1569e-08	6.2994e-09	3.2981e-09	2.0808e-09	7.4487e-10
	4	5.4743e-08	2.2992e-08	1.1457e-08	5.8825e-09	3.0749e-09	2.5540e-09	6.6092e-10
	5	5.8164e-08	2.1812e-08	1.0800e-08	5.1112e-09	3.2768e-09	2.2114e-09	5.6433e-10
2	1	1.1633e-07	2.9082e-08	1.9388e-08	8.0747e-09	4.4208e-09	3.7177e-09	1.1052e-09
	2	1.0949e-07	2.7371e-08	2.0438e-08	8.5249e-09	4.5564e-09	3.9786e-09	9.3889e-10
	3	9.3064e-08	2.9082e-08	2.0681e-08	8.5380e-09	4.5288e-09	3.9518e-09	9.3275e-10
	4	1.0949e-07	2.7371e-08	2.0438e-08	8.2141e-09	4.4833e-09	3.8869e-09	9.4517e-10
	5	1.1633e-07	2.9082e-08	1.9388e-08	7.3116e-09	4.0285e-09	3.4056e-09	9.0345e-10
5.5	1	2.4292e-07	6.0731e-08	2.6991e-08	1.5641e-08	8.9231e-09	5.5846e-09	1.7840e-09
	2	2.2863e-07	5.7158e-08	2.6924e-08	1.6605e-08	9.3314e-09	5.7559e-09	1.9030e-09
	3	1.9434e-07	6.0731e-08	2.6724e-08	1.6687e-08	1.3006e-08	7.9542e-09	1.8923e-09
	4	2.2863e-07	5.7158e-08	2.6397e-08	1.5911e-08	1.1603e-08	5.6635e-09	1.7459e-09
	5	2.4292e-07	6.0731e-08	2.6991e-08	1.4575e-08	9.7655e-09	5.2044e-09	1.5819e-09
11	1	4.6615e-07	1.1654e-07	5.1795e-08	2.7968e-08	1.5898e-08	1.0358e-08	3.5667e-09
	2	4.3873e-07	1.0968e-07	5.1665e-08	3.1864e-08	1.6865e-08	1.0832e-08	3.7195e-09
	3	3.7292e-07	1.1654e-07	5.1282e-08	3.2022e-08	1.7349e-08	1.1034e-08	3.6486e-09
	4	4.3873e-07	1.0968e-07	5.0655e-08	2.9482e-08	1.6178e-08	1.0158e-08	3.5431e-09
	5	4.6615e-07	1.1654e-07	5.1795e-08	2.7968e-08	1.6339e-08	9.0422e-09	3.1429e-09

Table I.3: 99% percentil of imission power at 10m distance (BER 10^{-6})

Speed [MBit/s]	P	99% percentil of imission power in [mW]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	7.6627e-08	2.8735e-08	1.4774e-08	7.5774e-09	4.3189e-09	3.2052e-09	8.4917e-10
	2	7.2119e-08	3.0290e-08	1.5598e-08	8.2368e-09	4.5040e-09	2.7589e-09	9.3462e-10
	3	6.1301e-08	3.0651e-08	1.5241e-08	5.8475e-09	4.3470e-09	2.6815e-09	9.6042e-10
	4	7.2119e-08	3.0290e-08	1.5094e-08	7.7507e-09	4.1314e-09	2.6204e-09	9.1482e-10
	5	7.6627e-08	2.8735e-08	1.4228e-08	6.7344e-09	3.6190e-09	2.7323e-09	8.0408e-10
2	1	1.5325e-07	3.8313e-08	2.5542e-08	1.0637e-08	5.8244e-09	4.8970e-09	1.4171e-09
	2	1.4424e-07	3.6060e-08	2.6924e-08	1.1230e-08	6.0030e-09	5.2408e-09	1.2393e-09
	3	1.2260e-07	3.8313e-08	2.7245e-08	1.1248e-08	5.9666e-09	5.3230e-09	1.2312e-09
	4	1.4424e-07	3.6060e-08	2.6924e-08	1.0821e-08	5.9066e-09	4.7832e-09	1.4101e-09
	5	1.5325e-07	3.8313e-08	2.5542e-08	9.6321e-09	5.3075e-09	4.2784e-09	1.2221e-09
5.5	1	3.4097e-07	8.5243e-08	3.7885e-08	2.1955e-08	1.2526e-08	7.8384e-09	2.6094e-09
	2	3.2091e-07	8.0228e-08	3.7791e-08	2.3308e-08	1.3099e-08	8.0787e-09	2.7212e-09
	3	2.7278e-07	8.5243e-08	3.7510e-08	2.3424e-08	1.8258e-08	8.0952e-09	2.6270e-09
	4	3.2091e-07	8.0228e-08	3.7052e-08	2.2334e-08	1.6288e-08	7.9491e-09	2.4898e-09
	5	3.4097e-07	8.5243e-08	3.7885e-08	2.0458e-08	1.3709e-08	7.3047e-09	2.2479e-09
11	1	6.6201e-07	1.6550e-07	7.3557e-08	2.6480e-08	2.1749e-08	1.4183e-08	4.8634e-09
	2	6.2307e-07	1.5577e-07	7.3374e-08	2.6414e-08	2.3089e-08	1.4974e-08	5.1876e-09
	3	5.2961e-07	1.6550e-07	7.2829e-08	2.6218e-08	2.3204e-08	1.5138e-08	4.8805e-09
	4	6.2307e-07	1.5577e-07	7.1939e-08	2.6414e-08	2.2124e-08	1.4428e-08	4.6919e-09
	5	6.6201e-07	1.6550e-07	7.3557e-08	2.6480e-08	2.0266e-08	1.2843e-08	4.1986e-09

Table I.4: 99% percentil of imission power at 10m distance (BER 10^{-8})

Speed [MBit/s]	P	Peak immission power in [mW]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	5.8164e-08	2.6174e-08	1.7144e-08	7.9881e-09	5.1751e-09	3.7485e-09	1.0673e-09
	2	5.4743e-08	2.7371e-08	1.8287e-08	8.5722e-09	5.4887e-09	3.4866e-09	1.0765e-09
	3	4.6531e-08	2.6174e-08	1.7783e-08	8.4339e-09	5.4540e-09	3.4576e-09	1.2081e-09
	4	5.4743e-08	2.7371e-08	1.6539e-08	8.2750e-09	5.1544e-09	3.7591e-09	1.1268e-09
	5	5.8164e-08	2.6174e-08	1.5266e-08	7.7327e-09	4.7329e-09	3.2748e-09	9.6867e-10
2	1	1.1633e-07	2.9082e-08	2.4784e-08	1.2086e-08	8.9549e-09	6.1546e-09	1.7025e-09
	2	1.0949e-07	2.7371e-08	2.5059e-08	1.3076e-08	8.7474e-09	6.6432e-09	1.7982e-09
	3	9.3064e-08	2.9082e-08	2.5226e-08	1.3483e-08	8.8022e-09	6.7056e-09	1.7983e-09
	4	1.0949e-07	2.7371e-08	2.3390e-08	1.3338e-08	8.2372e-09	6.2301e-09	1.6950e-09
	5	1.1633e-07	2.9082e-08	1.9818e-08	1.1965e-08	9.4891e-09	5.3570e-09	1.5033e-09
5.5	1	2.4292e-07	6.0731e-08	2.6991e-08	2.5237e-08	1.4139e-08	1.0071e-08	3.0297e-09
	2	2.2863e-07	5.7158e-08	2.6924e-08	2.7851e-08	1.4641e-08	1.1149e-08	3.1669e-09
	3	1.9434e-07	6.0731e-08	2.6724e-08	2.8155e-08	1.4632e-08	1.1489e-08	3.1638e-09
	4	2.2863e-07	5.7158e-08	2.6397e-08	2.7851e-08	1.4306e-08	1.1219e-08	3.0789e-09
	5	2.4292e-07	6.0731e-08	2.6991e-08	2.4864e-08	1.2960e-08	1.0050e-08	2.7739e-09
11	1	4.6615e-07	1.1654e-07	5.1795e-08	5.2648e-08	3.1126e-08	1.9551e-08	5.8294e-09
	2	4.3873e-07	1.0968e-07	5.1665e-08	5.4383e-08	3.4516e-08	2.1587e-08	6.0791e-09
	3	3.7292e-07	1.1654e-07	5.1282e-08	5.4028e-08	3.5271e-08	2.2208e-08	5.9671e-09
	4	4.3873e-07	1.0968e-07	5.0655e-08	5.3445e-08	3.3007e-08	2.2235e-08	6.1198e-09
	5	4.6615e-07	1.1654e-07	5.1795e-08	4.7712e-08	2.8510e-08	2.0005e-08	5.6781e-09

Table I.5: Peak immission power at 10m distance (BER 10^{-6})

Speed [MBit/s]	P	Peak immission power in [mW]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	7.6627e-08	3.4482e-08	2.2585e-08	1.0525e-08	6.6654e-09	4.7792e-09	1.4575e-09
	2	7.2119e-08	3.6060e-08	2.4091e-08	1.1295e-08	7.2342e-09	5.0795e-09	1.3885e-09
	3	6.1301e-08	3.4482e-08	2.3428e-08	1.1335e-08	7.1731e-09	5.3430e-09	1.3916e-09
	4	7.2119e-08	3.6060e-08	2.1789e-08	1.1028e-08	6.6269e-09	4.8903e-09	1.3043e-09
	5	7.6627e-08	3.4482e-08	2.0111e-08	1.0136e-08	5.8637e-09	4.4356e-09	1.2604e-09
2	1	1.5325e-07	3.8313e-08	3.2650e-08	1.6532e-08	1.0739e-08	8.0413e-09	2.3006e-09
	2	1.4424e-07	3.6060e-08	3.3012e-08	1.7345e-08	1.1525e-08	8.1809e-09	2.3711e-09
	3	1.2260e-07	3.8313e-08	3.3233e-08	1.7317e-08	1.1476e-08	8.9164e-09	2.3239e-09
	4	1.4424e-07	3.6060e-08	3.0814e-08	1.6816e-08	1.1029e-08	8.1369e-09	2.2613e-09
	5	1.5325e-07	3.8313e-08	2.6108e-08	1.5762e-08	9.9994e-09	7.6620e-09	2.0306e-09
5.5	1	3.4097e-07	8.5243e-08	3.7885e-08	3.5425e-08	1.9848e-08	1.5374e-08	4.1474e-09
	2	3.2091e-07	8.0228e-08	3.7791e-08	3.9094e-08	2.0553e-08	1.6015e-08	4.4056e-09
	3	2.7278e-07	8.5243e-08	3.7510e-08	3.9520e-08	2.0541e-08	1.5706e-08	4.4811e-09
	4	3.2091e-07	8.0228e-08	3.7052e-08	3.9094e-08	2.0433e-08	1.5054e-08	4.4311e-09
	5	3.4097e-07	8.5243e-08	3.7885e-08	3.4900e-08	1.8643e-08	1.3382e-08	4.1791e-09
11	1	6.6201e-07	1.6550e-07	7.3557e-08	7.4770e-08	4.8947e-08	3.0135e-08	7.6804e-09
	2	6.2307e-07	1.5577e-07	7.3374e-08	7.7234e-08	5.0643e-08	3.1833e-08	8.5356e-09
	3	5.2961e-07	1.6550e-07	7.2829e-08	7.6730e-08	5.2275e-08	3.1404e-08	8.6525e-09
	4	6.2307e-07	1.5577e-07	7.1939e-08	7.5902e-08	4.8603e-08	2.8713e-08	8.0739e-09
	5	6.6201e-07	1.6550e-07	7.3557e-08	6.7760e-08	4.1377e-08	2.4641e-08	7.0209e-09

Table I.6: Peak immission power at 10m distance (BER 10^{-8})

Speed [MBit/s]	P	Peak immission energy in [mWs]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	5.4081e-06	1.5814e-08	1.6733e-11	1.6362e-10	3.3545e-11	7.7969e-13	2.0279e-14
	2	5.0900e-06	1.6538e-08	1.7848e-11	1.7559e-10	2.0401e-11	3.7028e-12	2.7128e-13
	3	4.7508e-06	1.6107e-08	1.7357e-11	1.5788e-11	3.8178e-13	1.8326e-12	4.8443e-13
	4	4.9925e-07	3.0659e-10	1.8078e-11	2.9376e-12	1.0721e-12	8.4203e-13	4.5186e-13
	5	5.3046e-07	2.9317e-10	1.6685e-11	2.7451e-12	9.8445e-13	8.1542e-13	3.8844e-13
2	1	5.4077e-06	1.3522e-06	3.9851e-09	5.8980e-12	6.5102e-12	1.4402e-12	4.8690e-13
	2	5.0896e-06	2.6701e-06	4.0293e-09	6.3810e-12	8.6599e-12	3.2220e-12	5.1430e-13
	3	4.7505e-06	1.4848e-06	5.3211e-09	1.3119e-11	4.2955e-12	3.2522e-12	6.2761e-13
	4	4.9924e-07	1.5223e-06	4.9339e-09	1.2978e-11	5.9885e-12	3.0341e-12	2.8476e-13
	5	5.3045e-07	1.3261e-07	4.1803e-09	1.2461e-10	6.8986e-12	2.6089e-12	2.2850e-13
5.5	1	4.5513e-06	1.1378e-06	5.0569e-07	1.1962e-11	1.3446e-11	2.3970e-12	2.1814e-13
	2	4.2835e-06	2.3413e-06	5.9842e-07	4.0495e-11	1.0425e-11	2.6424e-12	6.9672e-14
	3	4.3194e-06	1.3498e-06	5.9398e-07	6.7572e-11	1.8700e-11	2.7228e-12	3.0372e-13
	4	7.9812e-07	1.4699e-06	5.8672e-07	2.6347e-11	3.4049e-12	8.8518e-12	2.9558e-13
	5	8.4801e-07	2.1199e-07	9.4224e-08	2.3521e-11	3.0844e-12	7.9291e-12	5.5478e-14
11	1	5.0380e-06	1.2595e-06	5.5978e-07	1.5315e-10	5.1981e-12	3.2649e-12	9.6768e-13
	2	4.7416e-06	2.7202e-06	7.2296e-07	1.5820e-10	5.7641e-12	3.6050e-12	1.0091e-12
	3	5.2182e-06	1.6307e-06	7.1760e-07	1.9018e-10	5.8903e-12	3.6865e-12	3.5206e-13
	4	1.3975e-06	1.8842e-06	7.0883e-07	2.5664e-10	5.5122e-12	3.6910e-12	3.6107e-13
	5	1.4849e-06	3.7120e-07	1.6498e-07	2.2911e-10	4.7612e-12	3.3208e-12	3.3501e-13

Table I.7: Peak immission energy at 10m distance (BER 10^{-6})

Speed [MBit/s]	P	Peak immission energy in [mWs]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	7.1247e-06	2.0834e-08	1.0294e-10	1.1135e-10	6.5055e-12	2.7050e-12	1.3117e-14
	2	6.7056e-06	2.1787e-08	1.0981e-10	1.1950e-10	7.0534e-12	7.3653e-13	1.2497e-14
	3	6.2589e-06	2.1220e-08	1.0678e-10	5.9951e-11	2.6641e-11	3.2314e-11	6.9440e-13
	4	6.5773e-07	4.0390e-10	1.3248e-11	1.0763e-11	6.4613e-12	1.0798e-11	1.2913e-13
	5	6.9883e-07	3.8623e-10	1.2227e-11	9.8931e-12	1.7955e-11	2.2577e-12	5.6718e-14
2	1	7.1242e-06	1.7813e-06	5.2499e-09	4.4454e-11	3.2841e-11	3.4739e-12	3.2208e-13
	2	6.7051e-06	3.5176e-06	5.3081e-09	4.6641e-11	3.5242e-11	3.9841e-12	4.3629e-13
	3	6.2584e-06	1.9562e-06	7.0100e-09	4.2150e-11	2.2643e-11	4.4582e-14	3.2534e-13
	4	6.5770e-07	2.0055e-06	6.4999e-09	2.4585e-11	5.6356e-12	5.2402e-12	1.0854e-13
	5	6.9881e-07	1.7470e-07	5.5071e-09	2.1562e-11	3.8818e-11	3.3559e-12	9.7468e-14
5.5	1	6.3882e-06	1.5971e-06	7.0980e-07	8.4665e-12	2.3520e-11	3.6743e-12	3.9815e-13
	2	6.0124e-06	3.2863e-06	8.3995e-07	6.6264e-11	1.4655e-11	1.8418e-12	6.7405e-13
	3	6.0628e-06	1.8946e-06	8.3372e-07	1.0437e-10	1.4584e-11	1.2706e-11	4.4363e-13
	4	1.1203e-06	2.0632e-06	8.2352e-07	3.6983e-11	4.8426e-12	3.5377e-12	4.8742e-14
	5	1.1903e-06	2.9756e-07	1.3225e-07	3.3016e-11	4.4184e-12	3.1447e-12	4.5970e-14
11	1	7.1548e-06	1.7887e-06	7.9498e-07	2.4824e-11	8.1253e-12	4.9722e-12	3.5330e-13
	2	6.7339e-06	3.8632e-06	1.0267e-06	2.5642e-11	2.5220e-11	5.2524e-12	1.2035e-12
	3	7.4109e-06	2.3159e-06	1.0191e-06	5.0718e-11	8.6776e-12	1.0458e-11	1.2200e-12
	4	1.9847e-06	2.6759e-06	1.0067e-06	1.2600e-11	8.0681e-12	9.5615e-12	1.3322e-12
	5	2.1088e-06	5.2718e-07	2.3431e-07	1.1248e-11	6.8686e-12	4.0658e-12	4.6338e-13

Table I.8: Peak immission energy at 10m distance (BER 10^{-8})

Speed [MBit/s]	P	Immission energy in [mWs]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	5.6733e-06	3.5361e-06	3.1990e-06	2.7639e-06	2.1527e-06	1.7652e-06	1.7042e-07
	2	5.4295e-06	3.7167e-06	3.3966e-06	2.9398e-06	1.9962e-06	1.6911e-06	1.5673e-07
	3	4.7508e-06	3.4174e-06	3.1226e-06	2.6015e-06	2.0844e-06	1.6766e-06	1.6097e-07
	4	3.9604e-06	3.2230e-06	2.9478e-06	2.6046e-06	1.9686e-06	1.6264e-06	1.4983e-07
	5	3.2345e-06	2.6896e-06	2.4616e-06	2.2095e-06	1.6768e-06	1.3738e-06	1.2780e-07
	mv	4.6097e-06	3.3166e-06	3.0255e-06	2.6239e-06	1.9758e-06	1.6266e-06	1.5315e-07
2	1	5.6730e-06	2.6063e-06	2.4127e-06	2.0774e-06	1.9094e-06	1.4937e-06	6.1632e-07
	2	5.4291e-06	2.7550e-06	2.5897e-06	2.2513e-06	1.9156e-06	1.4756e-06	5.9445e-07
	3	4.7505e-06	2.6727e-06	2.4334e-06	2.0023e-06	1.9157e-06	1.4964e-06	5.9124e-07
	4	3.9602e-06	2.3877e-06	2.2816e-06	2.0924e-06	1.8283e-06	1.4156e-06	5.4344e-07
	5	3.2343e-06	1.9966e-06	1.9116e-06	1.8066e-06	1.5604e-06	1.1980e-06	4.5511e-07
	mv	4.6094e-06	2.4836e-06	2.3258e-06	2.0460e-06	1.8259e-06	1.4159e-06	5.6011e-07
5.5	1	4.9753e-06	2.3237e-06	1.5443e-06	1.2977e-06	1.1432e-06	9.9631e-07	4.7962e-07
	2	4.8263e-06	2.4770e-06	1.6691e-06	1.4220e-06	1.1799e-06	1.0497e-06	4.8727e-07
	3	4.3194e-06	2.4297e-06	1.6508e-06	1.3970e-06	1.1874e-06	1.0364e-06	4.8353e-07
	4	3.7109e-06	2.1981e-06	1.4979e-06	1.3520e-06	1.1393e-06	9.9643e-07	4.4884e-07
	5	3.1236e-06	1.8608e-06	1.2669e-06	1.1765e-06	9.8120e-07	8.5216e-07	3.8044e-07
	mv	4.1911e-06	2.2578e-06	1.5258e-06	1.3290e-06	1.1262e-06	9.8620e-07	4.5594e-07
11	1	5.7804e-06	2.7497e-06	1.8401e-06	1.4029e-06	1.0714e-06	9.5984e-07	6.1491e-07
	2	5.6919e-06	2.9578e-06	2.0011e-06	1.5569e-06	1.1676e-06	1.0254e-06	6.4356e-07
	3	5.2182e-06	2.9353e-06	1.9943e-06	1.5600e-06	1.1683e-06	1.0414e-06	6.4651e-07
	4	4.6218e-06	2.6902e-06	1.8251e-06	1.4952e-06	1.0947e-06	9.8030e-07	6.0931e-07
	5	4.0038e-06	2.3055e-06	1.5561e-06	1.3003e-06	9.4556e-07	8.4144e-07	5.2483e-07
	mv	5.0632e-06	2.7277e-06	1.8433e-06	1.4631e-06	1.0895e-06	9.6968e-07	6.0783e-07

Table I.9: Immission energy at 10m distance (BER 10^{-6})

Speed [MBit/s]	P	Immission energy in [mWs]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	7.4741e-06	4.6586e-06	4.1801e-06	3.6550e-06	2.8882e-06	2.2629e-06	3.4507e-07
	2	7.1529e-06	4.8965e-06	4.4429e-06	3.8809e-06	2.6803e-06	2.1728e-06	3.1815e-07
	3	6.2589e-06	4.5022e-06	4.0986e-06	3.4397e-06	2.7904e-06	2.1473e-06	3.2643e-07
	4	5.2176e-06	4.2461e-06	3.8636e-06	3.4231e-06	2.6431e-06	2.0942e-06	3.0373e-07
	5	4.2612e-06	3.5433e-06	3.2281e-06	2.8987e-06	2.2497e-06	1.7768e-06	2.5939e-07
	mv	6.0729e-06	4.3693e-06	3.9627e-06	3.4595e-06	2.6503e-06	2.0908e-06	3.1055e-07
2	1	7.4736e-06	3.4336e-06	3.1785e-06	2.7722e-06	2.4840e-06	1.9610e-06	8.5291e-07
	2	7.1524e-06	3.6295e-06	3.4117e-06	3.0016e-06	2.4900e-06	1.9370e-06	8.2368e-07
	3	6.2584e-06	3.5210e-06	3.2057e-06	2.6673e-06	2.4944e-06	1.9679e-06	8.1855e-07
	4	5.2172e-06	3.1456e-06	3.0058e-06	2.7857e-06	2.3783e-06	1.8570e-06	7.5296e-07
	5	4.2609e-06	2.6303e-06	2.5183e-06	2.4044e-06	2.0270e-06	1.5722e-06	6.3088e-07
	mv	6.0725e-06	3.2720e-06	3.0640e-06	2.7262e-06	2.3747e-06	1.8590e-06	7.7580e-07
5.5	1	6.9833e-06	3.2615e-06	2.1676e-06	1.8209e-06	1.6057e-06	1.3882e-06	6.7308e-07
	2	6.7742e-06	3.4767e-06	2.3428e-06	1.9953e-06	1.6557e-06	1.4654e-06	6.8524e-07
	3	6.0628e-06	3.4103e-06	2.3170e-06	1.9601e-06	1.6717e-06	1.4478e-06	6.8033e-07
	4	5.2087e-06	3.0854e-06	2.1025e-06	1.8974e-06	1.6015e-06	1.3894e-06	6.3247e-07
	5	4.3844e-06	2.6118e-06	1.7782e-06	1.6513e-06	1.3777e-06	1.1875e-06	5.3747e-07
	mv	5.8827e-06	3.1692e-06	2.1416e-06	1.8650e-06	1.5825e-06	1.3756e-06	6.4172e-07
11	1	8.2092e-06	3.9050e-06	2.6133e-06	1.6138e-06	1.4272e-06	1.2652e-06	8.4854e-07
	2	8.0836e-06	4.2006e-06	2.8419e-06	1.7914e-06	1.5604e-06	1.3870e-06	8.9123e-07
	3	7.4109e-06	4.1686e-06	2.8322e-06	1.8281e-06	1.5597e-06	1.3744e-06	8.9731e-07
	4	6.5638e-06	3.8206e-06	2.5919e-06	1.7211e-06	1.4726e-06	1.3018e-06	8.4999e-07
	5	5.6862e-06	3.2743e-06	2.2099e-06	1.4971e-06	1.2758e-06	1.1210e-06	7.3412e-07
	mv	7.1907e-06	3.8738e-06	2.6179e-06	1.6903e-06	1.4591e-06	1.2899e-06	8.4424e-07

Table I.10: Immission energy at 10m distance (BER 10^{-8})

Appendix J

TABLES OF THE IMMISSION POWER FOR 50M

Speed [MBit/s]	P	Immission power in [mW]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	1.1306e-06	1.7052e-07	7.8658e-08	3.7717e-08	2.1769e-08	1.4612e-08	4.1500e-09
	2	4.4687e-07	1.2067e-07	7.4733e-08	3.5339e-08	2.2843e-08	1.5621e-08	3.9923e-09
	3	1.7059e-07	1.7998e-07	6.5529e-08	2.9316e-08	1.9904e-08	1.3254e-08	3.3285e-09
	4	1.1789e-07	7.7385e-08	5.8495e-08	2.5789e-08	1.5851e-08	1.0313e-08	2.4050e-09
	5	1.5379e-07	4.0405e-08	2.3165e-08	1.2337e-08	7.7731e-09	5.2622e-09	1.3369e-09
	mv	4.0394e-07	1.1779e-07	6.0116e-08	2.8099e-08	1.7628e-08	1.1812e-08	3.0425e-09
2	1	1.8836e-06	3.2469e-07	1.1842e-07	5.2671e-08	3.1011e-08	2.0417e-08	5.5839e-09
	2	7.4452e-07	2.3196e-07	1.3253e-07	5.2478e-08	3.3300e-08	2.2303e-08	5.6386e-09
	3	2.8422e-07	3.5121e-07	1.1718e-07	4.6415e-08	3.1140e-08	2.0328e-08	4.3614e-09
	4	1.9641e-07	1.4986e-07	1.0081e-07	5.0353e-08	2.7298e-08	1.6351e-08	3.0865e-09
	5	2.5624e-07	8.0945e-08	4.1151e-08	2.4052e-08	1.3344e-08	8.3966e-09	1.6677e-09
	mv	6.7300e-07	2.2773e-07	1.0202e-07	4.5194e-08	2.7219e-08	1.7559e-08	4.0676e-09
5.5	1	2.3779e-06	5.0224e-07	2.0760e-07	7.3725e-08	4.2109e-08	2.7057e-08	7.6201e-09
	2	9.5056e-07	3.7131e-07	2.4325e-07	7.8469e-08	4.8057e-08	3.2330e-08	8.6477e-09
	3	3.8633e-07	5.7910e-07	2.2234e-07	7.9623e-08	4.6768e-08	3.1298e-08	7.5936e-09
	4	3.2841e-07	2.5827e-07	1.9268e-07	8.0873e-08	4.4632e-08	2.8333e-08	5.7115e-09
	5	5.3071e-07	1.6662e-07	8.9980e-08	4.1040e-08	2.2752e-08	1.5172e-08	3.1300e-09
	mv	9.1478e-07	3.7551e-07	1.9117e-07	7.0746e-08	4.0864e-08	2.6838e-08	6.5406e-09
11	1	2.8931e-06	7.1782e-07	3.2067e-07	1.0453e-07	5.9051e-08	3.8538e-08	1.0440e-08
	2	1.1723e-06	5.5202e-07	3.9160e-07	1.4190e-07	7.1908e-08	4.7234e-08	1.3162e-08
	3	5.1086e-07	8.8878e-07	3.6378e-07	1.4586e-07	7.4866e-08	4.7564e-08	1.2703e-08
	4	5.1894e-07	4.1423e-07	3.2164e-07	1.3043e-07	6.9858e-08	4.4194e-08	1.0490e-08
	5	9.5315e-07	3.0872e-07	1.6621e-07	6.8425e-08	3.6219e-08	2.4181e-08	6.0613e-09
	mv	1.2097e-06	5.7631e-07	3.1278e-07	1.1823e-07	6.2380e-08	4.0342e-08	1.0571e-08

Table J.1: Immission power at 50m distance (BER 10^{-6})

Speed [MBit/s]	P	Immission power in [mW]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	1.4894e-06	2.2465e-07	1.0243e-07	4.9746e-08	2.8865e-08	1.9339e-08	5.5157e-09
	2	5.8871e-07	1.5897e-07	9.7967e-08	4.6375e-08	2.9930e-08	2.0625e-08	5.2861e-09
	3	2.2474e-07	2.3711e-07	8.6535e-08	3.8206e-08	2.6018e-08	1.7723e-08	4.4339e-09
	4	1.5531e-07	1.0195e-07	7.7477e-08	3.2993e-08	2.0859e-08	1.4124e-08	3.2392e-09
	5	2.0261e-07	5.3230e-08	3.0638e-08	1.5708e-08	1.0325e-08	7.2613e-09	1.7792e-09
	mv	5.3215e-07	1.5518e-07	7.9010e-08	3.6606e-08	2.3200e-08	1.5814e-08	4.0508e-09
2	1	2.4815e-06	4.2775e-07	1.5600e-07	6.9844e-08	4.0781e-08	2.7049e-08	7.3661e-09
	2	9.8084e-07	3.0558e-07	1.7460e-07	6.8975e-08	4.3819e-08	2.9581e-08	7.4524e-09
	3	3.7443e-07	4.6268e-07	1.5437e-07	6.0773e-08	4.1093e-08	2.6804e-08	5.7995e-09
	4	2.5876e-07	1.9743e-07	1.3280e-07	6.6039e-08	3.5804e-08	2.1561e-08	4.0944e-09
	5	3.3758e-07	1.0664e-07	5.4213e-08	3.1509e-08	1.7378e-08	1.1143e-08	2.2114e-09
	mv	8.8662e-07	3.0002e-07	1.3440e-07	5.9428e-08	3.5775e-08	2.3227e-08	5.3848e-09
5.5	1	3.3376e-06	7.0496e-07	2.9139e-07	1.0355e-07	5.9144e-08	3.7797e-08	1.0605e-08
	2	1.3342e-06	5.2117e-07	3.4144e-07	1.1004e-07	6.7313e-08	4.5298e-08	1.2068e-08
	3	5.4225e-07	8.1283e-07	3.1208e-07	1.1179e-07	6.5954e-08	4.3895e-08	1.0656e-08
	4	4.6096e-07	3.6251e-07	2.7045e-07	1.1366e-07	6.2682e-08	3.9666e-08	8.1494e-09
	5	7.4491e-07	2.3387e-07	1.2630e-07	5.7674e-08	3.1826e-08	2.1214e-08	4.4984e-09
	mv	1.2840e-06	5.2707e-07	2.6833e-07	9.9344e-08	5.7384e-08	3.7574e-08	9.1954e-09
11	1	4.1087e-06	1.0194e-06	4.5541e-07	1.6036e-07	8.1787e-08	5.4770e-08	1.4886e-08
	2	1.6649e-06	7.8397e-07	5.5614e-07	2.1851e-07	1.0468e-07	6.6679e-08	1.8824e-08
	3	7.2552e-07	1.2622e-06	5.1663e-07	2.2681e-07	1.0953e-07	6.7172e-08	1.8628e-08
	4	7.3699e-07	5.8828e-07	4.5679e-07	1.9999e-07	1.0205e-07	6.5021e-08	1.5720e-08
	5	1.3536e-06	4.3844e-07	2.3604e-07	1.0584e-07	5.4546e-08	3.6062e-08	9.1549e-09
	mv	1.7179e-06	8.1847e-07	4.4420e-07	1.8230e-07	9.0518e-08	5.7941e-08	1.5443e-08

Table J.2: Immission power at 50m distance (BER 10^{-8})

Speed [MBit/s]	P	99% percentil of imission power in mW]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	1.4541e-06	3.7751e-07	1.7516e-07	7.3219e-08	4.3058e-08	2.9149e-08	9.8304e-09
	2	5.6746e-07	1.6600e-07	1.5466e-07	6.9060e-08	4.9325e-08	3.3269e-08	1.0161e-08
	3	2.0057e-07	3.6353e-07	1.2080e-07	6.4428e-08	4.4746e-08	3.4882e-08	1.1682e-08
	4	5.6746e-07	1.6600e-07	1.4509e-07	7.2922e-08	5.1857e-08	3.0742e-08	9.9130e-09
	5	1.4541e-06	3.7751e-07	1.6778e-07	6.3981e-08	4.7770e-08	2.3412e-08	6.5810e-09
2	1	2.9082e-06	7.2706e-07	3.3557e-07	1.2796e-07	7.0323e-08	4.8315e-08	1.4744e-08
	2	1.1349e-06	2.8373e-07	2.8787e-07	1.2307e-07	6.7836e-08	5.0783e-08	1.5700e-08
	3	4.0114e-07	7.2706e-07	1.9703e-07	1.0911e-07	7.4609e-08	6.7463e-08	1.5948e-08
	4	1.1349e-06	2.8373e-07	2.6872e-07	1.2307e-07	6.5301e-08	4.6367e-08	1.3543e-08
	5	2.9082e-06	7.2706e-07	3.3557e-07	1.2317e-07	6.3603e-08	3.9966e-08	1.1037e-08
5.5	1	6.0731e-06	1.5183e-06	6.7479e-07	2.5721e-07	1.3796e-07	8.7815e-08	2.5235e-08
	2	2.3700e-06	5.9250e-07	6.0115e-07	2.2863e-07	1.6397e-07	9.1656e-08	2.7879e-08
	3	8.3767e-07	1.5183e-06	4.1146e-07	1.9434e-07	1.3080e-07	8.7088e-08	2.9445e-08
	4	2.3700e-06	5.9250e-07	5.6115e-07	2.4476e-07	1.2868e-07	8.8125e-08	2.6814e-08
	5	6.0731e-06	1.5183e-06	6.7479e-07	2.5227e-07	1.2871e-07	7.7860e-08	2.0807e-08
11	1	1.1654e-05	2.9134e-06	1.2949e-06	4.8408e-07	2.5578e-07	1.6123e-07	4.4282e-08
	2	4.5478e-06	1.1369e-06	1.1535e-06	4.3873e-07	2.3260e-07	1.8708e-07	4.5736e-08
	3	1.6074e-06	2.9134e-06	7.8955e-07	3.7292e-07	2.1819e-07	1.5818e-07	4.7299e-08
	4	4.5478e-06	1.1369e-06	1.0768e-06	4.3873e-07	2.3963e-07	1.5596e-07	4.5387e-08
	5	1.1654e-05	2.9134e-06	1.2949e-06	4.6615e-07	2.3783e-07	1.4387e-07	3.6175e-08

Table J.3: 99% percentil of imission power at 50m distance (BER 10^{-6})

Speed [MBit/s]	P	99% percentil of imission power in mW]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	1.9157e-06	4.9734e-07	2.3075e-07	9.6459e-08	5.6725e-08	3.8366e-08	1.1845e-08
	2	7.4758e-07	2.1869e-07	2.0375e-07	9.0981e-08	6.4981e-08	4.3829e-08	1.3153e-08
	3	2.6423e-07	4.7892e-07	1.5915e-07	8.4879e-08	5.8949e-08	4.0537e-08	1.2990e-08
	4	7.4758e-07	2.1869e-07	1.9114e-07	9.6068e-08	5.5656e-08	3.8339e-08	1.4460e-08
	5	1.9157e-06	4.9734e-07	2.2980e-07	8.4289e-08	4.3399e-08	3.0843e-08	8.2480e-09
2	1	3.8313e-06	9.5783e-07	4.4208e-07	1.6858e-07	9.2644e-08	6.0588e-08	1.9423e-08
	2	1.4952e-06	3.7379e-07	3.7925e-07	1.6214e-07	8.9367e-08	6.6902e-08	2.0084e-08
	3	5.2846e-07	9.5783e-07	2.5958e-07	1.4374e-07	9.8291e-08	8.8877e-08	2.1008e-08
	4	1.4952e-06	3.7379e-07	3.5402e-07	1.6214e-07	8.6028e-08	6.1085e-08	1.8545e-08
	5	3.8313e-06	9.5783e-07	4.4208e-07	1.6227e-07	8.3792e-08	5.2652e-08	1.4539e-08
5.5	1	8.5243e-06	2.1311e-06	9.4714e-07	3.6103e-07	1.9364e-07	1.2326e-07	3.5419e-08
	2	3.3265e-06	8.3164e-07	8.4378e-07	3.2091e-07	2.3015e-07	1.2315e-07	3.7336e-08
	3	1.1758e-06	2.1311e-06	5.7752e-07	2.7278e-07	1.8360e-07	1.2224e-07	3.6658e-08
	4	3.3265e-06	8.3164e-07	7.8764e-07	3.4355e-07	1.8062e-07	1.2369e-07	3.7635e-08
	5	8.5243e-06	2.1311e-06	9.4714e-07	3.5409e-07	1.8066e-07	1.0929e-07	3.1590e-08
11	1	1.6550e-05	4.1376e-06	1.8389e-06	6.6201e-07	3.5588e-07	2.2151e-07	5.9952e-08
	2	6.4587e-06	1.6147e-06	1.6382e-06	6.2307e-07	3.3033e-07	2.6176e-07	6.1040e-08
	3	2.2828e-06	4.1376e-06	1.1213e-06	5.2961e-07	3.0987e-07	1.9647e-07	6.2957e-08
	4	6.4587e-06	1.6147e-06	1.5293e-06	6.2307e-07	3.1789e-07	2.2149e-07	7.7066e-08
	5	1.6550e-05	4.1376e-06	1.8389e-06	6.6201e-07	3.5075e-07	2.0433e-07	5.2005e-08

Table J.4: 99% percentil of imission power at 50m distance (BER 10^{-8})

Speed [MBit/s]	P	Peak immission power in [mW]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	1.4541e-06	4.1367e-07	2.2054e-07	1.0230e-07	6.4566e-08	4.7646e-08	1.6429e-08
	2	5.6746e-07	2.8373e-07	2.3804e-07	1.2146e-07	7.5167e-08	5.7832e-08	1.8427e-08
	3	2.0057e-07	4.1367e-07	2.1007e-07	1.1096e-07	7.4644e-08	5.4637e-08	1.8495e-08
	4	5.6746e-07	2.8373e-07	2.0814e-07	1.1853e-07	7.4726e-08	5.5548e-08	1.6187e-08
	5	1.4541e-06	4.1367e-07	2.0932e-07	1.0112e-07	6.0168e-08	4.3970e-08	1.2393e-08
2	1	2.9082e-06	7.2706e-07	4.1391e-07	1.8134e-07	1.1334e-07	8.5206e-08	2.4330e-08
	2	1.1349e-06	2.8373e-07	4.1398e-07	1.9166e-07	1.2178e-07	9.6981e-08	2.7316e-08
	3	4.0114e-07	7.2706e-07	3.7556e-07	2.2192e-07	1.3247e-07	1.0004e-07	2.8639e-08
	4	1.1349e-06	2.8373e-07	3.2619e-07	2.1257e-07	1.2510e-07	8.3085e-08	2.6384e-08
	5	2.9082e-06	7.2706e-07	3.3557e-07	1.8134e-07	1.1430e-07	7.0228e-08	2.1389e-08
5.5	1	6.0731e-06	1.5183e-06	6.7479e-07	3.7373e-07	2.3003e-07	1.6888e-07	5.5386e-08
	2	2.3700e-06	5.9250e-07	6.0115e-07	4.4390e-07	2.8832e-07	1.8811e-07	5.3636e-08
	3	8.3767e-07	1.5183e-06	4.1146e-07	4.6342e-07	2.8252e-07	1.8660e-07	4.8705e-08
	4	2.3700e-06	5.9250e-07	5.6115e-07	4.4390e-07	2.5301e-07	1.9919e-07	5.2630e-08
	5	6.0731e-06	1.5183e-06	6.7479e-07	3.6439e-07	2.0839e-07	1.4147e-07	3.9728e-08
11	1	1.1654e-05	2.9134e-06	1.2949e-06	7.9245e-07	4.7780e-07	3.2407e-07	9.3306e-08
	2	4.5478e-06	1.1369e-06	1.1535e-06	9.1897e-07	5.5327e-07	3.6096e-07	1.0314e-07
	3	1.6074e-06	2.9134e-06	7.8955e-07	8.8927e-07	5.4213e-07	3.7790e-07	9.7070e-08
	4	4.5478e-06	1.1369e-06	1.0768e-06	8.5180e-07	5.4663e-07	4.0658e-07	1.1157e-07
	5	1.1654e-05	2.9134e-06	1.2949e-06	4.8408e-07	3.9989e-07	3.0863e-07	7.7251e-08

Table J.5: Peak immission power at 50m distance (BER 10^{-6})

Speed [MBit/s]	P	Peak immission power in [mW]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	1.9157e-06	5.4497e-07	2.9054e-07	1.3477e-07	8.2963e-08	6.2769e-08	2.1823e-08
	2	7.4758e-07	3.7379e-07	3.1360e-07	1.6001e-07	9.7395e-08	7.6188e-08	2.3084e-08
	3	2.6423e-07	5.4497e-07	2.7674e-07	1.5675e-07	1.0270e-07	7.4287e-08	2.2928e-08
	4	7.4758e-07	3.7379e-07	2.7420e-07	1.4511e-07	9.5849e-08	7.8085e-08	2.0239e-08
	5	1.9157e-06	5.4497e-07	2.7576e-07	1.2711e-07	7.6968e-08	5.3102e-08	1.9070e-08
2	1	3.8313e-06	9.5783e-07	5.4528e-07	2.4521e-07	1.5708e-07	1.0413e-07	3.3228e-08
	2	1.4952e-06	3.7379e-07	5.4537e-07	2.6022e-07	1.6701e-07	1.1867e-07	3.7105e-08
	3	5.2846e-07	9.5783e-07	4.9477e-07	2.4521e-07	1.7824e-07	1.3912e-07	3.7044e-08
	4	1.4952e-06	3.7379e-07	4.2973e-07	2.6022e-07	1.6481e-07	1.1977e-07	3.4259e-08
	5	3.8313e-06	9.5783e-07	4.4208e-07	2.3889e-07	1.3718e-07	1.0705e-07	2.9433e-08
5.5	1	8.5243e-06	2.1311e-06	9.4714e-07	5.2457e-07	3.2288e-07	2.3705e-07	7.5442e-08
	2	3.3265e-06	8.3164e-07	8.4378e-07	6.2307e-07	4.0469e-07	2.7806e-07	7.0942e-08
	3	1.1758e-06	2.1311e-06	5.7752e-07	6.5047e-07	3.9655e-07	2.6191e-07	7.5516e-08
	4	3.3265e-06	8.3164e-07	7.8764e-07	6.2307e-07	3.9984e-07	2.4255e-07	7.4995e-08
	5	8.5243e-06	2.1311e-06	9.4714e-07	5.1146e-07	2.9250e-07	2.0967e-07	6.8782e-08
11	1	1.6550e-05	4.1376e-06	1.8389e-06	1.1254e-06	7.0405e-07	4.7743e-07	1.3508e-07
	2	6.4587e-06	1.6147e-06	1.6382e-06	1.3051e-06	7.8574e-07	5.1263e-07	1.3682e-07
	3	2.2828e-06	4.1376e-06	1.1213e-06	1.2629e-06	9.2276e-07	5.4938e-07	1.4602e-07
	4	6.4587e-06	1.6147e-06	1.5293e-06	1.2097e-06	7.7631e-07	5.1737e-07	1.6275e-07
	5	1.6550e-05	4.1376e-06	1.8389e-06	6.6201e-07	5.5671e-07	3.6717e-07	1.0373e-07

Table J.6: Peak immission power at 50m distance (BER 10^{-8})

Speed [MBit/s]	P	Peak immission energy in [mWs]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	1.3520e-04	2.4994e-07	2.1525e-10	2.0954e-09	4.1852e-10	5.0600e-11	2.4643e-13
	2	5.2762e-05	1.7143e-07	2.3233e-10	2.4878e-09	4.8723e-10	6.1417e-11	1.7322e-12
	3	2.0478e-05	2.5457e-07	2.0503e-10	1.1418e-10	7.7988e-10	3.9284e-11	1.8680e-12
	4	5.1752e-06	3.1781e-09	2.2749e-10	4.2077e-11	4.5284e-11	4.4438e-11	1.2950e-13
	5	1.3262e-05	4.6335e-09	2.2878e-10	3.5896e-11	1.2515e-11	3.4252e-11	3.5073e-12
2	1	1.3519e-04	3.3804e-05	6.6553e-08	7.3572e-09	6.3471e-11	1.2167e-10	1.1873e-11
	2	5.2758e-05	2.7678e-05	6.6564e-08	2.8557e-11	1.2056e-10	3.4719e-11	5.1081e-12
	3	2.0476e-05	3.7121e-05	7.9221e-08	2.1593e-10	6.4647e-11	4.8520e-11	8.4197e-12
	4	5.1751e-06	1.5780e-05	6.8807e-08	2.0683e-10	1.7614e-10	1.2463e-12	6.2793e-12
	5	1.3261e-05	3.3153e-06	1.5229e-07	1.8886e-09	8.3093e-11	1.4467e-11	4.2351e-12
5.5	1	1.1378e-04	2.8446e-05	1.2642e-05	2.8030e-11	2.1876e-10	4.0025e-11	7.0894e-12
	2	4.4403e-05	2.4270e-05	1.3361e-05	6.4543e-10	2.0529e-10	4.4769e-11	5.5781e-12
	3	1.8618e-05	3.3746e-05	9.1452e-06	1.1122e-09	3.6106e-10	8.8633e-11	1.1592e-11
	4	8.2732e-06	1.5237e-05	1.2472e-05	4.1993e-10	6.0217e-11	1.5716e-10	6.3683e-12
	5	2.1200e-05	5.2999e-06	2.3556e-06	4.2633e-11	2.6507e-10	1.3072e-10	1.5494e-12
11	1	1.2595e-04	3.1488e-05	1.3994e-05	2.3052e-09	2.6948e-10	1.6042e-10	1.5396e-11
	2	4.9151e-05	2.8197e-05	1.6142e-05	2.6733e-09	2.7276e-10	2.4112e-10	4.8476e-12
	3	2.2492e-05	4.0768e-05	1.1048e-05	7.4005e-09	5.3942e-10	6.3110e-11	2.7277e-11
	4	1.4486e-05	1.9531e-05	1.5068e-05	4.0904e-09	9.0194e-11	6.7493e-11	6.5823e-12
	5	3.7121e-05	9.2801e-06	4.1246e-06	9.6871e-08	4.1988e-11	5.1232e-11	1.2746e-11

Table J.7: Peak immission energy at 50m distance (BER 10^{-6})

Speed [MBit/s]	P	Peak immission energy in [mWs]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	1.7812e-04	3.2927e-07	1.3243e-09	1.4259e-09	2.9653e-09	5.0843e-12	3.1861e-12
	2	6.9510e-05	2.2584e-07	1.4294e-09	1.6929e-09	1.0122e-09	6.1712e-12	4.3398e-12
	3	2.6978e-05	3.3538e-07	1.2614e-09	8.2905e-10	1.0013e-10	7.8744e-12	2.0635e-13
	4	6.8179e-06	4.1868e-09	1.6672e-10	9.8167e-10	9.9693e-10	9.9948e-11	1.8216e-13
	5	1.7471e-05	6.1043e-09	1.6766e-10	1.2406e-10	1.4470e-11	2.4427e-12	8.5813e-13
2	1	1.7810e-04	4.4534e-05	8.7678e-08	6.5936e-10	7.6657e-11	5.0817e-11	1.1962e-12
	2	6.9504e-05	3.6463e-05	8.7692e-08	2.6412e-10	8.1503e-11	5.7912e-11	1.7291e-11
	3	2.6976e-05	4.8904e-05	1.0437e-07	3.5230e-08	8.6979e-11	6.0099e-11	1.0150e-11
	4	6.8177e-06	2.0789e-05	9.0646e-08	3.8044e-10	3.2517e-10	5.8328e-11	9.9695e-12
	5	1.7470e-05	4.3676e-06	2.0063e-07	3.2681e-10	5.3255e-10	4.6889e-11	4.4739e-12
5.5	1	1.5970e-04	3.9927e-05	1.7745e-05	3.9343e-11	3.8261e-10	1.1260e-10	3.0931e-12
	2	6.2324e-05	3.4065e-05	1.8754e-05	1.0561e-09	2.8855e-10	3.1976e-11	1.6884e-11
	3	2.6133e-05	4.7366e-05	1.2836e-05	1.7179e-09	2.8155e-10	6.2334e-11	1.7973e-11
	4	1.1612e-05	2.1387e-05	1.7506e-05	5.8942e-10	9.4762e-11	1.9525e-10	1.7849e-11
	5	2.9757e-05	7.4390e-06	3.3064e-06	5.9840e-11	6.6983e-11	4.9692e-11	7.5660e-13
11	1	1.7887e-04	4.4718e-05	1.9875e-05	3.7364e-10	1.1687e-10	7.8775e-11	2.2288e-11
	2	6.9803e-05	4.0045e-05	2.2924e-05	4.3330e-10	1.3043e-10	2.5477e-10	1.9292e-11
	3	3.1943e-05	5.7898e-05	1.5691e-05	8.3479e-10	1.5318e-10	1.8294e-10	2.4093e-11
	4	2.0573e-05	2.7738e-05	2.1399e-05	2.0081e-10	1.0472e-09	5.1479e-10	2.6853e-11
	5	5.2719e-05	1.3179e-05	5.8576e-06	2.1090e-06	1.5588e-10	5.2689e-10	5.1759e-11

Table J.8: Peak immission energy at 50m distance (BER 10^{-8})

Speed [MBit/s]	P	Immission energy in [mWs]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	1.3571e-04	5.3338e-05	4.3624e-05	3.9014e-05	2.8217e-05	2.3143e-05	2.4366e-06
	2	5.3643e-05	3.7745e-05	4.1447e-05	3.6554e-05	2.9609e-05	2.4742e-05	2.3440e-06
	3	2.0478e-05	5.6296e-05	3.6343e-05	3.0324e-05	2.5799e-05	2.0992e-05	1.9543e-06
	4	1.4151e-05	2.4205e-05	3.2442e-05	2.6676e-05	2.0546e-05	1.6334e-05	1.4121e-06
	5	1.8462e-05	1.2638e-05	1.2848e-05	1.2761e-05	1.0075e-05	8.3343e-06	7.8491e-07
	mv	4.8489e-05	3.6844e-05	3.3341e-05	2.9066e-05	2.2849e-05	1.8709e-05	1.7864e-06
2	1	1.3570e-04	3.9052e-05	2.9827e-05	2.6544e-05	2.3653e-05	1.8704e-05	8.7528e-06
	2	5.3639e-05	2.7898e-05	3.3383e-05	2.6447e-05	2.5399e-05	2.0432e-05	8.8385e-06
	3	2.0476e-05	4.2241e-05	2.9515e-05	2.3392e-05	2.3751e-05	1.8623e-05	6.8365e-06
	4	1.4151e-05	1.8024e-05	2.5392e-05	2.5376e-05	2.0821e-05	1.4980e-05	4.8382e-06
	5	1.8461e-05	9.7356e-06	1.0365e-05	1.2121e-05	1.0178e-05	7.6925e-06	2.6142e-06
	mv	4.8486e-05	2.7390e-05	2.5696e-05	2.2776e-05	2.0760e-05	1.6086e-05	6.3760e-06
5.5	1	1.1460e-04	3.3304e-05	1.8207e-05	1.5364e-05	1.3140e-05	1.1185e-05	6.0195e-06
	2	4.5810e-05	2.4622e-05	2.1334e-05	1.6353e-05	1.4996e-05	1.3364e-05	6.8313e-06
	3	1.8618e-05	3.8400e-05	1.9500e-05	1.6593e-05	1.4594e-05	1.2938e-05	5.9986e-06
	4	1.5827e-05	1.7126e-05	1.6899e-05	1.6854e-05	1.3928e-05	1.1712e-05	4.5118e-06
	5	2.5576e-05	1.1049e-05	7.8915e-06	8.5524e-06	7.0998e-06	6.2717e-06	2.4726e-06
	mv	4.4086e-05	2.4900e-05	1.6766e-05	1.4743e-05	1.2752e-05	1.1094e-05	5.1668e-06
11	1	1.2738e-04	3.7468e-05	2.0767e-05	1.4376e-05	1.1501e-05	1.0342e-05	6.8094e-06
	2	5.1615e-05	2.8813e-05	2.5360e-05	1.9515e-05	1.4005e-05	1.2676e-05	8.5847e-06
	3	2.2492e-05	4.6391e-05	2.3558e-05	2.0060e-05	1.4581e-05	1.2764e-05	8.2857e-06
	4	2.2848e-05	2.1621e-05	2.0829e-05	1.7937e-05	1.3605e-05	1.1860e-05	6.8419e-06
	5	4.1966e-05	1.6114e-05	1.0763e-05	9.4102e-06	7.0541e-06	6.4890e-06	3.9535e-06
	mv	5.3260e-05	3.0082e-05	2.0255e-05	1.6260e-05	1.2149e-05	1.0826e-05	6.8950e-06

Table J.9: Immission energy at 50m distance (BER 10^{-6})

Speed [MBit/s]	P	Immission energy in [mWs]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	1.7879e-04	7.0267e-05	5.6611e-05	5.2037e-05	3.8091e-05	2.9443e-05	4.9532e-06
	2	7.0669e-05	4.9726e-05	5.4142e-05	4.8511e-05	3.9496e-05	3.1400e-05	4.7470e-06
	3	2.6978e-05	7.4164e-05	4.7824e-05	3.9966e-05	3.4333e-05	2.6983e-05	3.9817e-06
	4	1.8643e-05	3.1888e-05	4.2818e-05	3.4513e-05	2.7525e-05	2.1503e-05	2.9088e-06
	5	2.4322e-05	1.6650e-05	1.6932e-05	1.6432e-05	1.3625e-05	1.1055e-05	1.5977e-06
	mv	6.3880e-05	4.8539e-05	4.3665e-05	3.8292e-05	3.0614e-05	2.4077e-05	3.6377e-06
2	1	1.7878e-04	5.1447e-05	3.9294e-05	3.5661e-05	3.0771e-05	2.4588e-05	1.2071e-05
	2	7.0664e-05	3.6753e-05	4.3979e-05	3.5217e-05	3.3063e-05	2.6890e-05	1.2212e-05
	3	2.6976e-05	5.5649e-05	3.8884e-05	3.1029e-05	3.1007e-05	2.4365e-05	9.5036e-06
	4	1.8642e-05	2.3745e-05	3.3451e-05	3.3718e-05	2.7016e-05	1.9599e-05	6.7094e-06
	5	2.4320e-05	1.2826e-05	1.3655e-05	1.6088e-05	1.3113e-05	1.0130e-05	3.6239e-06
	mv	6.3876e-05	3.6084e-05	3.3853e-05	3.0343e-05	2.6994e-05	2.1114e-05	8.8240e-06
5.5	1	1.6085e-04	4.6746e-05	2.5556e-05	2.1564e-05	1.8457e-05	1.5555e-05	8.3818e-06
	2	6.4299e-05	3.4559e-05	2.9945e-05	2.2915e-05	2.1006e-05	1.8642e-05	9.5386e-06
	3	2.6133e-05	5.3899e-05	2.7371e-05	2.3280e-05	2.0582e-05	1.8064e-05	8.4226e-06
	4	2.2215e-05	2.4038e-05	2.3719e-05	2.3669e-05	1.9561e-05	1.6324e-05	6.4412e-06
	5	3.5899e-05	1.5508e-05	1.1077e-05	1.2010e-05	9.9317e-06	8.7305e-06	3.5555e-06
	mv	6.1879e-05	3.4950e-05	2.3533e-05	2.0688e-05	1.7907e-05	1.5463e-05	7.2680e-06
11	1	1.8090e-04	5.3211e-05	2.9492e-05	1.6494e-05	1.4724e-05	1.3541e-05	9.2377e-06
	2	7.3303e-05	4.0920e-05	3.6015e-05	2.2475e-05	1.8846e-05	1.6486e-05	1.1682e-05
	3	3.1943e-05	6.5884e-05	3.3457e-05	2.3329e-05	1.9720e-05	1.6608e-05	1.1560e-05
	4	3.2449e-05	3.0706e-05	2.9581e-05	2.0571e-05	1.8372e-05	1.6076e-05	9.7556e-06
	5	5.9599e-05	2.2885e-05	1.5286e-05	1.0886e-05	9.8201e-06	8.9159e-06	5.6813e-06
	mv	7.5638e-05	4.2721e-05	2.8766e-05	1.8751e-05	1.6296e-05	1.4325e-05	9.5833e-06

Table J.10: Immission energy at 50m distance (BER 10^{-8})

Appendix K

TABLES OF THE IMMISSION POWER FOR 100M

Speed [MBit/s]	P	Immission power in [mW]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	4.5096e-06	6.1676e-07	2.6539e-07	1.2234e-07	6.5432e-08	4.2085e-08	1.1914e-08
	2	6.2913e-07	1.7030e-07	1.5619e-07	7.7465e-08	5.2608e-08	3.6430e-08	9.7464e-09
	3	1.9027e-07	6.6393e-07	1.1573e-07	6.0883e-08	4.2065e-08	2.9540e-08	7.3635e-09
	4	1.3965e-07	1.0586e-07	1.3570e-07	6.1822e-08	3.7005e-08	2.3827e-08	5.5344e-09
	5	4.8650e-07	8.0839e-08	3.6708e-08	1.8813e-08	1.2817e-08	8.7631e-09	2.4205e-09
	mv	1.1910e-06	3.2754e-07	1.4194e-07	6.8265e-08	4.1985e-08	2.8129e-08	7.3957e-09
2	1	7.5134e-06	1.1728e-06	3.7837e-07	1.6433e-07	9.0573e-08	5.7694e-08	1.0456e-08
	2	1.0482e-06	3.2728e-07	2.9062e-07	1.1810e-07	7.4198e-08	5.0352e-08	9.0964e-09
	3	3.1701e-07	1.2820e-06	2.0896e-07	9.5026e-08	6.5520e-08	4.6181e-08	6.2583e-09
	4	2.3267e-07	2.0513e-07	2.3185e-07	1.2958e-07	6.6724e-08	3.8620e-08	4.5361e-09
	5	8.1059e-07	1.6887e-07	6.8776e-08	3.7125e-08	2.2196e-08	1.4040e-08	1.9384e-09
	mv	1.9844e-06	6.3123e-07	2.3571e-07	1.0883e-07	6.3842e-08	4.1377e-08	6.4570e-09
5.5	1	9.4613e-06	1.7974e-06	6.5055e-07	2.2526e-07	1.1821e-07	7.2415e-08	2.0617e-08
	2	1.3333e-06	5.2304e-07	5.3691e-07	1.7094e-07	1.0887e-07	7.4334e-08	2.1061e-08
	3	4.3090e-07	2.1139e-06	3.9430e-07	1.6255e-07	9.6875e-08	6.9625e-08	1.7191e-08
	4	4.0766e-07	3.5484e-07	4.3951e-07	2.0911e-07	1.1123e-07	6.9852e-08	1.3106e-08
	5	1.8531e-06	4.1498e-07	1.8251e-07	7.0152e-08	4.0380e-08	2.6982e-08	5.7791e-09
	mv	2.6973e-06	1.0408e-06	4.4076e-07	1.6760e-07	9.5113e-08	6.2642e-08	1.5551e-08
11	1	1.1476e-05	2.5402e-06	9.8616e-07	2.7746e-07	1.6179e-07	1.0008e-07	2.6408e-08
	2	1.6372e-06	7.7617e-07	8.6894e-07	3.3177e-07	1.6237e-07	1.0822e-07	3.1413e-08
	3	5.6981e-07	3.2443e-06	6.4512e-07	3.0767e-07	1.5892e-07	1.0645e-07	2.9138e-08
	4	6.6504e-07	5.7116e-07	7.2861e-07	3.1641e-07	1.7492e-07	1.0920e-07	2.4937e-08
	5	3.4858e-06	8.5522e-07	3.7682e-07	1.2771e-07	6.7867e-08	4.4910e-08	1.1845e-08
	mv	3.5667e-06	1.5974e-06	7.2113e-07	2.7221e-07	1.4517e-07	9.3770e-08	2.4748e-08

Table K.1: Immission power at 100m distance (BER 10^{-6})

Speed [MBit/s]	P	Immission power in [mW]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	5.9410e-06	8.1253e-07	3.4483e-07	1.6167e-07	8.7143e-08	5.5733e-08	1.5917e-08
	2	8.2882e-07	2.2436e-07	2.0487e-07	1.0185e-07	6.8454e-08	4.7791e-08	1.2803e-08
	3	2.5067e-07	8.7466e-07	1.5291e-07	7.9331e-08	5.4897e-08	3.9427e-08	9.8173e-09
	4	1.8397e-07	1.3946e-07	1.8003e-07	7.8345e-08	4.8565e-08	3.2988e-08	7.5004e-09
	5	6.4092e-07	1.0650e-07	4.8572e-08	2.3792e-08	1.7109e-08	1.2244e-08	3.1984e-09
	mv	1.5691e-06	4.3150e-07	1.8624e-07	8.8997e-08	5.5234e-08	3.7636e-08	9.8474e-09
2	1	9.8982e-06	1.5451e-06	4.9846e-07	2.1875e-07	1.1925e-07	7.6039e-08	2.0938e-08
	2	1.3809e-06	4.3116e-07	3.8287e-07	1.5498e-07	9.7621e-08	6.7106e-08	1.8204e-08
	3	4.1764e-07	1.6890e-06	2.7528e-07	1.2428e-07	8.6652e-08	6.0780e-08	1.2720e-08
	4	3.0652e-07	2.7024e-07	3.0544e-07	1.7001e-07	8.7618e-08	5.0610e-08	9.1153e-09
	5	1.0679e-06	2.2247e-07	9.0606e-08	4.8485e-08	2.8707e-08	1.8791e-08	3.9061e-09
	mv	2.6142e-06	8.3158e-07	3.1053e-07	1.4330e-07	8.3970e-08	5.4665e-08	1.2976e-08
5.5	1	1.3280e-05	2.5228e-06	9.1312e-07	3.1665e-07	1.6635e-07	1.0071e-07	2.8624e-08
	2	1.8715e-06	7.3414e-07	7.5362e-07	2.3946e-07	1.5193e-07	1.0413e-07	2.9202e-08
	3	6.0482e-07	2.9671e-06	5.5344e-07	2.2824e-07	1.3710e-07	9.7747e-08	2.4076e-08
	4	5.7220e-07	4.9806e-07	6.1690e-07	2.9398e-07	1.5617e-07	9.7738e-08	1.8896e-08
	5	2.6010e-06	5.8248e-07	2.5618e-07	9.8584e-08	5.6320e-08	3.7645e-08	8.3668e-09
	mv	3.7859e-06	1.4609e-06	6.1865e-07	2.3538e-07	1.3358e-07	8.7593e-08	2.1833e-08
11	1	1.6298e-05	3.6076e-06	1.4005e-06	4.2448e-07	2.1842e-07	1.4234e-07	3.7299e-08
	2	2.3251e-06	1.1023e-06	1.2340e-06	5.1130e-07	2.4017e-07	1.5202e-07	4.4532e-08
	3	8.0923e-07	4.6076e-06	9.1619e-07	4.7801e-07	2.3431e-07	1.4800e-07	4.2902e-08
	4	9.4448e-07	8.1116e-07	1.0348e-06	4.8266e-07	2.5042e-07	1.6302e-07	3.7573e-08
	5	4.9504e-06	1.2146e-06	5.3515e-07	2.0049e-07	1.0387e-07	6.7685e-08	1.8042e-08
	mv	5.0654e-06	2.2686e-06	1.0241e-06	4.1939e-07	2.0944e-07	1.3461e-07	3.6070e-08

Table K.2: Immission power at 100m distance (BER 10^{-8})

Speed [MBit/s]	P	99% percentil of imission power in mW]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	5.8165e-06	1.4685e-06	6.6078e-07	2.4992e-07	1.3568e-07	8.7631e-08	2.6505e-08
	2	8.0227e-07	2.2597e-07	4.0536e-07	2.0369e-07	1.3584e-07	9.1360e-08	2.8959e-08
	3	2.2371e-07	1.4541e-06	2.0639e-07	1.3960e-07	1.0456e-07	8.0336e-08	2.7162e-08
	4	8.0227e-07	2.2597e-07	3.6835e-07	2.0775e-07	1.1439e-07	8.5119e-08	2.5876e-08
	5	5.8165e-06	1.4685e-06	6.5267e-07	2.3895e-07	1.5523e-07	7.8420e-08	2.1129e-08
2	1	1.1633e-05	2.9082e-06	1.3053e-06	4.7789e-07	2.5014e-07	1.5808e-07	2.8676e-08
	2	1.6045e-06	4.0114e-07	7.8814e-07	3.8714e-07	2.2852e-07	1.4612e-07	2.8895e-08
	3	4.4742e-07	2.9082e-06	3.6308e-07	2.5056e-07	1.7968e-07	2.2049e-07	2.8437e-08
	4	1.6045e-06	4.0114e-07	7.1412e-07	3.8714e-07	2.1494e-07	1.5163e-07	2.8172e-08
	5	1.1633e-05	2.9082e-06	1.3053e-06	4.7248e-07	2.4190e-07	1.4806e-07	2.1226e-08
5.5	1	2.4292e-05	6.0731e-06	2.6992e-06	9.8664e-07	5.1057e-07	3.1464e-07	7.9730e-08
	2	3.3507e-06	8.3767e-07	1.6458e-06	7.7736e-07	4.6823e-07	2.9198e-07	8.0083e-08
	3	9.3432e-07	6.0731e-06	7.5819e-07	4.8585e-07	3.5179e-07	2.5843e-07	7.7606e-08
	4	3.3507e-06	8.3767e-07	1.4912e-06	7.9433e-07	4.4036e-07	3.0446e-07	7.5401e-08
	5	2.4292e-05	6.0731e-06	2.6992e-06	9.8132e-07	5.0067e-07	3.0288e-07	7.3944e-08
11	1	4.6615e-05	1.1654e-05	5.1794e-06	1.8831e-06	9.6983e-07	5.9391e-07	1.4577e-07
	2	6.4296e-06	1.6074e-06	3.1582e-06	1.4917e-06	8.7277e-07	5.8552e-07	1.4566e-07
	3	1.7929e-06	1.1654e-05	1.4549e-06	9.3230e-07	6.3847e-07	4.8253e-07	1.4326e-07
	4	6.4296e-06	1.6074e-06	2.8616e-06	1.4917e-06	8.3672e-07	5.6707e-07	1.3958e-07
	5	4.6615e-05	1.1654e-05	5.1794e-06	1.8646e-06	9.5132e-07	5.7549e-07	1.2913e-07

Table K.3: 99% percentil of imission power at 100m distance (BER 10^{-6})

Speed [MBit/s]	P	99% percentil of imission power in mW]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	7.6627e-06	1.9346e-06	8.7051e-07	3.2925e-07	1.7874e-07	1.1503e-07	3.4272e-08
	2	1.0569e-06	2.9769e-07	5.3402e-07	2.6834e-07	1.7895e-07	1.1162e-07	3.6833e-08
	3	2.9472e-07	1.9157e-06	2.7191e-07	1.8390e-07	1.3775e-07	1.0584e-07	3.5321e-08
	4	1.0569e-06	2.9769e-07	4.8526e-07	2.7369e-07	1.4796e-07	1.1496e-07	3.3719e-08
	5	7.6627e-06	1.9346e-06	8.6996e-07	3.1479e-07	1.6090e-07	1.0331e-07	2.2109e-08
2	1	1.5325e-05	3.8313e-06	1.7197e-06	6.2958e-07	3.2954e-07	2.0511e-07	5.7353e-08
	2	2.1138e-06	5.2846e-07	1.0383e-06	5.1003e-07	3.0105e-07	1.9250e-07	5.7792e-08
	3	5.8944e-07	3.8313e-06	4.7832e-07	3.3008e-07	2.3672e-07	2.9048e-07	5.6874e-08
	4	2.1138e-06	5.2846e-07	9.4078e-07	5.1003e-07	2.8317e-07	1.9976e-07	5.7087e-08
	5	1.5325e-05	3.8313e-06	1.7197e-06	6.2244e-07	3.1868e-07	1.9505e-07	4.2452e-08
5.5	1	3.4097e-05	8.5243e-06	3.7886e-06	1.3849e-06	7.1664e-07	4.4163e-07	1.1191e-07
	2	4.7030e-06	1.1758e-06	2.3101e-06	1.0911e-06	6.5721e-07	4.0121e-07	1.1049e-07
	3	1.3114e-06	8.5243e-06	1.0642e-06	6.8194e-07	4.9378e-07	3.6273e-07	1.0893e-07
	4	4.7030e-06	1.1758e-06	2.0931e-06	1.1149e-06	6.1809e-07	4.2734e-07	1.0584e-07
	5	3.4097e-05	8.5243e-06	3.7886e-06	1.3774e-06	7.0275e-07	4.2512e-07	9.4452e-08
11	1	6.6201e-05	1.6550e-05	7.3557e-06	2.6481e-06	1.3695e-06	8.3564e-07	2.0067e-07
	2	9.1312e-06	2.2828e-06	4.4852e-06	2.1184e-06	1.2395e-06	7.6990e-07	1.9098e-07
	3	2.5462e-06	1.6550e-05	2.0662e-06	1.3240e-06	9.0675e-07	6.5384e-07	1.9582e-07
	4	9.1312e-06	2.2828e-06	4.0639e-06	2.1184e-06	1.1647e-06	8.0535e-07	2.3828e-07
	5	6.6201e-05	1.6550e-05	7.3557e-06	2.6481e-06	1.3644e-06	8.1730e-07	1.8338e-07

Table K.4: 99% percentil of imission power at 100m distance (BER 10^{-8})

Speed [MBit/s]	P	Peak immission power in [mW]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	5.8165e-06	1.5100e-06	7.1513e-07	2.9646e-07	1.7740e-07	1.2493e-07	4.4981e-08
	2	8.0227e-07	4.0114e-07	5.1950e-07	2.9725e-07	1.9849e-07	1.5206e-07	4.9745e-08
	3	2.2371e-07	1.5100e-06	3.7253e-07	2.5593e-07	1.8249e-07	1.4319e-07	5.6424e-08
	4	8.0227e-07	4.0114e-07	4.5749e-07	2.9387e-07	1.9689e-07	1.5149e-07	4.8664e-08
	5	5.8165e-06	1.5100e-06	7.0413e-07	2.9518e-07	1.7126e-07	1.1927e-07	3.5803e-08
2	1	1.1633e-05	2.9082e-06	1.4013e-06	5.6554e-07	3.3359e-07	2.3779e-07	4.7187e-08
	2	1.6045e-06	4.0114e-07	9.6642e-07	5.2356e-07	3.4635e-07	2.7591e-07	5.3734e-08
	3	4.4742e-07	2.9082e-06	6.9535e-07	5.1185e-07	3.4474e-07	2.7224e-07	5.5488e-08
	4	1.6045e-06	4.0114e-07	7.8346e-07	5.5055e-07	3.4748e-07	2.3976e-07	5.2100e-08
	5	1.1633e-05	2.9082e-06	1.3053e-06	5.6554e-07	3.3184e-07	2.1156e-07	4.3408e-08
5.5	1	2.4292e-05	6.0731e-06	2.6992e-06	1.1757e-06	6.8985e-07	4.8696e-07	1.6636e-07
	2	3.3507e-06	8.3767e-07	1.6458e-06	1.1497e-06	8.0660e-07	5.5933e-07	1.6597e-07
	3	9.3432e-07	6.0731e-06	7.5819e-07	1.0689e-06	7.2666e-07	5.4469e-07	1.7160e-07
	4	3.3507e-06	8.3767e-07	1.4912e-06	1.1497e-06	7.1696e-07	5.7586e-07	1.7160e-07
	5	2.4292e-05	6.0731e-06	2.6992e-06	1.1660e-06	6.5769e-07	4.3506e-07	1.2683e-07
11	1	4.6615e-05	1.1654e-05	5.1794e-06	2.3472e-06	1.3803e-06	9.3444e-07	3.0160e-07
	2	6.4296e-06	1.6074e-06	3.1582e-06	2.3226e-06	1.5478e-06	1.0733e-06	3.3948e-07
	3	1.7929e-06	1.1654e-05	1.4549e-06	2.0510e-06	1.3944e-06	1.0673e-06	3.3425e-07
	4	6.4296e-06	1.6074e-06	2.8616e-06	2.2061e-06	1.5201e-06	1.1395e-06	3.4714e-07
	5	4.6615e-05	1.1654e-05	5.1794e-06	1.8831e-06	1.2620e-06	9.0284e-07	2.3732e-07

Table K.5: Peak immission power at 100m distance (BER 10^{-6})

Speed [MBit/s]	P	Peak immission power in [mW]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	7.6627e-06	1.9893e-06	9.4212e-07	3.9055e-07	2.3157e-07	1.6459e-07	6.0086e-08
	2	1.0569e-06	5.2846e-07	6.8439e-07	3.9160e-07	2.6149e-07	1.9928e-07	7.1056e-08
	3	2.9472e-07	1.9893e-06	4.9078e-07	3.4895e-07	2.4490e-07	1.9613e-07	6.8069e-08
	4	1.0569e-06	5.2846e-07	6.0270e-07	3.6800e-07	2.5666e-07	2.0623e-07	6.8376e-08
	5	7.6627e-06	1.9893e-06	9.2762e-07	3.8081e-07	2.2320e-07	1.5088e-07	5.4491e-08
2	1	1.5325e-05	3.8313e-06	1.8460e-06	7.5218e-07	4.5381e-07	2.9678e-07	1.0233e-07
	2	2.1138e-06	5.2846e-07	1.2732e-06	6.9865e-07	4.7160e-07	3.5287e-07	1.2803e-07
	3	5.8944e-07	3.8313e-06	9.1606e-07	6.1301e-07	4.5843e-07	3.6922e-07	1.0815e-07
	4	2.1138e-06	5.2846e-07	1.0321e-06	6.9865e-07	4.5777e-07	3.5679e-07	1.0322e-07
	5	1.5325e-05	3.8313e-06	1.7197e-06	7.4505e-07	4.2112e-07	3.0282e-07	9.4336e-08
5.5	1	3.4097e-05	8.5243e-06	3.7886e-06	1.6502e-06	9.6828e-07	6.8351e-07	2.3094e-07
	2	4.7030e-06	1.1758e-06	2.3101e-06	1.6137e-06	1.1322e-06	8.0010e-07	2.4439e-07
	3	1.3114e-06	8.5243e-06	1.0642e-06	1.5003e-06	1.0199e-06	7.6453e-07	2.3507e-07
	4	4.7030e-06	1.1758e-06	2.0931e-06	1.6137e-06	1.1119e-06	7.2152e-07	2.4086e-07
	5	3.4097e-05	8.5243e-06	3.7886e-06	1.6367e-06	9.2314e-07	6.2699e-07	2.1374e-07
11	1	6.6201e-05	1.6550e-05	7.3557e-06	3.3334e-06	1.9866e-06	1.3454e-06	4.3162e-07
	2	9.1312e-06	2.2828e-06	4.4852e-06	3.2985e-06	2.1981e-06	1.5243e-06	4.7450e-07
	3	2.5462e-06	1.6550e-05	2.0662e-06	2.9129e-06	2.2116e-06	1.5348e-06	4.7843e-07
	4	9.1312e-06	2.2828e-06	4.0639e-06	3.1331e-06	2.1589e-06	1.5412e-06	5.4280e-07
	5	6.6201e-05	1.6550e-05	7.3557e-06	2.6481e-06	1.7801e-06	1.1655e-06	3.3448e-07

Table K.6: Peak immission power at 100m distance (BER 10^{-8})

Speed [MBit/s]	P	Peak immission energy in [mWs]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	5.4081e-04	9.1236e-07	6.9797e-10	6.0723e-09	1.1499e-09	1.3268e-10	6.7472e-13
	2	7.4595e-05	2.4236e-07	5.0703e-10	6.0886e-09	1.1367e-09	7.3902e-11	4.6064e-11
	3	2.2841e-05	9.2928e-07	3.6359e-10	2.6335e-10	1.9067e-09	1.0295e-10	5.6988e-12
	4	7.3167e-06	4.4931e-09	5.0003e-10	1.0432e-10	1.1932e-10	1.2119e-10	4.5257e-12
	5	5.3046e-05	1.6914e-08	7.6961e-10	1.0479e-10	3.5623e-11	9.2908e-11	9.4521e-12
2	1	5.4077e-04	1.3522e-04	2.2531e-07	2.2945e-08	1.8681e-10	3.3956e-10	2.3027e-11
	2	7.4589e-05	3.9131e-05	1.5539e-07	7.8010e-11	1.6902e-10	9.8777e-11	1.0048e-11
	3	2.2839e-05	1.4849e-04	1.4668e-07	4.9803e-10	1.6824e-10	1.3204e-10	2.7078e-11
	4	7.3165e-06	2.2310e-05	1.6526e-07	5.3568e-10	4.8925e-10	1.1676e-10	1.0420e-11
	5	5.3044e-05	1.3261e-05	5.9240e-07	5.8901e-09	2.4125e-10	4.3581e-11	5.5563e-12
5.5	1	4.5513e-04	1.1378e-04	5.0570e-05	8.8174e-11	6.5604e-10	1.1541e-10	2.1294e-11
	2	6.2776e-05	3.4312e-05	3.6581e-05	1.6716e-09	5.7430e-10	1.3312e-10	1.7261e-11
	3	2.0766e-05	1.3498e-04	1.6852e-05	2.5653e-09	9.2867e-10	2.5873e-10	4.1013e-11
	4	1.1697e-05	2.1542e-05	3.3145e-05	1.0876e-09	1.7064e-10	4.5436e-10	8.1167e-11
	5	8.4800e-05	2.1200e-05	9.4225e-06	1.3643e-10	8.3658e-10	4.0199e-10	4.9464e-12
11	1	5.0380e-04	1.2595e-04	5.5977e-05	6.8280e-09	7.7851e-10	4.6255e-10	4.9763e-11
	2	6.9489e-05	3.9865e-05	4.4193e-05	6.7564e-09	7.6306e-10	7.1697e-10	4.0738e-11
	3	2.5088e-05	1.6307e-04	2.0359e-05	1.7069e-08	1.3874e-09	1.7825e-10	9.3925e-11
	4	2.0481e-05	2.7613e-05	4.0043e-05	1.0594e-08	2.5082e-10	1.8915e-10	2.0481e-11
	5	1.4849e-04	3.7120e-05	1.6498e-05	3.7683e-07	1.3251e-10	1.4987e-10	2.5156e-11

Table K.7: Peak immission energy at 100m distance (BER 10^{-6})

Speed [MBit/s]	P	Peak immission energy in [mWs]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	7.1247e-04	1.2020e-06	4.2942e-09	4.1321e-09	8.2771e-09	1.3332e-11	8.7726e-12
	2	9.8272e-05	3.1929e-07	3.1195e-09	4.1431e-09	2.7176e-09	1.8433e-10	2.9069e-10
	3	3.0091e-05	1.2242e-06	2.2370e-09	1.8456e-09	2.3878e-10	5.1779e-11	3.3830e-11
	4	9.6391e-06	5.9193e-09	3.6644e-10	2.4895e-09	2.6695e-09	2.6398e-10	1.5590e-11
	5	6.9883e-05	2.2283e-08	5.6400e-10	3.7167e-10	4.1962e-11	6.9404e-12	2.4521e-12
2	1	7.1242e-04	1.7813e-04	2.9683e-07	2.0226e-09	2.2146e-10	1.4483e-10	3.6838e-12
	2	9.8265e-05	5.1552e-05	2.0472e-07	7.0913e-10	2.3014e-10	1.7220e-10	8.0657e-12
	3	3.0088e-05	1.9562e-04	1.9323e-07	8.8075e-08	2.2371e-10	1.5950e-10	5.2777e-11
	4	9.6388e-06	2.9391e-05	2.1772e-07	1.0214e-09	9.0318e-10	1.7376e-10	5.0269e-11
	5	6.9881e-05	1.7470e-05	7.8044e-07	1.0192e-09	1.6348e-09	1.3263e-10	1.4339e-11
5.5	1	6.3882e-04	1.5971e-04	7.0980e-05	1.2376e-10	1.1474e-09	3.2467e-10	9.4685e-12
	2	8.8113e-05	4.8161e-05	5.1345e-05	2.7352e-09	8.0723e-10	9.2011e-11	1.0362e-10
	3	2.9148e-05	1.8946e-04	2.3653e-05	3.9622e-09	7.2416e-10	1.8196e-10	1.1166e-10
	4	1.6417e-05	3.0237e-05	4.6523e-05	1.5266e-09	2.6353e-10	5.8082e-10	1.1369e-10
	5	1.1903e-04	2.9756e-05	1.3226e-05	1.9149e-10	2.1140e-10	1.4860e-10	2.3511e-12
11	1	7.1548e-04	1.7887e-04	7.9498e-05	1.1067e-09	3.2978e-10	2.2199e-10	7.1217e-11
	2	9.8687e-05	5.6616e-05	6.2762e-05	1.0951e-09	3.6489e-10	7.5757e-10	3.9526e-10
	3	3.5629e-05	2.3159e-04	2.8913e-05	1.9254e-09	3.6713e-10	5.1109e-10	7.8942e-11
	4	2.9086e-05	3.9215e-05	5.6868e-05	5.2009e-10	2.9123e-09	1.5335e-09	8.9563e-11
	5	2.1088e-04	5.2718e-05	2.3431e-05	8.4359e-06	4.9844e-10	1.6725e-09	8.3620e-12

Table K.8: Peak immission energy at 100m distance (BER 10^{-8})

Speed [MBit/s]	P	Immission energy in [mWs]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	5.4134e-04	1.9292e-04	1.4719e-04	1.2655e-04	8.4811e-05	6.6655e-05	6.9949e-06
	2	7.5522e-05	5.3269e-05	8.6624e-05	8.0129e-05	6.8189e-05	5.7699e-05	5.7224e-06
	3	2.2841e-05	2.0767e-04	6.4186e-05	6.2977e-05	5.4524e-05	4.6786e-05	4.3233e-06
	4	1.6763e-05	3.3111e-05	7.5258e-05	6.3948e-05	4.7965e-05	3.7737e-05	3.2494e-06
	5	5.8401e-05	2.5286e-05	2.0359e-05	1.9460e-05	1.6613e-05	1.3879e-05	1.4212e-06
	mv	1.4297e-04	1.0245e-04	7.8723e-05	7.0613e-05	5.4421e-05	4.4551e-05	4.3423e-06
2	1	5.4130e-04	1.4106e-04	9.5304e-05	8.2819e-05	6.9082e-05	5.2856e-05	1.6389e-05
	2	7.5516e-05	3.9363e-05	7.3202e-05	5.9520e-05	5.6593e-05	4.6129e-05	1.4259e-05
	3	2.2839e-05	1.5420e-04	5.2633e-05	4.7890e-05	4.9974e-05	4.2308e-05	9.8099e-06
	4	1.6762e-05	2.4672e-05	5.8400e-05	6.5306e-05	5.0892e-05	3.5381e-05	7.1103e-06
	5	5.8399e-05	2.0311e-05	1.7323e-05	1.8710e-05	1.6929e-05	1.2863e-05	3.0385e-06
	mv	1.4296e-04	7.5920e-05	5.9372e-05	5.4849e-05	4.8694e-05	3.7907e-05	1.0121e-05
5.5	1	4.5597e-04	1.1918e-04	5.7055e-05	4.6944e-05	3.6888e-05	2.9935e-05	1.6287e-05
	2	6.4257e-05	3.4683e-05	4.7089e-05	3.5623e-05	3.3973e-05	3.0728e-05	1.6637e-05
	3	2.0766e-05	1.4017e-04	3.4581e-05	3.3874e-05	3.0230e-05	2.8782e-05	1.3580e-05
	4	1.9646e-05	2.3530e-05	3.8546e-05	4.3578e-05	3.4709e-05	2.8875e-05	1.0353e-05
	5	8.9307e-05	2.7518e-05	1.6007e-05	1.4619e-05	1.2601e-05	1.1154e-05	4.5652e-06
	mv	1.2999e-04	6.9018e-05	3.8656e-05	3.4928e-05	2.9680e-05	2.5895e-05	1.2284e-05
11	1	5.0527e-04	1.3259e-04	6.3863e-05	3.8159e-05	3.1510e-05	2.6857e-05	1.7225e-05
	2	7.2083e-05	4.0514e-05	5.6272e-05	4.5628e-05	3.1624e-05	2.9041e-05	2.0490e-05
	3	2.5088e-05	1.6934e-04	4.1778e-05	4.2312e-05	3.0950e-05	2.8566e-05	1.9006e-05
	4	2.9281e-05	2.9813e-05	4.7184e-05	4.3515e-05	3.4067e-05	2.9303e-05	1.6266e-05
	5	1.5347e-04	4.4639e-05	2.4402e-05	1.7564e-05	1.3218e-05	1.2052e-05	7.7260e-06
	mv	1.5704e-04	8.3380e-05	4.6700e-05	3.7435e-05	2.8274e-05	2.5164e-05	1.6142e-05

Table K.9: Immission energy at 100m distance (BER 10^{-6})

Speed [MBit/s]	P	Immission energy in [mWs]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	7.1317e-04	2.5415e-04	1.9057e-04	1.6912e-04	1.1499e-04	8.4850e-05	1.4294e-05
	2	9.9493e-05	7.0177e-05	1.1322e-04	1.0654e-04	9.0332e-05	7.2759e-05	1.1498e-05
	3	3.0091e-05	2.7359e-04	8.4505e-05	8.2985e-05	7.2442e-05	6.0025e-05	8.8160e-06
	4	2.2084e-05	4.3621e-05	9.9493e-05	8.1954e-05	6.4087e-05	5.0222e-05	6.7355e-06
	5	7.6938e-05	3.3312e-05	2.6844e-05	2.4888e-05	2.2577e-05	1.8640e-05	2.8722e-06
	mv	1.8835e-04	1.3497e-04	1.0293e-04	9.3096e-05	7.2886e-05	5.7299e-05	8.8431e-06
2	1	7.1311e-04	1.8583e-04	1.2555e-04	1.1169e-04	8.9981e-05	6.9121e-05	3.4310e-05
	2	9.9485e-05	5.1857e-05	9.6438e-05	7.9129e-05	7.3660e-05	6.1001e-05	2.9830e-05
	3	3.0088e-05	2.0314e-04	6.9339e-05	6.3453e-05	6.5383e-05	5.5250e-05	2.0843e-05
	4	2.2083e-05	3.2503e-05	7.6936e-05	8.6805e-05	6.6112e-05	4.6006e-05	1.4937e-05
	5	7.6935e-05	2.6758e-05	2.2822e-05	2.4755e-05	2.1661e-05	1.7082e-05	6.4009e-06
	mv	1.8834e-04	1.0002e-04	7.8218e-05	7.3167e-05	6.3359e-05	4.9692e-05	2.1264e-05
5.5	1	6.4000e-04	1.6729e-04	8.0083e-05	6.5940e-05	5.1913e-05	4.1445e-05	2.2624e-05
	2	9.0192e-05	4.8681e-05	6.6094e-05	4.9866e-05	4.7412e-05	4.2852e-05	2.3081e-05
	3	2.9148e-05	1.9675e-04	4.8539e-05	4.7529e-05	4.2783e-05	4.0226e-05	1.9029e-05
	4	2.7576e-05	3.3027e-05	5.4104e-05	6.1219e-05	4.8736e-05	4.0223e-05	1.4935e-05
	5	1.2535e-04	3.8624e-05	2.2468e-05	2.0529e-05	1.7575e-05	1.5492e-05	6.6130e-06
	mv	1.8245e-04	9.6874e-05	5.4258e-05	4.9017e-05	4.1684e-05	3.6048e-05	1.7256e-05
11	1	7.1757e-04	1.8830e-04	9.0697e-05	4.3661e-05	3.9323e-05	3.5192e-05	2.3147e-05
	2	1.0237e-04	5.7537e-05	7.9916e-05	5.2591e-05	4.3239e-05	3.7586e-05	2.7636e-05
	3	3.5629e-05	2.4050e-04	5.9332e-05	4.9166e-05	4.2183e-05	3.6590e-05	2.6624e-05
	4	4.1584e-05	4.2340e-05	6.7010e-05	4.9644e-05	4.5085e-05	4.0304e-05	2.3317e-05
	5	2.1796e-04	6.3396e-05	3.4656e-05	2.0621e-05	1.8699e-05	1.6735e-05	1.1197e-05
	mv	2.2302e-04	1.1841e-04	6.6322e-05	4.3137e-05	3.7706e-05	3.3281e-05	2.2384e-05

Table K.10: Immission energy at 100m distance (BER 10^{-8})

Appendix L

TABLES OF THE IMMISSION POWER FOR 500M

Speed [MBit/s]	P	Immission power in [mW]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	1.1263e-04	1.4815e-05	6.1519e-06	2.6898e-06	1.2895e-06	7.5958e-07	1.6496e-07
	2	7.2410e-07	1.9618e-07	3.0485e-07	2.2394e-07	2.1006e-07	1.6673e-07	5.2188e-08
	3	1.9757e-07	1.6079e-05	1.4937e-07	1.0690e-07	9.7753e-08	8.1727e-08	3.1575e-08
	4	1.5029e-07	1.2061e-07	3.0789e-07	2.0090e-07	1.4536e-07	1.1250e-07	2.9423e-08
	5	1.1092e-05	1.2885e-06	3.5256e-07	9.0104e-08	5.0470e-08	3.0876e-08	8.8142e-09
	mv	2.4960e-05	6.5000e-06	1.4533e-06	6.6233e-07	3.5862e-07	2.3028e-07	5.7392e-08
2	1	1.8766e-04	2.8156e-05	8.5199e-06	3.5046e-06	1.7165e-06	1.0091e-06	2.2037e-07
	2	1.2064e-06	3.7697e-07	5.8839e-07	3.6412e-07	2.7345e-07	2.0921e-07	7.7901e-08
	3	3.2917e-07	3.0913e-05	2.7128e-07	1.6521e-07	1.5155e-07	1.3059e-07	3.9804e-08
	4	2.5040e-07	2.3377e-07	5.2279e-07	4.4331e-07	2.7485e-07	1.9023e-07	3.6459e-08
	5	1.8482e-05	2.8170e-06	7.5142e-07	1.5536e-07	7.6294e-08	4.1435e-08	8.9767e-09
	mv	4.1586e-05	1.2499e-05	2.1308e-06	9.2652e-07	4.9852e-07	3.1612e-07	7.6702e-08
5.5	1	2.3611e-04	4.2982e-05	1.4493e-05	4.7586e-06	2.1403e-06	1.1870e-06	2.6475e-07
	2	1.5327e-06	6.0211e-07	1.0932e-06	4.9518e-07	4.1817e-07	3.2967e-07	1.2085e-07
	3	4.4742e-07	5.0972e-05	5.1098e-07	2.8178e-07	2.1979e-07	1.9145e-07	7.4997e-08
	4	4.4752e-07	4.0494e-07	9.8382e-07	7.2365e-07	4.5897e-07	3.5880e-07	7.0130e-08
	5	4.4085e-05	8.0910e-06	2.7681e-06	5.1221e-07	2.0205e-07	1.1073e-07	2.1020e-08
	mv	5.6525e-05	2.0610e-05	3.9699e-06	1.3543e-06	6.8785e-07	4.3553e-07	1.1035e-07
11	1	2.8610e-04	6.0457e-05	2.1739e-05	5.1340e-06	2.8934e-06	1.5494e-06	2.8712e-07
	2	1.8791e-06	8.9295e-07	1.7775e-06	1.0291e-06	6.3152e-07	4.8280e-07	1.8016e-07
	3	5.9165e-07	7.8229e-05	8.3602e-07	5.4313e-07	3.6852e-07	2.9409e-07	1.2957e-07
	4	7.3944e-07	6.5262e-07	1.6208e-06	1.0201e-06	7.4334e-07	5.5491e-07	1.3533e-07
	5	8.4427e-05	1.7928e-05	6.5028e-06	1.3380e-06	4.9606e-07	2.5296e-07	4.5639e-08
	mv	7.4747e-05	3.1632e-05	6.4952e-06	1.8129e-06	1.0266e-06	6.2683e-07	1.5556e-07

Table L.1: Immission power at 500m distance (BER 10^{-6})

Speed [MBit/s]	P	Immission power in [mW]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	1.4839e-04	1.9518e-05	7.9845e-06	3.5581e-06	1.7235e-06	1.0070e-06	2.2394e-07
	2	9.5394e-07	2.5845e-07	4.0012e-07	2.9516e-07	2.6933e-07	2.1635e-07	6.7570e-08
	3	2.6028e-07	2.1183e-05	1.9735e-07	1.3930e-07	1.2759e-07	1.0884e-07	4.2236e-08
	4	1.9799e-07	1.5890e-07	4.0883e-07	2.5198e-07	1.8832e-07	1.5822e-07	4.0522e-08
	5	1.4613e-05	1.6975e-06	4.6653e-07	1.1197e-07	6.6537e-08	4.5941e-08	1.1773e-08
	mv	3.2882e-05	8.5632e-06	1.8915e-06	8.7131e-07	4.7505e-07	3.0728e-07	7.7209e-08
2	1	2.4722e-04	3.7093e-05	1.1224e-05	4.6789e-06	2.2659e-06	1.3142e-06	2.8992e-07
	2	1.5893e-06	4.9662e-07	7.7515e-07	4.7730e-07	3.6045e-07	2.8389e-07	1.0235e-07
	3	4.3365e-07	4.0725e-05	3.5739e-07	2.1594e-07	2.0078e-07	1.7155e-07	5.4053e-08
	4	3.2988e-07	3.0798e-07	6.8873e-07	5.8189e-07	3.6322e-07	2.4385e-07	4.7917e-08
	5	2.4348e-05	3.7111e-06	9.8993e-07	1.9778e-07	9.4856e-08	6.0629e-08	1.1994e-08
	mv	5.4785e-05	1.6467e-05	2.8071e-06	1.2304e-06	6.5703e-07	4.1482e-07	1.0125e-07
5.5	1	3.3141e-04	6.0330e-05	2.0343e-05	6.6939e-06	3.0210e-06	1.6344e-06	3.6398e-07
	2	2.1513e-06	8.4512e-07	1.5344e-06	6.9284e-07	5.8039e-07	4.6112e-07	1.6546e-07
	3	6.2801e-07	7.1545e-05	7.1721e-07	3.9567e-07	3.1201e-07	2.6921e-07	1.0483e-07
	4	6.2814e-07	5.6838e-07	1.3809e-06	1.0175e-06	6.4510e-07	5.0122e-07	1.0286e-07
	5	6.1878e-05	1.1357e-05	3.8853e-06	7.1936e-07	2.7931e-07	1.5127e-07	3.1009e-08
	mv	7.9339e-05	2.8929e-05	5.5722e-06	1.9038e-06	9.6757e-07	6.0344e-07	1.5363e-07
11	1	4.0631e-04	8.5860e-05	3.0873e-05	7.8317e-06	3.8076e-06	2.2001e-06	3.9288e-07
	2	2.6686e-06	1.2682e-06	2.5243e-06	1.5873e-06	9.6475e-07	6.7251e-07	2.4225e-07
	3	8.4025e-07	1.1110e-04	1.1873e-06	8.4368e-07	5.4781e-07	4.0225e-07	1.9223e-07
	4	1.0501e-06	9.2684e-07	2.3018e-06	1.5462e-06	1.0068e-06	8.4835e-07	2.0717e-07
	5	1.1990e-04	2.5461e-05	9.2351e-06	2.1888e-06	7.6481e-07	3.8471e-07	6.9468e-08
	mv	1.0615e-04	4.4923e-05	9.2243e-06	2.7995e-06	1.4183e-06	9.0159e-07	2.2080e-07

Table L.2: Immission power at 500m distance (BER 10^{-8})

Speed [MBit/s]	P	99% percentil of imission power in mW]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	1.4541e-04	3.6367e-05	1.6171e-05	5.8346e-06	2.9859e-06	1.8133e-06	4.1976e-07
	2	9.2472e-07	2.5701e-07	9.1866e-07	8.2120e-07	7.9329e-07	6.3678e-07	3.1628e-07
	3	2.3229e-07	3.6353e-05	2.5699e-07	2.4945e-07	2.4919e-07	2.4635e-07	1.8543e-07
	4	9.2472e-07	2.5701e-07	8.7827e-07	8.2534e-07	7.1342e-07	6.8761e-07	2.8851e-07
	5	1.4541e-04	3.6367e-05	1.6163e-05	5.8229e-06	3.0237e-06	1.8025e-06	4.0338e-07
2	1	2.9082e-04	7.2706e-05	3.2327e-05	1.1646e-05	5.9481e-06	3.6058e-06	8.2008e-07
	2	1.8494e-06	4.6236e-07	1.8144e-06	1.6199e-06	1.5368e-06	1.2285e-06	6.0720e-07
	3	4.6457e-07	7.2706e-05	4.6235e-07	4.6600e-07	4.6640e-07	8.3926e-07	3.0889e-07
	4	1.8494e-06	4.6236e-07	1.7336e-06	1.6199e-06	1.4107e-06	1.3500e-06	5.4705e-07
	5	2.9082e-04	7.2706e-05	3.2327e-05	1.1640e-05	5.9398e-06	3.5951e-06	8.0560e-07
5.5	1	6.0731e-04	1.5183e-04	6.7479e-05	2.4308e-05	1.2409e-05	7.5128e-06	1.6974e-06
	2	3.8621e-06	9.6552e-07	3.7888e-06	3.3507e-06	3.1996e-06	2.5503e-06	1.2540e-06
	3	9.7014e-07	1.5183e-04	9.6550e-07	9.3432e-07	9.5520e-07	9.2409e-07	6.4503e-07
	4	3.8621e-06	9.6552e-07	3.6201e-06	3.3679e-06	2.9365e-06	2.8044e-06	1.1377e-06
	5	6.0731e-04	1.5183e-04	6.7479e-05	2.4302e-05	1.2399e-05	7.5006e-06	1.6897e-06
11	1	1.1654e-03	2.9134e-04	1.2949e-04	4.6633e-05	2.3802e-05	1.4406e-05	3.2469e-06
	2	7.4109e-06	1.8527e-06	7.2704e-06	6.4296e-06	6.1139e-06	4.9226e-06	2.3942e-06
	3	1.8616e-06	2.9134e-04	1.8527e-06	1.7929e-06	1.7949e-06	1.7585e-06	1.2111e-06
	4	7.4109e-06	1.8527e-06	6.9466e-06	6.4296e-06	5.6261e-06	5.3625e-06	2.1720e-06
	5	1.1654e-03	2.9134e-04	1.2949e-04	4.6615e-05	2.3783e-05	1.4387e-05	3.2282e-06

Table L.3: 99% percentil of imission power at 500m distance (BER 10^{-6})

Speed [MBit/s]	P	99% percentil of imission power in mW]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	1.9157e-04	4.7911e-05	2.1304e-05	7.6866e-06	3.9336e-06	2.3883e-06	5.5207e-07
	2	1.2182e-06	3.3859e-07	1.2103e-06	1.0819e-06	1.0451e-06	8.2655e-07	4.1037e-07
	3	3.0602e-07	4.7892e-05	3.3855e-07	3.2862e-07	3.2829e-07	3.1834e-07	2.2848e-07
	4	1.2182e-06	3.3859e-07	1.1570e-06	1.0873e-06	9.3708e-07	9.0896e-07	3.8009e-07
	5	1.9157e-04	4.7911e-05	2.1304e-05	7.6712e-06	3.9143e-06	2.3747e-06	5.3142e-07
2	1	3.8313e-04	9.5783e-05	4.2587e-05	1.5342e-05	7.8361e-06	4.7471e-06	1.0804e-06
	2	2.4365e-06	6.0911e-07	2.3903e-06	2.1341e-06	2.0245e-06	1.6184e-06	7.9992e-07
	3	6.1203e-07	9.5783e-05	6.0911e-07	6.1392e-07	6.1444e-07	1.1056e-06	4.1836e-07
	4	2.4365e-06	6.0911e-07	2.2838e-06	2.1341e-06	1.8585e-06	1.7785e-06	7.2246e-07
	5	3.8313e-04	9.5783e-05	4.2587e-05	1.5335e-05	7.8251e-06	4.7362e-06	1.0613e-06
5.5	1	8.5243e-04	2.1311e-04	9.4714e-05	3.4118e-05	1.7418e-05	1.0545e-05	2.3825e-06
	2	5.4208e-06	1.3552e-06	5.3180e-06	4.7030e-06	4.4910e-06	3.5705e-06	1.7513e-06
	3	1.3617e-06	2.1311e-04	1.3552e-06	1.3114e-06	1.3407e-06	1.2863e-06	8.9464e-07
	4	5.4208e-06	1.3552e-06	5.0812e-06	4.7273e-06	4.1217e-06	3.9362e-06	1.6034e-06
	5	8.5243e-04	2.1311e-04	9.4714e-05	3.4111e-05	1.7403e-05	1.0528e-05	2.3613e-06
11	1	1.6550e-03	4.1376e-04	1.8389e-04	6.6201e-05	3.3795e-05	2.0451e-05	4.6031e-06
	2	1.0525e-05	2.6312e-06	1.0325e-05	9.1312e-06	8.6828e-06	6.9229e-06	3.3807e-06
	3	2.6438e-06	4.1376e-04	2.6312e-06	2.5462e-06	2.5492e-06	2.4647e-06	1.7260e-06
	4	1.0525e-05	2.6312e-06	9.8655e-06	9.1312e-06	7.9661e-06	7.6157e-06	3.1637e-06
	5	1.6550e-03	4.1376e-04	1.8389e-04	6.6201e-05	3.3790e-05	2.0433e-05	4.5846e-06

Table L.4: 99% percentil of imission power at 500m distance (BER 10^{-8})

Speed [MBit/s]	P	Peak immission power in [mW]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	1.4541e-04	3.6411e-05	1.6230e-05	5.8922e-06	3.0452e-06	1.8759e-06	4.7868e-07
	2	9.2472e-07	4.6236e-07	1.0472e-06	9.4854e-07	9.0377e-07	7.6466e-07	4.3002e-07
	3	2.3229e-07	3.6411e-05	4.8277e-07	4.7316e-07	4.7148e-07	4.5932e-07	3.4341e-07
	4	9.2472e-07	4.6236e-07	9.8101e-07	9.4499e-07	8.4567e-07	8.2085e-07	4.0140e-07
	5	1.4541e-04	3.6411e-05	1.6221e-05	5.8909e-06	3.0417e-06	1.8722e-06	4.6582e-07
2	1	2.9082e-04	7.2706e-05	3.2431e-05	1.1755e-05	6.0668e-06	3.7389e-06	9.2639e-07
	2	1.8494e-06	4.6236e-07	2.0198e-06	1.8160e-06	1.7456e-06	1.4947e-06	7.8411e-07
	3	4.6457e-07	7.2706e-05	9.1391e-07	9.4631e-07	9.2355e-07	9.0468e-07	5.9913e-07
	4	1.8494e-06	4.6236e-07	1.8074e-06	1.8456e-06	1.6309e-06	1.5527e-06	7.5255e-07
	5	2.9082e-04	7.2706e-05	3.2327e-05	1.1755e-05	6.0699e-06	3.7109e-06	9.1644e-07
5.5	1	6.0731e-04	1.5183e-04	6.7479e-05	2.4543e-05	1.2662e-05	7.7979e-06	1.9718e-06
	2	3.8621e-06	9.6552e-07	3.7888e-06	3.8541e-06	3.7516e-06	3.1039e-06	1.6525e-06
	3	9.7014e-07	1.5183e-04	9.6550e-07	1.9761e-06	1.9305e-06	1.8599e-06	1.2975e-06
	4	3.8621e-06	9.6552e-07	3.6201e-06	3.8541e-06	3.3968e-06	3.3544e-06	1.6355e-06
	5	6.0731e-04	1.5183e-04	6.7479e-05	2.4533e-05	1.2638e-05	7.7420e-06	1.8968e-06
11	1	1.1654e-03	2.9134e-04	1.2949e-04	4.7193e-05	2.4363e-05	1.4963e-05	3.7640e-06
	2	7.4109e-06	1.8527e-06	7.2704e-06	7.5403e-06	7.1990e-06	5.9561e-06	3.3119e-06
	3	1.8616e-06	2.9134e-04	1.8527e-06	3.7920e-06	3.7045e-06	3.5919e-06	2.4950e-06
	4	7.4109e-06	1.8527e-06	6.9466e-06	7.3956e-06	6.7168e-06	6.4775e-06	3.1410e-06
	5	1.1654e-03	2.9134e-04	1.2949e-04	4.6633e-05	2.4252e-05	1.4946e-05	3.6323e-06

Table L.5: Peak immission power at 500m distance (BER 10^{-6})

Speed [MBit/s]	P	Peak immission power in [mW]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	1.9157e-04	4.7968e-05	2.1381e-05	7.7624e-06	4.0097e-06	2.4714e-06	6.3176e-07
	2	1.2182e-06	6.0911e-07	1.3796e-06	1.2496e-06	1.1906e-06	1.0063e-06	5.7078e-07
	3	3.0602e-07	4.7968e-05	6.3600e-07	6.3558e-07	6.2689e-07	6.1971e-07	4.4155e-07
	4	1.2182e-06	6.0911e-07	1.2924e-06	1.2211e-06	1.1113e-06	1.0892e-06	5.3667e-07
	5	1.9157e-04	4.7968e-05	2.1370e-05	7.7518e-06	4.0047e-06	2.4593e-06	6.2349e-07
2	1	3.8313e-04	9.5783e-05	4.2724e-05	1.5494e-05	8.0097e-06	4.9047e-06	1.2409e-06
	2	2.4365e-06	6.0911e-07	2.6610e-06	2.4018e-06	2.3190e-06	1.9582e-06	1.1122e-06
	3	6.1203e-07	9.5783e-05	1.2040e-06	1.1789e-06	1.2179e-06	1.2040e-06	8.1822e-07
	4	2.4365e-06	6.0911e-07	2.3811e-06	2.4018e-06	2.1485e-06	2.1094e-06	9.9040e-07
	5	3.8313e-04	9.5783e-05	4.2587e-05	1.5487e-05	7.9797e-06	4.9197e-06	1.2273e-06
5.5	1	8.5243e-04	2.1311e-04	9.4714e-05	3.4448e-05	1.7773e-05	1.0945e-05	2.7650e-06
	2	5.4208e-06	1.3552e-06	5.3180e-06	5.4096e-06	5.2658e-06	4.3719e-06	2.4186e-06
	3	1.3617e-06	2.1311e-04	1.3552e-06	2.7737e-06	2.7097e-06	2.6105e-06	1.8144e-06
	4	5.4208e-06	1.3552e-06	5.0812e-06	5.4096e-06	4.9131e-06	4.5852e-06	2.2956e-06
	5	8.5243e-04	2.1311e-04	9.4714e-05	3.4435e-05	1.7739e-05	1.0887e-05	2.7350e-06
11	1	1.6550e-03	4.1376e-04	1.8389e-04	6.7022e-05	3.4626e-05	2.1269e-05	5.3493e-06
	2	1.0525e-05	2.6312e-06	1.0325e-05	1.0709e-05	1.0224e-05	8.4588e-06	4.6958e-06
	3	2.6438e-06	4.1376e-04	2.6312e-06	5.3853e-06	5.5482e-06	5.1220e-06	3.5476e-06
	4	1.0525e-05	2.6312e-06	9.8655e-06	1.0503e-05	9.5391e-06	9.1122e-06	4.5809e-06
	5	1.6550e-03	4.1376e-04	1.8389e-04	6.6201e-05	3.4429e-05	2.1077e-05	5.1549e-06

Table L.6: Peak immission power at 500m distance (BER 10^{-8})

Speed [MBit/s]	P	Peak immission energy in [mWs]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	1.3520e-02	2.1999e-05	1.5840e-08	1.2069e-07	1.9739e-08	1.9922e-09	7.1802e-12
	2	8.5980e-05	2.7936e-07	1.0221e-09	1.9429e-08	5.1759e-09	3.7163e-10	3.9820e-10
	3	2.3716e-05	2.2407e-05	4.7118e-10	1.8718e-09	4.9260e-09	3.3025e-10	1.8269e-10
	4	8.4334e-06	5.1789e-09	1.0722e-09	3.3547e-10	5.1248e-10	6.5668e-10	3.7330e-11
	5	1.3262e-03	4.0784e-07	1.7730e-08	2.0913e-09	6.3267e-10	1.4584e-09	1.2298e-10
2	1	1.3519e-02	3.3804e-03	5.2146e-06	4.7694e-07	3.3974e-09	5.3391e-09	4.5208e-10
	2	8.5973e-05	4.5104e-05	3.2478e-07	2.7058e-10	8.5187e-10	5.3509e-10	7.6372e-10
	3	2.3715e-05	3.7121e-03	1.9278e-07	9.2076e-10	4.5069e-10	4.3877e-10	4.7930e-12
	4	8.4331e-06	2.5715e-05	3.8124e-07	1.7958e-09	2.2962e-09	7.5618e-10	1.5051e-10
	5	1.3261e-03	3.3153e-04	1.4671e-05	1.2243e-07	4.4128e-09	7.6445e-10	1.1730e-10
5.5	1	1.1378e-02	2.8446e-03	1.2642e-03	1.8407e-09	1.2042e-08	1.8481e-09	2.5240e-10
	2	7.2357e-05	3.9549e-05	8.4211e-05	5.6038e-09	2.6711e-09	7.3873e-10	1.5534e-10
	3	2.1563e-05	3.3746e-03	2.1460e-05	4.7427e-09	2.4672e-09	8.8343e-10	3.1011e-10
	4	1.3482e-05	2.4830e-05	8.0462e-05	3.6459e-09	8.0844e-10	2.6467e-09	7.7358e-10
	5	2.1200e-03	5.2999e-04	2.3556e-04	2.8704e-09	1.6076e-08	7.1536e-09	7.3976e-11
11	1	1.2595e-02	3.1488e-03	1.3994e-03	1.3728e-07	1.3741e-08	7.4069e-09	6.2105e-10
	2	8.0095e-05	4.5950e-05	1.0174e-04	2.1935e-08	3.5491e-09	3.9787e-09	3.9743e-10
	3	2.6050e-05	4.0768e-03	2.5925e-05	3.1557e-08	3.6860e-09	5.9984e-10	7.0108e-10
	4	2.3607e-05	3.1827e-05	9.7206e-05	3.5514e-08	1.1083e-09	1.0753e-09	2.0416e-10
	5	3.7121e-03	9.2801e-04	4.1246e-04	9.3320e-06	2.5464e-09	2.4810e-09	3.8502e-10

Table L.7: Peak immission energy at 500m distance (BER 10^{-6})

Speed [MBit/s]	P	Peak immission energy in [mWs]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	1.7812e-02	2.8982e-05	9.7456e-08	8.2126e-08	1.4332e-07	2.0018e-10	9.2237e-11
	2	1.1327e-04	3.6803e-07	6.2881e-09	1.3221e-08	1.2374e-08	9.3081e-10	2.2603e-10
	3	3.1244e-05	2.9520e-05	2.8989e-09	3.3616e-09	6.1122e-10	1.6360e-10	2.1945e-10
	4	1.1110e-05	6.8227e-09	7.8577e-10	8.2611e-09	1.1559e-08	1.3941e-09	1.2236e-10
	5	1.7471e-03	5.3729e-07	1.2993e-08	7.5658e-09	7.5288e-10	1.1313e-10	2.8057e-11
2	1	1.7810e-02	4.4534e-03	6.8698e-06	4.1664e-08	3.9087e-09	2.3935e-09	4.4672e-11
	2	1.1326e-04	5.9420e-05	4.2787e-07	2.4378e-09	1.1317e-09	9.5559e-10	7.0066e-11
	3	3.1242e-05	4.8904e-03	2.5397e-07	1.6938e-07	5.9435e-10	5.2013e-10	3.9929e-10
	4	1.1110e-05	3.3877e-05	5.0225e-07	3.5114e-09	4.2390e-09	1.0273e-09	4.8233e-10
	5	1.7470e-03	4.3676e-04	1.9327e-05	2.1186e-08	3.0977e-08	2.1548e-09	1.8656e-10
5.5	1	1.5970e-02	3.9927e-03	1.7745e-03	2.5836e-09	2.1061e-08	5.1990e-09	1.1336e-10
	2	1.0156e-04	5.5512e-05	1.1820e-04	9.1693e-09	3.7545e-09	5.0277e-10	1.0255e-09
	3	3.0265e-05	4.7366e-03	3.0121e-05	7.3254e-09	1.9239e-09	6.2130e-10	8.6186e-10
	4	1.8923e-05	3.4852e-05	1.1294e-04	5.1175e-09	1.1644e-09	3.6911e-09	1.0835e-09
	5	2.9757e-03	7.4390e-04	3.3064e-04	4.0289e-09	4.0623e-09	2.5801e-09	3.0085e-11
11	1	1.7887e-02	4.4718e-03	1.9875e-03	2.2251e-08	5.7480e-09	3.5094e-09	8.8263e-10
	2	1.1375e-04	6.5257e-05	1.4448e-04	3.5553e-09	1.6972e-09	4.2040e-09	3.9116e-09
	3	3.6995e-05	5.7898e-03	3.6819e-05	3.5597e-09	9.2101e-10	1.7056e-09	5.8536e-10
	4	3.3526e-05	4.5200e-05	1.3805e-04	1.7435e-09	1.2868e-08	9.0667e-09	7.5585e-10
	5	5.2719e-03	1.3179e-03	5.8576e-04	2.1090e-04	9.6401e-09	3.0246e-08	1.2887e-10

Table L.8: Peak immission energy at 500m distance (BER 10^{-8})

Speed [MBit/s]	P	Immission energy in [mWs]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	1.3521e-02	4.6341e-03	3.4119e-03	2.7823e-03	1.6714e-03	1.2030e-03	9.6855e-05
	2	8.6922e-05	6.1362e-05	1.6907e-04	2.3164e-04	2.7227e-04	2.6407e-04	3.0641e-05
	3	2.3716e-05	5.0295e-03	8.2841e-05	1.1058e-04	1.2671e-04	1.2944e-04	1.8538e-05
	4	1.8041e-05	3.7727e-05	1.7076e-04	2.0781e-04	1.8841e-04	1.7818e-04	1.7275e-05
	5	1.3316e-03	4.0304e-04	1.9553e-04	9.3203e-05	6.5419e-05	4.8902e-05	5.1751e-06
	mv	2.9962e-03	2.0331e-03	8.0601e-04	6.8511e-04	4.6484e-04	3.6473e-04	3.3697e-05
2	1	1.3520e-02	3.3865e-03	2.1460e-03	1.7662e-03	1.3092e-03	9.2451e-04	3.4543e-04
	2	8.6916e-05	4.5339e-05	1.4821e-04	1.8351e-04	2.0857e-04	1.9166e-04	1.2211e-04
	3	2.3715e-05	3.7181e-03	6.8331e-05	8.3259e-05	1.1559e-04	1.1964e-04	6.2394e-05
	4	1.8040e-05	2.8117e-05	1.3168e-04	2.2342e-04	2.0963e-04	1.7428e-04	5.7149e-05
	5	1.3315e-03	3.3881e-04	1.8927e-04	7.8298e-05	5.8191e-05	3.7960e-05	1.4071e-05
	mv	2.9960e-03	1.5034e-03	5.3670e-04	4.6694e-04	3.8023e-04	2.8961e-04	1.2023e-04
5.5	1	1.1379e-02	2.8502e-03	1.2711e-03	9.9166e-04	6.6787e-04	4.9067e-04	2.0914e-04
	2	7.3864e-05	3.9926e-05	9.5877e-05	1.0319e-04	1.3049e-04	1.3628e-04	9.5467e-05
	3	2.1563e-05	3.3800e-03	4.4814e-05	5.8722e-05	6.8585e-05	7.9143e-05	5.9244e-05
	4	2.1567e-05	2.6852e-05	8.6284e-05	1.5081e-04	1.4322e-04	1.4832e-04	5.5399e-05
	5	2.1246e-03	5.3652e-04	2.4277e-04	1.0674e-04	6.3049e-05	4.5776e-05	1.6605e-05
	mv	2.7241e-03	1.3667e-03	3.4817e-04	2.8222e-04	2.1464e-04	1.8004e-04	8.7171e-05
11	1	1.2596e-02	3.1557e-03	1.4078e-03	7.0607e-04	5.6352e-04	4.1579e-04	1.8728e-04
	2	8.2733e-05	4.6609e-05	1.1511e-04	1.4153e-04	1.2299e-04	1.2956e-04	1.1751e-04
	3	2.6050e-05	4.0833e-03	5.4140e-05	7.4694e-05	7.1772e-05	7.8921e-05	8.4514e-05
	4	3.2557e-05	3.4065e-05	1.0496e-04	1.4029e-04	1.4477e-04	1.4891e-04	8.8271e-05
	5	3.7172e-03	9.3578e-04	4.2111e-04	1.8401e-04	9.6613e-05	6.7883e-05	2.9768e-05
	mv	3.2910e-03	1.6511e-03	4.2062e-04	2.4932e-04	1.9994e-04	1.6821e-04	1.0147e-04

Table L.9: Immission energy at 500m distance (BER 10^{-6})

Speed [MBit/s]	P	Immission energy in [mWs]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	1.7813e-02	6.1050e-03	4.4127e-03	3.7220e-03	2.2743e-03	1.5332e-03	2.0110e-04
	2	1.1451e-04	8.0839e-05	2.2113e-04	3.0876e-04	3.5541e-04	3.2939e-04	6.0679e-05
	3	3.1244e-05	6.6259e-03	1.0907e-04	1.4572e-04	1.6837e-04	1.6571e-04	3.7929e-05
	4	2.3767e-05	4.9702e-05	2.2594e-04	2.6359e-04	2.4850e-04	2.4087e-04	3.6389e-05
	5	1.7542e-03	5.3097e-04	2.5783e-04	1.1713e-04	8.7802e-05	6.9942e-05	1.0572e-05
	mv	3.9473e-03	2.6785e-03	1.0453e-03	9.1144e-04	6.2687e-04	4.6781e-04	6.9335e-05
2	1	1.7811e-02	4.4614e-03	2.8272e-03	2.3889e-03	1.7097e-03	1.1946e-03	4.7508e-04
	2	1.1450e-04	5.9730e-05	1.9525e-04	2.4370e-04	2.7198e-04	2.5806e-04	1.6771e-04
	3	3.1242e-05	4.8982e-03	9.0020e-05	1.1025e-04	1.5150e-04	1.5594e-04	8.8575e-05
	4	2.3766e-05	3.7042e-05	1.7348e-04	2.9710e-04	2.7407e-04	2.2167e-04	7.8521e-05
	5	1.7542e-03	4.4635e-04	2.4935e-04	1.0098e-04	7.1574e-05	5.5113e-05	1.9654e-05
	mv	3.9470e-03	1.9805e-03	7.0706e-04	6.2819e-04	4.9576e-04	3.7708e-04	1.6591e-04
5.5	1	1.5972e-02	4.0005e-03	1.7842e-03	1.3939e-03	9.4274e-04	6.7260e-04	2.8769e-04
	2	1.0368e-04	5.6040e-05	1.3457e-04	1.4428e-04	1.8112e-04	1.8977e-04	1.3078e-04
	3	3.0265e-05	4.7441e-03	6.2902e-05	8.2396e-05	9.7368e-05	1.1079e-04	8.2857e-05
	4	3.0272e-05	3.7689e-05	1.2111e-04	2.1189e-04	2.0131e-04	2.0627e-04	8.1297e-05
	5	2.9821e-03	7.5306e-04	3.4075e-04	1.4980e-04	8.7164e-05	6.2253e-05	2.4509e-05
	mv	3.8236e-03	1.9183e-03	4.8870e-04	3.9646e-04	3.0194e-04	2.4834e-04	1.2143e-04
11	1	1.7889e-02	4.4816e-03	1.9993e-03	8.0554e-04	6.8549e-04	5.4396e-04	2.4381e-04
	2	1.1750e-04	6.6193e-05	1.6347e-04	1.6326e-04	1.7369e-04	1.6627e-04	1.5034e-04
	3	3.6995e-05	5.7990e-03	7.6889e-05	8.6778e-05	9.8624e-05	9.9453e-05	1.1929e-04
	4	4.6236e-05	4.8378e-05	1.4907e-04	1.5903e-04	1.8126e-04	2.0975e-04	1.2856e-04
	5	5.2791e-03	1.3290e-03	5.9806e-04	2.2513e-04	1.3769e-04	9.5115e-05	4.3111e-05
	mv	4.6738e-03	2.3448e-03	5.9736e-04	2.8795e-04	2.5535e-04	2.2291e-04	1.3702e-04

Table L.10: Immission energy at 500m distance (BER 10^{-8})

Appendix M

TABLES OF THE IMMISSION POWER FOR 1000M

Speed [MBit/s]	P	Immission power in [mW]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	4.5053e-04	5.9183e-05	2.4543e-05	1.0705e-05	5.1014e-06	2.9827e-06	6.1439e-07
	2	7.2754e-07	1.9711e-07	3.0995e-07	2.4493e-07	2.4017e-07	2.1156e-07	8.6381e-08
	3	1.9781e-07	6.4250e-05	1.5165e-07	1.0972e-07	1.0149e-07	8.7053e-08	4.1421e-08
	4	1.5067e-07	1.2115e-07	3.2017e-07	2.2113e-07	1.7061e-07	1.3922e-07	4.8237e-08
	5	4.4235e-05	5.0595e-06	1.3327e-06	3.0486e-07	1.5673e-07	8.8129e-08	2.1250e-08
	mv	9.9167e-05	2.5762e-05	5.3316e-06	2.3171e-06	1.1541e-06	7.0173e-07	1.6234e-07
2	1	7.5062e-04	1.1247e-04	3.3955e-05	1.3929e-05	6.7754e-06	3.9532e-06	8.2244e-07
	2	1.2121e-06	3.7876e-07	5.9859e-07	3.9992e-07	3.1087e-07	2.6251e-07	1.2964e-07
	3	3.2956e-07	1.2351e-04	2.7561e-07	1.6950e-07	1.5723e-07	1.3926e-07	5.2092e-08
	4	2.5103e-07	2.3481e-07	5.4355e-07	4.8913e-07	3.2357e-07	2.3644e-07	5.9897e-08
	5	7.3702e-05	1.1086e-05	2.8729e-06	5.0694e-07	2.2413e-07	1.0669e-07	1.8612e-08
	mv	1.6522e-04	4.9536e-05	7.6491e-06	3.0989e-06	1.5582e-06	9.3961e-07	2.1654e-07
5.5	1	9.4440e-04	1.7168e-04	5.7738e-05	1.8907e-05	8.4269e-06	4.6300e-06	9.7674e-07
	2	1.5399e-06	6.0497e-07	1.1123e-06	5.4170e-07	4.7661e-07	4.1677e-07	2.0211e-07
	3	4.4796e-07	2.0364e-04	5.1908e-07	2.8907e-07	2.2761e-07	2.0390e-07	9.8462e-08
	4	4.4895e-07	4.0675e-07	1.0226e-06	7.9901e-07	5.4006e-07	4.4712e-07	1.1505e-07
	5	1.7605e-04	3.2069e-05	1.0826e-05	1.8643e-06	6.6964e-07	3.3283e-07	5.0021e-08
	mv	2.2458e-04	8.1680e-05	1.4244e-05	4.4801e-06	2.0682e-06	1.2061e-06	2.8848e-07
11	1	1.1443e-03	2.4143e-04	8.6568e-05	2.0271e-05	1.1387e-05	6.0162e-06	1.0293e-06
	2	1.8878e-06	8.9718e-07	1.8086e-06	1.1298e-06	7.2086e-07	6.1121e-07	3.0335e-07
	3	5.9236e-07	3.1254e-04	8.4929e-07	5.5755e-07	3.8224e-07	3.1280e-07	1.7047e-07
	4	7.4212e-07	6.5557e-07	1.6844e-06	1.1221e-06	8.7715e-07	6.9063e-07	2.2113e-07
	5	3.3736e-04	7.1266e-05	2.5610e-05	5.0795e-06	1.7803e-06	8.4183e-07	1.0935e-07
	mv	2.9697e-04	1.2536e-04	2.3304e-05	5.6320e-06	3.0296e-06	1.6945e-06	3.6671e-07

Table M.1: Immission power at 1000m distance (BER 10^{-6})

Speed [MBit/s]	P	Immission power in [mW]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	5.9353e-04	7.7968e-05	3.1854e-05	1.4161e-05	6.8194e-06	3.9546e-06	8.3611e-07
	2	9.5846e-07	2.5968e-07	4.0681e-07	3.2289e-07	3.0765e-07	2.7426e-07	1.1156e-07
	3	2.6059e-07	8.4644e-05	2.0036e-07	1.4298e-07	1.3249e-07	1.1594e-07	5.5407e-08
	4	1.9849e-07	1.5960e-07	4.2515e-07	2.7720e-07	2.2075e-07	1.9604e-07	6.6508e-08
	5	5.8275e-05	6.6655e-06	1.7634e-06	3.7748e-07	2.0544e-07	1.3465e-07	2.9033e-08
	mv	1.3064e-04	3.3939e-05	6.9299e-06	3.0563e-06	1.5372e-06	9.3510e-07	2.1972e-07
2	1	9.8887e-04	1.4817e-04	4.4733e-05	1.8599e-05	8.9455e-06	5.1434e-06	1.0813e-06
	2	1.5969e-06	4.9899e-07	7.8859e-07	5.2419e-07	4.0985e-07	3.5715e-07	1.7018e-07
	3	4.3417e-07	1.6271e-04	3.6309e-07	2.2154e-07	2.0833e-07	1.8290e-07	7.0866e-08
	4	3.3071e-07	3.0934e-07	7.1608e-07	6.4204e-07	4.2787e-07	3.0241e-07	7.8538e-08
	5	9.7096e-05	1.4605e-05	3.7848e-06	6.4080e-07	2.7422e-07	1.6427e-07	2.5015e-08
	mv	2.1767e-04	6.5259e-05	1.0077e-05	4.1254e-06	2.0531e-06	1.2300e-06	2.8518e-07
5.5	1	1.3256e-03	2.4096e-04	8.1042e-05	2.6597e-05	1.1897e-05	6.3700e-06	1.3406e-06
	2	2.1614e-06	8.4914e-07	1.5612e-06	7.5788e-07	6.6129e-07	5.8293e-07	2.7596e-07
	3	6.2876e-07	2.8584e-04	7.2859e-07	4.0590e-07	3.2312e-07	2.8677e-07	1.3763e-07
	4	6.3015e-07	5.7092e-07	1.4354e-06	1.1235e-06	7.5918e-07	6.2450e-07	1.6931e-07
	5	2.4711e-04	4.5012e-05	1.5196e-05	2.6180e-06	9.2383e-07	4.5078e-07	7.4652e-08
	mv	3.1522e-04	1.1465e-04	1.9993e-05	6.3004e-06	2.9128e-06	1.6630e-06	3.9963e-07
11	1	1.6251e-03	3.4288e-04	1.2294e-04	3.0918e-05	1.4964e-05	8.5412e-06	1.4000e-06
	2	2.6810e-06	1.2742e-06	2.5685e-06	1.7427e-06	1.1036e-06	8.5081e-07	4.0170e-07
	3	8.4126e-07	4.4387e-04	1.2061e-06	8.6607e-07	5.6853e-07	4.2789e-07	2.5308e-07
	4	1.0539e-06	9.3102e-07	2.3921e-06	1.7001e-06	1.1822e-06	1.0579e-06	3.3997e-07
	5	4.7912e-04	1.0121e-04	3.6371e-05	8.3408e-06	2.7441e-06	1.2815e-06	1.6557e-07
	mv	4.2176e-04	1.7803e-04	3.3096e-05	8.7135e-06	4.1126e-06	2.4319e-06	5.1205e-07

Table M.2: Immission power at 1000m distance (BER 10^{-8})

Speed [MBit/s]	P	99% percentil of imission power in [mW]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	5.8165e-04	1.4543e-04	6.4642e-05	2.3284e-05	1.1889e-05	7.1990e-06	1.6283e-06
	2	9.2915e-07	2.5813e-07	9.3619e-07	9.1382e-07	9.2635e-07	8.4281e-07	6.2005e-07
	3	2.3257e-07	1.4541e-04	2.5952e-07	2.5618e-07	2.6127e-07	2.6018e-07	2.4662e-07
	4	9.2915e-07	2.5813e-07	9.1461e-07	9.1795e-07	8.6386e-07	8.8680e-07	5.6314e-07
	5	5.8165e-04	1.4543e-04	6.4634e-05	2.3272e-05	1.1928e-05	7.1882e-06	1.6118e-06
2	1	1.1633e-03	2.9082e-04	1.2927e-04	4.6545e-05	2.3754e-05	1.4377e-05	3.2369e-06
	2	1.8583e-06	4.6457e-07	1.8494e-06	1.8051e-06	1.8028e-06	1.6400e-06	1.2132e-06
	3	4.6513e-07	2.9082e-04	4.6737e-07	4.7932e-07	4.8642e-07	9.0338e-07	4.2475e-07
	4	1.8583e-06	4.6457e-07	1.8062e-06	1.8051e-06	1.7116e-06	1.7477e-06	1.0951e-06
	5	1.1633e-03	2.9082e-04	1.2927e-04	4.6539e-05	2.3745e-05	1.4366e-05	3.2224e-06
5.5	1	2.4292e-03	6.0731e-04	2.6992e-04	9.7185e-05	4.9592e-05	3.0006e-05	6.7444e-06
	2	3.8806e-06	9.7014e-07	3.8620e-06	3.7373e-06	3.7551e-06	3.4099e-06	2.5187e-06
	3	9.7131e-07	6.0731e-04	9.7597e-07	9.6207e-07	9.8415e-07	9.7951e-07	8.8698e-07
	4	3.8806e-06	9.7014e-07	3.7719e-06	3.7546e-06	3.5647e-06	3.6349e-06	2.2821e-06
	5	2.4292e-03	6.0731e-04	2.6992e-04	9.7179e-05	4.9581e-05	2.9994e-05	6.7366e-06
11	1	4.6615e-03	1.1654e-03	5.1794e-04	1.8648e-04	9.5151e-05	5.7568e-05	1.2931e-05
	2	7.4464e-06	1.8616e-06	7.4108e-06	7.1715e-06	7.1798e-06	6.5719e-06	4.8209e-06
	3	1.8638e-06	1.1654e-03	1.8728e-06	1.8461e-06	1.8505e-06	1.8646e-06	1.6750e-06
	4	7.4464e-06	1.8616e-06	7.2379e-06	7.1715e-06	6.8315e-06	6.9561e-06	4.3678e-06
	5	4.6615e-03	1.1654e-03	5.1794e-04	1.8646e-04	9.5132e-05	5.7549e-05	1.2913e-05

Table M.3: 99% percentil of imission power at 1000m distance (BER 10^{-6})

Speed [MBit/s]	P	99% percentil of imission power in [mW]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	7.6627e-04	1.9159e-04	8.5160e-05	3.0675e-05	1.5662e-05	9.4835e-06	2.1442e-06
	2	1.2241e-06	3.4007e-07	1.2333e-06	1.2039e-06	1.2204e-06	1.0977e-06	8.0961e-07
	3	3.0638e-07	1.9157e-04	3.4190e-07	3.3749e-07	3.4419e-07	3.3652e-07	3.0701e-07
	4	1.2241e-06	3.4007e-07	1.2049e-06	1.2093e-06	1.1353e-06	1.1714e-06	7.4189e-07
	5	7.6627e-04	1.9159e-04	8.5160e-05	3.0659e-05	1.5643e-05	9.4697e-06	2.1234e-06
2	1	1.5325e-03	3.8313e-04	1.7030e-04	6.1318e-05	3.1293e-05	1.8937e-05	4.2643e-06
	2	2.4481e-06	6.1203e-07	2.4364e-06	2.3780e-06	2.3750e-06	2.1606e-06	1.5983e-06
	3	6.1277e-07	3.8313e-04	6.1571e-07	6.3145e-07	6.4081e-07	1.1901e-06	5.7129e-07
	4	2.4481e-06	6.1203e-07	2.3796e-06	2.3780e-06	2.2549e-06	2.3025e-06	1.4444e-06
	5	1.5325e-03	3.8313e-04	1.7030e-04	6.1311e-05	3.1282e-05	1.8926e-05	4.2452e-06
5.5	1	3.4097e-03	8.5243e-04	3.7886e-04	1.3641e-04	6.9607e-05	4.2116e-05	9.4665e-06
	2	5.4468e-06	1.3617e-06	5.4207e-06	5.2457e-06	5.2706e-06	4.7770e-06	3.5263e-06
	3	1.3633e-06	8.5243e-04	1.3699e-06	1.3504e-06	1.3814e-06	1.3748e-06	1.2341e-06
	4	5.4468e-06	1.3617e-06	5.2942e-06	5.2699e-06	5.0035e-06	5.1020e-06	3.2097e-06
	5	3.4097e-03	8.5243e-04	3.7886e-04	1.3640e-04	6.9593e-05	4.2099e-05	9.4452e-06
11	1	6.6201e-03	1.6550e-03	7.3557e-04	2.6481e-04	1.3512e-04	8.1749e-05	1.8357e-05
	2	1.0575e-05	2.6438e-06	1.0525e-05	1.0185e-05	1.0197e-05	9.2656e-06	6.8270e-06
	3	2.6470e-06	1.6550e-03	2.6597e-06	2.6218e-06	2.6280e-06	2.6154e-06	2.3850e-06
	4	1.0575e-05	2.6438e-06	1.0279e-05	1.0185e-05	9.6780e-06	9.8789e-06	6.2834e-06
	5	6.6201e-03	1.6550e-03	7.3557e-04	2.6481e-04	1.3512e-04	8.1730e-05	1.8338e-05

Table M.4: 99% percentil of imission power at 1000m distance (BER 10^{-8})

Speed [MBit/s]	P	Peak immission power in [mW]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	5.8165e-04	1.4547e-04	6.4700e-05	2.3342e-05	1.1949e-05	7.2620e-06	1.6928e-06
	2	9.2915e-07	4.6457e-07	1.0653e-06	1.0426e-06	1.0396e-06	9.7364e-07	7.4941e-07
	3	2.3257e-07	1.4547e-04	4.9043e-07	4.8653e-07	4.9066e-07	4.9170e-07	4.6264e-07
	4	9.2915e-07	4.6457e-07	1.0178e-06	1.0391e-06	9.9762e-07	1.0247e-06	6.8974e-07
	5	5.8165e-04	1.4547e-04	6.4692e-05	2.3341e-05	1.1946e-05	7.2594e-06	1.6814e-06
2	1	1.1633e-03	2.9082e-04	1.2937e-04	4.6655e-05	2.3874e-05	1.4511e-05	3.3543e-06
	2	1.8583e-06	4.6457e-07	2.0559e-06	2.0038e-06	2.0166e-06	1.9124e-06	1.4187e-06
	3	4.6513e-07	2.9082e-04	9.2917e-07	9.7307e-07	9.6233e-07	9.6997e-07	8.3185e-07
	4	1.8583e-06	4.6457e-07	1.8805e-06	2.0335e-06	1.9333e-06	1.9586e-06	1.3258e-06
	5	1.1633e-03	2.9082e-04	1.2927e-04	4.6655e-05	2.3879e-05	1.4485e-05	3.3470e-06
5.5	1	2.4292e-03	6.0731e-04	2.6992e-04	9.7422e-05	4.9848e-05	3.0293e-05	7.0424e-06
	2	3.8806e-06	9.7014e-07	3.8620e-06	4.2465e-06	4.3190e-06	3.9761e-06	2.9806e-06
	3	9.7131e-07	6.0731e-04	9.7597e-07	2.0320e-06	2.0106e-06	1.9949e-06	1.7877e-06
	4	3.8806e-06	9.7014e-07	3.7719e-06	4.2465e-06	4.0283e-06	4.2042e-06	2.8395e-06
	5	2.4292e-03	6.0731e-04	2.6992e-04	9.7412e-05	4.9827e-05	3.0240e-05	6.9722e-06
11	1	4.6615e-03	1.1654e-03	5.1794e-04	1.8704e-04	9.5719e-05	5.8129e-05	1.3494e-05
	2	7.4464e-06	1.8616e-06	7.4108e-06	8.2944e-06	8.2878e-06	7.6298e-06	5.8638e-06
	3	1.8638e-06	1.1654e-03	1.8728e-06	3.8992e-06	3.8581e-06	3.8511e-06	3.4356e-06
	4	7.4464e-06	1.8616e-06	7.2379e-06	8.1486e-06	7.9343e-06	8.1082e-06	5.4514e-06
	5	4.6615e-03	1.1654e-03	5.1794e-04	1.8648e-04	9.5614e-05	5.8120e-05	1.3371e-05

Table M.5: Peak immission power at 1000m distance (BER 10^{-6})

Speed [MBit/s]	P	Peak immission power in [mW]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	7.6627e-04	1.9164e-04	8.5237e-05	3.0751e-05	1.5739e-05	9.5670e-06	2.2312e-06
	2	1.2241e-06	6.1203e-07	1.4034e-06	1.3736e-06	1.3696e-06	1.2816e-06	9.9154e-07
	3	3.0638e-07	1.9164e-04	6.4609e-07	6.5322e-07	6.5241e-07	6.6307e-07	5.9844e-07
	4	1.2241e-06	6.1203e-07	1.3409e-06	1.3449e-06	1.3115e-06	1.3577e-06	9.1700e-07
	5	7.6627e-04	1.9164e-04	8.5225e-05	3.0740e-05	1.5735e-05	9.5564e-06	2.2250e-06
2	1	1.5325e-03	3.8313e-04	1.7043e-04	6.1471e-05	3.1469e-05	1.9096e-05	4.4398e-06
	2	2.4481e-06	6.1203e-07	2.7084e-06	2.6492e-06	2.6763e-06	2.5084e-06	1.9517e-06
	3	6.1277e-07	3.8313e-04	1.2241e-06	1.2139e-06	1.2684e-06	1.2899e-06	1.1288e-06
	4	2.4481e-06	6.1203e-07	2.4774e-06	2.6492e-06	2.5469e-06	2.6455e-06	1.7457e-06
	5	1.5325e-03	3.8313e-04	1.7030e-04	6.1464e-05	3.1441e-05	1.9114e-05	4.4302e-06
5.5	1	3.4097e-03	8.5243e-04	3.7886e-04	1.3674e-04	6.9967e-05	4.2519e-05	9.8821e-06
	2	5.4468e-06	1.3617e-06	5.4207e-06	5.9604e-06	6.0622e-06	5.5961e-06	4.2852e-06
	3	1.3633e-06	8.5243e-04	1.3699e-06	2.8521e-06	2.8221e-06	2.8001e-06	2.5055e-06
	4	5.4468e-06	1.3617e-06	5.2942e-06	5.9604e-06	5.8037e-06	5.7765e-06	3.9856e-06
	5	3.4097e-03	8.5243e-04	3.7886e-04	1.3673e-04	6.9938e-05	4.2466e-05	9.8608e-06
11	1	6.6201e-03	1.6550e-03	7.3557e-04	2.6563e-04	1.3596e-04	8.2572e-05	1.9168e-05
	2	1.0575e-05	2.6438e-06	1.0525e-05	1.1780e-05	1.1770e-05	1.0836e-05	8.3200e-06
	3	2.6470e-06	1.6550e-03	2.6597e-06	5.5376e-06	5.7709e-06	5.4905e-06	4.8854e-06
	4	1.0575e-05	2.6438e-06	1.0279e-05	1.1573e-05	1.1268e-05	1.1428e-05	7.8668e-06
	5	6.6201e-03	1.6550e-03	7.3557e-04	2.6481e-04	1.3578e-04	8.2390e-05	1.8986e-05

Table M.6: Peak immission power at 1000m distance (BER 10^{-8})

Speed [MBit/s]	P	Peak immission energy in [mWs]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	5.4081e-02	8.7892e-05	6.3147e-08	4.7812e-07	7.7452e-08	7.7122e-09	2.5391e-11
	2	8.6392e-05	2.8069e-07	1.0397e-09	2.1356e-08	5.9540e-09	4.7319e-10	6.9395e-10
	3	2.3745e-05	8.9522e-05	4.7866e-10	1.9247e-09	5.1264e-09	3.5353e-10	2.4613e-10
	4	8.4738e-06	5.2037e-09	1.1125e-09	3.6888e-10	6.0456e-10	8.1972e-10	6.4146e-11
	5	5.3046e-03	1.6294e-06	7.0708e-08	8.2860e-09	2.4848e-09	5.6550e-09	4.4389e-10
2	1	5.4077e-02	1.3522e-02	2.0802e-05	1.8929e-06	1.3369e-08	2.0722e-08	1.6369e-09
	2	8.6385e-05	4.5320e-05	3.3057e-07	2.9857e-10	9.8409e-10	6.8462e-10	1.3818e-09
	3	2.3743e-05	1.4849e-02	1.9600e-07	9.4679e-10	4.6962e-10	4.7044e-10	6.6548e-12
	4	8.4735e-06	2.5838e-05	3.9668e-07	1.9786e-09	2.7221e-09	9.5384e-10	2.6517e-10
	5	5.3044e-03	1.3261e-03	5.8665e-05	4.8591e-07	1.7360e-08	2.9839e-09	4.2842e-10
5.5	1	4.5513e-02	1.1378e-02	5.0570e-03	7.3066e-09	4.7405e-08	7.1794e-09	9.0143e-10
	2	7.2704e-05	3.9739e-05	8.5838e-05	6.1744e-09	3.0751e-09	9.4632e-10	2.8017e-10
	3	2.1588e-05	1.3498e-02	2.1692e-05	4.8768e-09	2.5695e-09	9.4759e-10	4.2726e-10
	4	1.3546e-05	2.4949e-05	8.3835e-05	4.0172e-09	9.5875e-10	3.3171e-09	1.3431e-09
	5	8.4800e-03	2.1200e-03	9.4225e-04	1.1397e-08	6.3380e-08	2.7942e-08	2.7191e-10
11	1	5.0380e-02	1.2595e-02	5.5977e-03	5.4410e-07	5.3985e-08	2.8774e-08	2.2265e-09
	2	8.0479e-05	4.6170e-05	1.0370e-04	2.4128e-08	4.0859e-09	5.0967e-09	7.0366e-10
	3	2.6081e-05	1.6307e-02	2.6207e-05	3.2449e-08	3.8388e-09	6.4313e-10	9.6540e-10
	4	2.3720e-05	3.1980e-05	1.0128e-04	3.9130e-08	1.3092e-09	1.3460e-09	3.5434e-10
	5	1.4849e-02	3.7120e-03	1.6498e-03	3.7317e-05	1.0039e-08	9.6479e-09	1.4174e-09

Table M.7: Peak immission energy at 1000m distance (BER 10^{-6})

Speed [MBit/s]	P	Peak immission energy in [mWs]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	7.1247e-02	1.1579e-04	3.8851e-07	3.2535e-07	5.6257e-07	7.7493e-10	3.2575e-10
	2	1.1381e-04	3.6979e-07	6.3966e-09	1.4533e-08	1.4235e-08	1.1855e-09	3.9265e-10
	3	3.1282e-05	1.1794e-04	2.9449e-09	3.4549e-09	6.3610e-10	1.7505e-10	2.9742e-10
	4	1.1164e-05	6.8554e-09	8.1528e-10	9.0985e-09	1.3641e-08	1.7378e-09	2.0908e-10
	5	6.9883e-03	2.1466e-06	5.1817e-08	3.0003e-08	2.9583e-09	4.3959e-10	1.0013e-10
2	1	7.1242e-02	1.7813e-02	2.7405e-05	1.6530e-07	1.5357e-08	9.3187e-09	1.5983e-10
	2	1.1380e-04	5.9705e-05	4.3550e-07	2.6890e-09	1.3060e-09	1.2241e-09	1.2296e-10
	3	3.1279e-05	1.9562e-02	2.5821e-07	1.7441e-07	6.1899e-10	5.5724e-10	5.5087e-10
	4	1.1163e-05	3.4039e-05	5.2258e-07	3.8732e-09	5.0251e-09	1.2884e-09	8.5014e-10
	5	6.9881e-03	1.7470e-03	7.7286e-05	8.4082e-08	1.2205e-07	8.3719e-09	6.7338e-10
5.5	1	6.3882e-02	1.5971e-02	7.0980e-03	1.0256e-08	8.2911e-08	2.0197e-08	4.0516e-10
	2	1.0205e-04	5.5778e-05	1.2048e-04	1.0103e-08	4.3224e-09	6.4355e-10	1.8169e-09
	3	3.0302e-05	1.8946e-02	3.0448e-05	7.5325e-09	2.0037e-09	6.6642e-10	1.1901e-09
	4	1.9014e-05	3.5019e-05	1.1767e-04	5.6386e-09	1.3755e-09	4.6501e-09	1.8812e-09
	5	1.1903e-02	2.9756e-03	1.3226e-03	1.5997e-08	1.6016e-08	1.0064e-08	1.0847e-10
11	1	7.1548e-02	1.7887e-02	7.9498e-03	8.8190e-08	2.2570e-08	1.3624e-08	3.1626e-09
	2	1.1429e-04	6.5570e-05	1.4727e-04	3.9108e-09	1.9538e-09	5.3854e-09	6.9305e-09
	3	3.7040e-05	2.3159e-02	3.7218e-05	3.6603e-09	9.5797e-10	1.8283e-09	8.0609e-10
	4	3.3686e-05	4.5417e-05	1.4384e-04	1.9210e-09	1.5201e-08	1.1371e-08	1.2980e-09
	5	2.1088e-02	5.2718e-03	2.3431e-03	8.4359e-04	3.8017e-08	1.1823e-07	4.7465e-10

Table M.8: Peak immission energy at 1000m distance (BER 10^{-8})

Speed [MBit/s]	P	Immission energy in [mWs]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	5.4082e-02	1.8512e-02	1.3612e-02	1.1073e-02	6.6123e-03	4.7240e-03	3.6073e-04
	2	8.7335e-05	6.1655e-05	1.7190e-04	2.5335e-04	3.1131e-04	3.3507e-04	5.0717e-05
	3	2.3745e-05	2.0097e-02	8.4107e-05	1.1350e-04	1.3155e-04	1.3788e-04	2.4319e-05
	4	1.8087e-05	3.7894e-05	1.7757e-04	2.2874e-04	2.2115e-04	2.2051e-04	2.8322e-05
	5	5.3100e-03	1.5826e-03	7.3910e-04	3.1534e-04	2.0315e-04	1.3958e-04	1.2477e-05
	mv	1.1904e-02	8.0581e-03	2.9569e-03	2.3968e-03	1.4959e-03	1.1114e-03	9.5312e-05
2	1	5.4078e-02	1.3528e-02	8.5527e-03	7.0198e-03	5.1678e-03	3.6216e-03	1.2892e-03
	2	8.7328e-05	4.5555e-05	1.5078e-04	2.0154e-04	2.3711e-04	2.4050e-04	2.0322e-04
	3	2.3743e-05	1.4854e-02	6.9422e-05	8.5422e-05	1.1992e-04	1.2758e-04	8.1655e-05
	4	1.8086e-05	2.8241e-05	1.3691e-04	2.4650e-04	2.4680e-04	2.1662e-04	9.3889e-05
	5	5.3098e-03	1.3334e-03	7.2364e-04	2.5548e-04	1.7095e-04	9.7742e-05	2.9175e-05
	mv	1.1903e-02	5.9579e-03	1.9267e-03	1.5617e-03	1.1885e-03	8.6081e-04	3.3942e-04
5.5	1	4.5513e-02	1.1384e-02	5.0638e-03	3.9400e-03	2.6296e-03	1.9140e-03	7.7158e-04
	2	7.4211e-05	4.0116e-05	9.7548e-05	1.1289e-04	1.4873e-04	1.7228e-04	1.5966e-04
	3	2.1588e-05	1.3504e-02	4.5525e-05	6.0240e-05	7.1025e-05	8.4288e-05	7.7781e-05
	4	2.1636e-05	2.6972e-05	8.9687e-05	1.6651e-04	1.6852e-04	1.8483e-04	9.0886e-05
	5	8.4846e-03	2.1265e-03	9.4948e-04	3.8851e-04	2.0896e-04	1.3758e-04	3.9514e-05
	mv	1.0823e-02	5.4162e-03	1.2492e-03	9.3363e-04	6.4537e-04	4.9859e-04	2.2788e-04
11	1	5.0381e-02	1.2602e-02	5.6061e-03	2.7878e-03	2.2178e-03	1.6145e-03	6.7134e-04
	2	8.3118e-05	4.6830e-05	1.1712e-04	1.5538e-04	1.4039e-04	1.6402e-04	1.9786e-04
	3	2.6081e-05	1.6314e-02	5.4999e-05	7.6677e-05	7.4446e-05	8.3941e-05	1.1119e-04
	4	3.2675e-05	3.4218e-05	1.0908e-04	1.5431e-04	1.7083e-04	1.8533e-04	1.4423e-04
	5	1.4854e-02	3.7198e-03	1.6585e-03	6.9856e-04	3.4673e-04	2.2591e-04	7.1323e-05
	mv	1.3075e-02	6.5433e-03	1.5092e-03	7.7454e-04	5.9003e-04	4.5474e-04	2.3919e-04

Table M.9: Immission energy at 1000m distance (BER 10^{-6})

Speed [MBit/s]	P	Immission energy in [mWs]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	7.1248e-02	2.4387e-02	1.7604e-02	1.4813e-02	8.9989e-03	6.0207e-03	7.5083e-04
	2	1.1506e-04	8.1225e-05	2.2483e-04	3.3776e-04	4.0597e-04	4.1754e-04	1.0018e-04
	3	3.1282e-05	2.6476e-02	1.1073e-04	1.4956e-04	1.7483e-04	1.7651e-04	4.9756e-05
	4	2.3827e-05	4.9921e-05	2.3496e-04	2.8997e-04	2.9130e-04	2.9846e-04	5.9725e-05
	5	6.9955e-03	2.0849e-03	9.7457e-04	3.9486e-04	2.7110e-04	2.0499e-04	2.6072e-05
	mv	1.5683e-02	1.0616e-02	3.8298e-03	3.1971e-03	2.0284e-03	1.4236e-03	1.9731e-04
2	1	7.1243e-02	1.7821e-02	1.1267e-02	9.4960e-03	6.7498e-03	4.6755e-03	1.7719e-03
	2	1.1505e-04	6.0015e-05	1.9863e-04	2.6764e-04	3.0926e-04	3.2466e-04	2.7886e-04
	3	3.1279e-05	1.9569e-02	9.1457e-05	1.1311e-04	1.5720e-04	1.6626e-04	1.1613e-04
	4	2.3826e-05	3.7206e-05	1.8037e-04	3.2781e-04	3.2285e-04	2.7490e-04	1.2870e-04
	5	6.9952e-03	1.7566e-03	9.5333e-04	3.2718e-04	2.0691e-04	1.4933e-04	4.0992e-05
	mv	1.5682e-02	7.8489e-03	2.5382e-03	2.1064e-03	1.5492e-03	1.1181e-03	4.6732e-04
5.5	1	6.3883e-02	1.5978e-02	7.1077e-03	5.5386e-03	3.7125e-03	2.6215e-03	1.0596e-03
	2	1.0416e-04	5.6307e-05	1.3692e-04	1.5782e-04	2.0636e-04	2.3990e-04	2.1812e-04
	3	3.0302e-05	1.8954e-02	6.3900e-05	8.4525e-05	1.0083e-04	1.1802e-04	1.0878e-04
	4	3.0369e-05	3.7858e-05	1.2589e-04	2.3396e-04	2.3691e-04	2.5700e-04	1.3382e-04
	5	1.1909e-02	2.9848e-03	1.3327e-03	5.4519e-04	2.8829e-04	1.8551e-04	5.9004e-05
	mv	1.5191e-02	7.6023e-03	1.7534e-03	1.3120e-03	9.0898e-04	6.8438e-04	3.1587e-04
11	1	7.1550e-02	1.7897e-02	7.9616e-03	3.1801e-03	2.6941e-03	2.1117e-03	8.6879e-04
	2	1.1804e-04	6.6507e-05	1.6633e-04	1.7924e-04	1.9869e-04	2.1036e-04	2.4929e-04
	3	3.7040e-05	2.3168e-02	7.8109e-05	8.9081e-05	1.0236e-04	1.0579e-04	1.5706e-04
	4	4.6404e-05	4.8596e-05	1.5491e-04	1.7487e-04	2.1285e-04	2.6155e-04	2.1098e-04
	5	2.1095e-02	5.2828e-03	2.3554e-03	8.5790e-04	4.9404e-04	3.1683e-04	1.0275e-04
	mv	1.8569e-02	9.2927e-03	2.1433e-03	8.9623e-04	7.4040e-04	6.0125e-04	3.1777e-04

Table M.10: Immission energy at 1000m distance (BER 10^{-8})

Appendix N

TABLES OF THE IMMISSION POWER FOR 5000M

Speed [MBit/s]	P	Immission power in [mW]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	1.1263e-02	1.4789e-03	6.1308e-04	2.6718e-04	1.2708e-04	7.4118e-05	1.4958e-05
	2	7.2864e-07	1.9741e-07	3.1231e-07	2.5269e-07	2.4907e-07	2.3583e-07	1.2273e-07
	3	1.9788e-07	1.6057e-03	1.5174e-07	1.1066e-07	1.0318e-07	8.9325e-08	4.6543e-08
	4	1.5079e-07	1.2132e-07	3.2875e-07	2.2862e-07	1.8295e-07	1.4898e-07	7.1997e-08
	5	1.1048e-03	1.2573e-04	3.2694e-05	7.1738e-06	3.5479e-06	1.9139e-06	4.0666e-07
	mv	2.4738e-03	6.4214e-04	1.2931e-04	5.4990e-05	2.6232e-05	1.5301e-05	3.1212e-06
2	1	1.8765e-02	2.8106e-03	8.4788e-04	3.4751e-04	1.6865e-04	9.8157e-05	2.0040e-05
	2	1.2140e-06	3.7934e-07	6.0336e-07	4.1316e-07	3.2208e-07	2.9132e-07	1.8463e-07
	3	3.2969e-07	3.0864e-03	2.7589e-07	1.7092e-07	1.5976e-07	1.4298e-07	5.8479e-08
	4	2.5124e-07	2.3514e-07	5.5804e-07	5.0608e-07	3.4736e-07	2.5327e-07	8.9527e-08
	5	1.8408e-03	2.7570e-04	7.0757e-05	1.1750e-05	4.9379e-06	2.1839e-06	3.1170e-07
	mv	4.1216e-03	1.2347e-03	1.8401e-04	7.2069e-05	3.4884e-05	2.0206e-05	4.1370e-06
5.5	1	2.3610e-02	4.2898e-03	1.4416e-03	4.7163e-04	2.0958e-04	1.1480e-04	2.3694e-05
	2	1.5422e-06	6.0589e-07	1.1212e-06	5.5890e-07	4.9408e-07	4.6389e-07	2.8858e-07
	3	4.4813e-07	5.0891e-03	5.1960e-07	2.9149e-07	2.3095e-07	2.0922e-07	1.1061e-07
	4	4.4941e-07	4.0733e-07	1.0497e-06	8.2691e-07	5.7965e-07	4.7925e-07	1.7180e-07
	5	4.3991e-03	7.9935e-04	2.6867e-04	4.5120e-05	1.5602e-05	7.4186e-06	9.4717e-07
	mv	5.6022e-03	2.0359e-03	3.4259e-04	1.0369e-04	4.5298e-05	2.4675e-05	5.0424e-06
11	1	2.8606e-02	6.0327e-03	2.1611e-03	5.0463e-04	2.8317e-04	1.4894e-04	2.4684e-05
	2	1.8906e-06	8.9854e-07	1.8231e-06	1.1670e-06	7.4734e-07	6.8067e-07	4.3483e-07
	3	5.9259e-07	7.8106e-03	8.5013e-07	5.6234e-07	3.8829e-07	3.2051e-07	1.9165e-07
	4	7.4298e-07	6.5651e-07	1.7287e-06	1.1598e-06	9.4244e-07	7.4006e-07	3.2923e-07
	5	8.4313e-03	1.7781e-03	6.3704e-04	1.2479e-04	4.2833e-05	1.9653e-05	2.0781e-06
	mv	7.4082e-03	3.1246e-03	5.6051e-04	1.2646e-04	6.5616e-05	3.4068e-05	5.5435e-06

Table N.1: Immission power at 5000m distance (BER 10^{-6})

Speed [MBit/s]	P	Immission power in [mW]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	1.4838e-02	1.9484e-03	7.9567e-04	3.5345e-04	1.6988e-04	9.8273e-05	2.0375e-05
	2	9.5992e-07	2.6008e-07	4.0992e-07	3.3314e-07	3.1899e-07	3.0560e-07	1.5831e-07
	3	2.6069e-07	2.1154e-03	2.0047e-07	1.4420e-07	1.3471e-07	1.1897e-07	6.2218e-08
	4	1.9865e-07	1.5983e-07	4.3655e-07	2.8653e-07	2.3659e-07	2.0985e-07	9.9314e-08
	5	1.4555e-03	1.6564e-04	4.3262e-05	8.8697e-06	4.6377e-06	2.9643e-06	5.6573e-07
	mv	3.2590e-03	8.4596e-04	1.6800e-04	7.2617e-05	3.5042e-05	2.0374e-05	4.2522e-06
2	1	2.4721e-02	3.7028e-03	1.1170e-03	4.6402e-04	2.2268e-04	1.2767e-04	2.6342e-05
	2	1.5993e-06	4.9975e-07	7.9488e-07	5.4155e-07	4.2465e-07	3.9675e-07	2.4225e-07
	3	4.3434e-07	4.0661e-03	3.6346e-07	2.2341e-07	2.1170e-07	1.8777e-07	7.9613e-08
	4	3.3098e-07	3.0978e-07	7.3517e-07	6.6430e-07	4.5942e-07	3.2375e-07	1.1722e-07
	5	2.4250e-03	3.6322e-04	9.3216e-05	1.4808e-05	5.9919e-06	3.4664e-06	4.2141e-07
	mv	5.4298e-03	1.6266e-03	2.4242e-04	9.6052e-05	4.5954e-05	2.6409e-05	5.4405e-06
5.5	1	3.3139e-02	6.0213e-03	2.0234e-03	6.6348e-04	2.9590e-04	1.5790e-04	3.2500e-05
	2	2.1647e-06	8.5043e-07	1.5737e-06	7.8193e-07	6.8548e-07	6.4883e-07	3.9351e-07
	3	6.2900e-07	7.1432e-03	7.2932e-07	4.0930e-07	3.2784e-07	2.9430e-07	1.5462e-07
	4	6.3079e-07	5.7174e-07	1.4734e-06	1.1627e-06	8.1488e-07	6.6936e-07	2.5331e-07
	5	6.1746e-03	1.1220e-03	3.7711e-04	6.3359e-05	2.1506e-05	1.0005e-05	1.4263e-06
	mv	7.8634e-03	2.8576e-03	4.8086e-04	1.4584e-04	6.3846e-05	3.3904e-05	6.9455e-06
11	1	4.0626e-02	8.5675e-03	3.0692e-03	7.6965e-04	3.7195e-04	2.1144e-04	3.3492e-05
	2	2.6850e-06	1.2761e-06	2.5892e-06	1.8001e-06	1.1446e-06	9.4725e-07	5.7130e-07
	3	8.4159e-07	1.1092e-02	1.2073e-06	8.7352e-07	5.7776e-07	4.3863e-07	2.8456e-07
	4	1.0552e-06	9.3237e-07	2.4550e-06	1.7571e-06	1.2680e-06	1.1341e-06	5.0746e-07
	5	1.1974e-02	2.5252e-03	9.0472e-04	2.0518e-04	6.6013e-05	2.9927e-05	3.1329e-06
	mv	1.0521e-02	4.4375e-03	7.9603e-04	1.9585e-04	8.8191e-05	4.8778e-05	7.5976e-06

Table N.2: Immission power at 5000m distance (BER 10^{-8})

Speed [MBit/s]	P	99% percentil of imission power in [mW]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	1.4541e-02	3.6353e-03	1.6157e-03	5.8166e-04	2.9678e-04	1.7954e-04	4.0297e-05
	2	9.3058e-07	2.5849e-07	9.4457e-07	9.4814e-07	9.6416e-07	9.5485e-07	9.5083e-07
	3	2.3265e-07	3.6353e-03	2.5866e-07	2.5842e-07	2.6323e-07	2.6421e-07	2.8239e-07
	4	9.3058e-07	2.5849e-07	9.4010e-07	9.5228e-07	9.3689e-07	9.5846e-07	9.2298e-07
	5	1.4541e-02	3.6353e-03	1.6157e-03	5.8165e-04	2.9682e-04	1.7953e-04	4.0281e-05
2	1	2.9082e-02	7.2706e-03	3.2314e-03	1.1633e-03	5.9353e-04	3.5906e-04	8.0575e-05
	2	1.8612e-06	4.6529e-07	1.8662e-06	1.8737e-06	1.8784e-06	1.8641e-06	1.8780e-06
	3	4.6531e-07	7.2706e-03	4.6562e-07	4.8374e-07	4.9085e-07	9.3130e-07	4.8411e-07
	4	1.8612e-06	4.6529e-07	1.8572e-06	1.8737e-06	1.8576e-06	1.8909e-06	1.8143e-06
	5	2.9082e-02	7.2706e-03	3.2314e-03	1.1633e-03	5.9352e-04	3.5905e-04	8.0560e-05
5.5	1	6.0731e-02	1.5183e-02	6.7479e-03	2.4293e-03	1.2394e-03	7.4978e-04	1.6824e-04
	2	3.8865e-06	9.7163e-07	3.8970e-06	3.8806e-06	3.9129e-06	3.8779e-06	3.9070e-06
	3	9.7168e-07	1.5183e-02	9.7233e-07	9.7131e-07	9.9154e-07	9.9571e-07	9.9445e-07
	4	3.8865e-06	9.7163e-07	3.8783e-06	3.8978e-06	3.8696e-06	3.9337e-06	3.7842e-06
	5	6.0731e-02	1.5183e-02	6.7479e-03	2.4292e-03	1.2394e-03	7.4977e-04	1.6824e-04
11	1	1.1654e-01	2.9134e-02	1.2949e-02	4.6615e-03	2.3783e-03	1.4387e-03	3.2284e-04
	2	7.4579e-06	1.8645e-06	7.4780e-06	7.4464e-06	7.4827e-06	7.4698e-06	7.4846e-06
	3	1.8646e-06	2.9134e-02	1.8658e-06	1.8638e-06	1.8646e-06	1.8957e-06	1.8812e-06
	4	7.4579e-06	1.8645e-06	7.4422e-06	7.4464e-06	7.4165e-06	7.5294e-06	7.2500e-06
	5	1.1654e-01	2.9134e-02	1.2949e-02	4.6615e-03	2.3783e-03	1.4387e-03	3.2282e-04

Table N.3: 99% percentil of imission power at 5000m distance (BER 10^{-6})

Speed [MBit/s]	P	99% percentil of imission power in [mW]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	1.9157e-02	4.7892e-03	2.1285e-03	7.6629e-04	3.9098e-04	2.3653e-04	5.3087e-05
	2	1.2259e-06	3.4054e-07	1.2444e-06	1.2491e-06	1.2702e-06	1.2454e-06	1.2475e-06
	3	3.0650e-07	4.7892e-03	3.4076e-07	3.4044e-07	3.4678e-07	3.4808e-07	3.4142e-07
	4	1.2259e-06	3.4054e-07	1.2385e-06	1.2545e-06	1.2315e-06	1.2658e-06	1.2159e-06
	5	1.9157e-02	4.7892e-03	2.1285e-03	7.6627e-04	3.9096e-04	2.3651e-04	5.3066e-05
2	1	3.8313e-02	9.5783e-03	4.2571e-03	1.5325e-03	7.8192e-04	4.7302e-04	1.0615e-04
	2	2.4519e-06	6.1297e-07	2.4585e-06	2.4684e-06	2.4746e-06	2.4558e-06	2.4741e-06
	3	6.1300e-07	9.5783e-03	6.1342e-07	6.3729e-07	6.4666e-07	1.2269e-06	6.3294e-07
	4	2.4519e-06	6.1297e-07	2.4467e-06	2.4684e-06	2.4472e-06	2.4910e-06	2.3920e-06
	5	3.8313e-02	9.5783e-03	4.2571e-03	1.5325e-03	7.8191e-04	4.7301e-04	1.0613e-04
5.5	1	8.5243e-02	2.1311e-02	9.4714e-03	3.4097e-03	1.7397e-03	1.0524e-03	2.3615e-04
	2	5.4552e-06	1.3638e-06	5.4699e-06	5.4468e-06	5.4922e-06	5.4339e-06	5.4747e-06
	3	1.3639e-06	2.1311e-02	1.3648e-06	1.3633e-06	1.3917e-06	1.3976e-06	1.3848e-06
	4	5.4552e-06	1.3638e-06	5.4437e-06	5.4711e-06	5.4314e-06	5.5214e-06	5.3180e-06
	5	8.5243e-02	2.1311e-02	9.4714e-03	3.4097e-03	1.7397e-03	1.0524e-03	2.3613e-04
11	1	1.6550e-01	4.1376e-02	1.8389e-02	6.6201e-03	3.3776e-03	2.0433e-03	4.5848e-04
	2	1.0592e-05	2.6479e-06	1.0620e-05	1.0575e-05	1.0627e-05	1.0541e-05	1.0610e-05
	3	2.6480e-06	4.1376e-02	2.6498e-06	2.6470e-06	2.6481e-06	2.6595e-06	2.6779e-06
	4	1.0592e-05	2.6479e-06	1.0569e-05	1.0575e-05	1.0509e-05	1.0693e-05	1.0376e-05
	5	1.6550e-01	4.1376e-02	1.8389e-02	6.6201e-03	3.3776e-03	2.0433e-03	4.5846e-04

Table N.4: 99% percentil of imission power at 5000m distance (BER 10^{-8})

Speed [MBit/s]	P	Peak immission power in [mW]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	1.4541e-02	3.6354e-03	1.6158e-03	5.8172e-04	2.9684e-04	1.7960e-04	4.0362e-05
	2	9.3058e-07	4.6529e-07	1.0737e-06	1.0774e-06	1.0797e-06	1.0868e-06	1.0902e-06
	3	2.3265e-07	3.6354e-03	4.9092e-07	4.9098e-07	4.9920e-07	5.0557e-07	5.2425e-07
	4	9.3058e-07	4.6529e-07	1.0435e-06	1.0739e-06	1.0718e-06	1.0989e-06	1.0546e-06
	5	1.4541e-02	3.6354e-03	1.6157e-03	5.8172e-04	2.9683e-04	1.7960e-04	4.0353e-05
2	1	2.9082e-02	7.2706e-03	3.2315e-03	1.1634e-03	5.9365e-04	3.5919e-04	8.0694e-05
	2	1.8612e-06	4.6529e-07	2.0730e-06	2.0733e-06	2.0968e-06	2.1387e-06	2.0989e-06
	3	4.6531e-07	7.2706e-03	9.3013e-07	9.8196e-07	9.7970e-07	9.9816e-07	9.5453e-07
	4	1.8612e-06	4.6529e-07	1.9316e-06	2.1031e-06	2.0811e-06	2.1074e-06	2.0538e-06
	5	2.9082e-02	7.2706e-03	3.2314e-03	1.1634e-03	5.9366e-04	3.5917e-04	8.0690e-05
5.5	1	6.0731e-02	1.5183e-02	6.7479e-03	2.4295e-03	1.2397e-03	7.5007e-04	1.6855e-04
	2	3.8865e-06	9.7163e-07	3.8970e-06	4.3917e-06	4.4865e-06	4.4488e-06	4.4031e-06
	3	9.7168e-07	1.5183e-02	9.7233e-07	2.0506e-06	2.0460e-06	2.0528e-06	2.0429e-06
	4	3.8865e-06	9.7163e-07	3.8783e-06	4.3917e-06	4.3370e-06	4.5138e-06	4.3630e-06
	5	6.0731e-02	1.5183e-02	6.7479e-03	2.4295e-03	1.2397e-03	7.5002e-04	1.6848e-04
11	1	1.1654e-01	2.9134e-02	1.2949e-02	4.6621e-03	2.3789e-03	1.4393e-03	3.2340e-04
	2	7.4579e-06	1.8645e-06	7.4780e-06	8.5733e-06	8.6091e-06	8.5368e-06	8.5905e-06
	3	1.8646e-06	2.9134e-02	1.8658e-06	3.9349e-06	3.9262e-06	3.9622e-06	3.9256e-06
	4	7.4579e-06	1.8645e-06	7.4422e-06	8.4272e-06	8.5284e-06	8.7025e-06	8.3748e-06
	5	1.1654e-01	2.9134e-02	1.2949e-02	4.6615e-03	2.3788e-03	1.4393e-03	3.2329e-04

Table N.5: Peak immission power at 5000m distance (BER 10^{-6})

Speed [MBit/s]	P	Peak immission power in [mW]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	1.9157e-02	4.7892e-03	2.1286e-03	7.6637e-04	3.9105e-04	2.3661e-04	5.3175e-05
	2	1.2259e-06	6.1297e-07	1.4145e-06	1.4194e-06	1.4224e-06	1.4306e-06	1.4404e-06
	3	3.0650e-07	4.7892e-03	6.4674e-07	6.5908e-07	6.6386e-07	6.8153e-07	6.7946e-07
	4	1.2259e-06	6.1297e-07	1.3747e-06	1.3907e-06	1.4092e-06	1.4555e-06	1.3978e-06
	5	1.9157e-02	4.7892e-03	2.1286e-03	7.6636e-04	3.9105e-04	2.3660e-04	5.3171e-05
2	1	3.8313e-02	9.5783e-03	4.2572e-03	1.5327e-03	7.8210e-04	4.7318e-04	1.0633e-04
	2	2.4519e-06	6.1297e-07	2.7309e-06	2.7408e-06	2.7822e-06	2.8066e-06	2.8483e-06
	3	6.1300e-07	9.5783e-03	1.2254e-06	1.2255e-06	1.2908e-06	1.3270e-06	1.2912e-06
	4	2.4519e-06	6.1297e-07	2.5447e-06	2.7408e-06	2.7416e-06	2.8408e-06	2.7047e-06
	5	3.8313e-02	9.5783e-03	4.2571e-03	1.5327e-03	7.8207e-04	4.7320e-04	1.0632e-04
5.5	1	8.5243e-02	2.1311e-02	9.4714e-03	3.4101e-03	1.7400e-03	1.0528e-03	2.3657e-04
	2	5.4552e-06	1.3638e-06	5.4699e-06	6.1642e-06	6.2973e-06	6.2595e-06	6.2797e-06
	3	1.3639e-06	2.1311e-02	1.3648e-06	2.8782e-06	2.8719e-06	2.8814e-06	2.8667e-06
	4	5.4552e-06	1.3638e-06	5.4437e-06	6.1642e-06	6.2382e-06	6.2132e-06	6.1240e-06
	5	8.5243e-02	2.1311e-02	9.4714e-03	3.4100e-03	1.7400e-03	1.0528e-03	2.3656e-04
11	1	1.6550e-01	4.1376e-02	1.8389e-02	6.6210e-03	3.3785e-03	2.0441e-03	4.5930e-04
	2	1.0592e-05	2.6479e-06	1.0620e-05	1.2176e-05	1.2227e-05	1.2124e-05	1.2192e-05
	3	2.6480e-06	4.1376e-02	2.6498e-06	5.5882e-06	5.8698e-06	5.6483e-06	5.5868e-06
	4	1.0592e-05	2.6479e-06	1.0569e-05	1.1968e-05	1.2112e-05	1.2272e-05	1.2020e-05
	5	1.6550e-01	4.1376e-02	1.8389e-02	6.6201e-03	3.3783e-03	2.0439e-03	4.5913e-04

Table N.6: Peak immission power at 5000m distance (BER 10^{-8})

Speed [MBit/s]	P	Peak immission energy in [mWs]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	1.3520e+00	2.1965e-03	1.5770e-06	1.1915e-05	1.9241e-06	1.9074e-07	6.0544e-10
	2	8.6525e-05	2.8113e-07	1.0479e-09	2.2069e-08	6.1836e-09	5.2817e-10	1.0095e-09
	3	2.3754e-05	2.2372e-03	4.7913e-10	1.9423e-09	5.2156e-09	3.6351e-10	2.7890e-10
	4	8.4868e-06	5.2117e-09	1.1405e-09	3.8123e-10	6.4949e-10	8.7912e-10	9.8076e-11
	5	1.3262e-01	4.0720e-05	1.7660e-06	2.0651e-07	6.1742e-08	1.3991e-07	1.0653e-08
2	1	1.3519e+00	3.3804e-01	5.1960e-04	4.7202e-05	3.3244e-07	5.1293e-07	3.9379e-08
	2	8.6518e-05	4.5389e-05	3.3332e-07	3.0893e-10	1.0233e-09	7.6564e-10	2.0443e-09
	3	2.3752e-05	3.7121e-01	1.9620e-07	9.5545e-10	4.7809e-10	4.8411e-10	7.6363e-12
	4	8.4866e-06	2.5878e-05	4.0745e-07	2.0463e-09	2.9301e-09	1.0263e-09	4.1076e-10
	5	1.3261e-01	3.3153e-02	1.4665e-03	1.2117e-05	4.3159e-07	7.3988e-08	1.0328e-08
5.5	1	1.1378e+00	2.8446e-01	1.2642e-01	1.8221e-07	1.1789e-06	1.7777e-07	2.1574e-08
	2	7.2815e-05	3.9800e-05	8.6616e-05	6.3855e-09	3.1944e-09	1.0588e-09	4.1389e-10
	3	2.1597e-05	3.3746e-01	2.1611e-05	4.9214e-09	2.6148e-09	9.7509e-10	4.8826e-10
	4	1.3567e-05	2.4988e-05	8.6201e-05	4.1545e-09	1.0322e-09	3.5614e-09	2.0637e-09
	5	2.1200e-01	5.2999e-02	2.3556e-02	2.8425e-07	1.5768e-06	6.9302e-07	6.5708e-09
11	1	1.2595e+00	3.1488e-01	1.3994e-01	1.3562e-05	1.3417e-06	7.1246e-07	5.3362e-08
	2	8.0602e-05	4.6241e-05	1.0464e-04	2.4940e-08	4.2443e-09	5.7026e-09	1.0309e-09
	3	2.6091e-05	4.0768e-01	2.6109e-05	1.8895e-08	3.9065e-09	6.6168e-10	4.1611e-10
	4	2.3756e-05	3.2029e-05	1.0414e-04	4.0467e-08	1.4072e-09	1.4446e-09	5.4436e-10
	5	3.7121e-01	9.2801e-02	4.1246e-02	9.3284e-04	2.4977e-07	2.3893e-07	3.4269e-08

Table N.7: Peak immission energy at 5000m distance (BER 10^{-6})

Speed [MBit/s]	P	Peak immission energy in [mWs]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	1.7812e+00	2.8936e-03	9.7022e-06	8.1082e-06	1.3977e-05	1.9165e-08	7.7636e-09
	2	1.1399e-04	3.7036e-07	6.4474e-09	1.5018e-08	1.4783e-08	1.3233e-09	5.7042e-10
	3	3.1294e-05	2.9473e-03	2.9478e-09	3.4859e-09	6.4726e-10	1.7992e-10	3.3769e-10
	4	1.1181e-05	6.8659e-09	8.3583e-10	9.4083e-09	1.4657e-08	1.8631e-09	3.1869e-10
	5	1.7471e-01	5.3644e-05	1.2942e-06	7.4796e-07	7.3517e-08	1.0884e-08	2.3927e-09
2	1	1.7810e+00	4.4534e-01	6.8453e-04	4.1214e-06	3.8166e-07	2.3091e-07	3.8278e-09
	2	1.1398e-04	5.9796e-05	4.3911e-07	2.7819e-09	1.3577e-09	1.3696e-09	1.7944e-10
	3	3.1291e-05	4.8904e-01	2.5848e-07	1.7608e-07	6.2991e-10	5.7327e-10	6.3010e-10
	4	1.1180e-05	3.4092e-05	5.3678e-07	4.0071e-09	5.4092e-09	1.3835e-09	1.3172e-09
	5	1.7470e-01	4.3676e-02	1.9320e-03	2.0967e-06	3.0360e-06	2.0726e-07	1.6161e-08
5.5	1	1.5970e+00	3.9927e-01	1.7745e-01	2.5575e-07	2.0619e-06	5.0008e-07	9.6994e-09
	2	1.0220e-04	5.5864e-05	1.2157e-04	1.0448e-08	4.4899e-09	7.1984e-10	2.6626e-09
	3	3.0313e-05	4.7366e-01	3.0334e-05	7.6014e-09	2.0390e-09	6.8576e-10	1.3617e-09
	4	1.9043e-05	3.5073e-05	1.2099e-04	5.8313e-09	1.4785e-09	5.0016e-09	2.8905e-09
	5	2.9757e-01	7.4390e-02	3.3064e-02	3.9898e-07	3.9846e-07	2.4950e-07	2.6022e-09
11	1	1.7887e+00	4.4718e-01	1.9875e-01	2.1982e-06	5.6083e-07	3.3728e-07	7.5784e-08
	2	1.1447e-04	6.5670e-05	1.4861e-04	4.0423e-09	2.0296e-09	6.0255e-09	1.0156e-08
	3	3.7054e-05	5.7898e-01	3.7079e-05	3.6938e-09	9.7438e-10	1.8809e-09	9.2182e-10
	4	3.3738e-05	4.5487e-05	1.4790e-04	1.9867e-09	1.6339e-08	1.2210e-08	1.9834e-09
	5	5.2719e-01	1.3179e-01	5.8576e-02	2.1090e-02	9.4592e-07	2.9330e-06	1.1478e-08

Table N.8: Peak immission energy at 5000m distance (BER 10^{-8})

Speed [MBit/s]	P	Immission energy in [mWs]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	1.3520e+00	4.6260e-01	3.4002e-01	2.7637e-01	1.6471e-01	1.1739e-01	8.7824e-03
	2	8.7468e-05	6.1749e-05	1.7321e-04	2.6138e-04	3.2284e-04	3.7351e-04	7.2061e-05
	3	2.3754e-05	5.0225e-01	8.4155e-05	1.1447e-04	1.3374e-04	1.4147e-04	2.7327e-05
	4	1.8101e-05	3.7947e-05	1.8233e-04	2.3648e-04	2.3713e-04	2.3596e-04	4.2272e-05
	5	1.3262e-01	3.9327e-02	1.8132e-02	7.4205e-03	4.5987e-03	3.0313e-03	2.3876e-04
	mv	2.9696e-01	2.0086e-01	7.1717e-02	5.6881e-02	3.4001e-02	2.4235e-02	1.8326e-03
2	1	1.3519e+00	3.3805e-01	2.1357e-01	1.7513e-01	1.2863e-01	8.9926e-02	3.1413e-02
	2	8.7461e-05	4.5625e-05	1.5198e-04	2.0822e-04	2.4566e-04	2.6689e-04	2.8941e-04
	3	2.3752e-05	3.7122e-01	6.9491e-05	8.6141e-05	1.2185e-04	1.3099e-04	9.1665e-05
	4	1.8100e-05	2.8282e-05	1.4056e-04	2.5505e-04	2.6494e-04	2.3203e-04	1.4033e-04
	5	1.3262e-01	3.3160e-02	1.7822e-02	5.9218e-03	3.7662e-03	2.0008e-03	4.8859e-04
	mv	2.9694e-01	1.4850e-01	4.6350e-02	3.6321e-02	2.6607e-02	1.8511e-02	6.4847e-03
5.5	1	1.1378e+00	2.8446e-01	1.2643e-01	9.8286e-02	6.5400e-02	4.7457e-02	1.8717e-02
	2	7.4323e-05	4.0177e-05	9.8331e-05	1.1647e-04	1.5418e-04	1.9176e-04	2.2797e-04
	3	2.1597e-05	3.3746e-01	4.5571e-05	6.0745e-05	7.2067e-05	8.6485e-05	8.7375e-05
	4	2.1658e-05	2.7010e-05	9.2061e-05	1.7232e-04	1.8088e-04	1.9811e-04	1.3572e-04
	5	2.1201e-01	5.3005e-02	2.3563e-02	9.4028e-03	4.8686e-03	3.0667e-03	7.4822e-04
	mv	2.6999e-01	1.3500e-01	3.0046e-02	2.1608e-02	1.4135e-02	1.0200e-02	3.9832e-03
11	1	1.2595e+00	3.1488e-01	1.3995e-01	6.9400e-02	5.5150e-02	3.9970e-02	1.6100e-02
	2	8.3242e-05	4.6901e-05	1.1807e-04	1.6050e-04	1.4555e-04	1.8266e-04	2.8362e-04
	3	2.6091e-05	4.0769e-01	5.5054e-05	7.7336e-05	7.5623e-05	8.6011e-05	1.2500e-04
	4	3.2712e-05	3.4268e-05	1.1195e-04	1.5950e-04	1.8355e-04	1.9860e-04	2.1474e-04
	5	3.7122e-01	9.2809e-02	4.1254e-02	1.7162e-02	8.3421e-03	5.2740e-03	1.3554e-03
	mv	3.2617e-01	1.6309e-01	3.6298e-02	1.7392e-02	1.2779e-02	9.1423e-03	3.6158e-03

Table N.9: Immission energy at 5000m distance (BER 10^{-6})

Speed [MBit/s]	P	Immission energy in [mWs]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	1.7812e+00	6.0943e-01	4.3973e-01	3.6973e-01	2.2418e-01	1.4961e-01	1.8297e-02
	2	1.1523e-04	8.1349e-05	2.2655e-04	3.4848e-04	4.2094e-04	4.6525e-04	1.4217e-04
	3	3.1294e-05	6.6167e-01	1.1079e-04	1.5084e-04	1.7777e-04	1.8113e-04	5.5872e-05
	4	2.3847e-05	4.9992e-05	2.4126e-04	2.9973e-04	3.1220e-04	3.1948e-04	8.9185e-05
	5	1.7472e-01	5.1810e-02	2.3909e-02	9.2782e-03	6.1199e-03	4.5130e-03	5.0803e-04
	mv	3.9121e-01	2.6461e-01	9.2844e-02	7.5962e-02	4.6241e-02	3.1019e-02	3.8185e-03
2	1	1.7810e+00	4.4534e-01	2.8135e-01	2.3692e-01	1.6802e-01	1.1606e-01	4.3166e-02
	2	1.1522e-04	6.0107e-05	2.0022e-04	2.7650e-04	3.2042e-04	3.6065e-04	3.9696e-04
	3	3.1291e-05	4.8905e-01	9.1548e-05	1.1407e-04	1.5974e-04	1.7069e-04	1.3046e-04
	4	2.3845e-05	3.7258e-05	1.8518e-04	3.3918e-04	3.4666e-04	2.9430e-04	1.9209e-04
	5	1.7471e-01	4.3685e-02	2.3479e-02	7.5607e-03	4.5212e-03	3.1510e-03	6.9055e-04
	mv	3.9119e-01	1.9563e-01	6.1062e-02	4.9042e-02	3.4674e-02	2.4007e-02	8.9152e-03
5.5	1	1.5971e+00	3.9927e-01	1.7746e-01	1.3816e-01	9.2339e-02	6.4982e-02	2.5687e-02
	2	1.0432e-04	5.6393e-05	1.3802e-04	1.6283e-04	2.1391e-04	2.6702e-04	3.1102e-04
	3	3.0313e-05	4.7367e-01	6.3963e-05	8.5234e-05	1.0231e-04	1.2111e-04	1.2221e-04
	4	3.0400e-05	3.7912e-05	1.2922e-04	2.4212e-04	2.5429e-04	2.7547e-04	2.0021e-04
	5	2.9757e-01	7.4399e-02	3.3074e-02	1.3194e-02	6.7112e-03	4.1176e-03	1.1273e-03
	mv	3.7896e-01	1.8949e-01	4.2173e-02	3.0370e-02	1.9924e-02	1.3953e-02	5.4896e-03
11	1	1.7887e+00	4.4719e-01	1.9876e-01	7.9163e-02	6.6964e-02	5.2277e-02	2.0784e-02
	2	1.1822e-04	6.6607e-05	1.6767e-04	1.8515e-04	2.0607e-04	2.3420e-04	3.5454e-04
	3	3.7054e-05	5.7899e-01	7.8187e-05	8.9847e-05	1.0402e-04	1.0845e-04	1.7659e-04
	4	4.6458e-05	4.8667e-05	1.5898e-04	1.8073e-04	2.2828e-04	2.8040e-04	3.1492e-04
	5	5.2720e-01	1.3181e-01	5.8589e-02	2.1104e-02	1.1885e-02	7.3992e-03	1.9442e-03
	mv	4.6322e-01	2.3162e-01	5.1550e-02	2.0145e-02	1.5877e-02	1.2060e-02	4.7150e-03

Table N.10: Immission energy at 5000m distance (BER 10^{-8})

Appendix O

TABLES OF THE IMMISSION POWER FOR 10000M

Speed [MBit/s]	P	Immission power in [mW]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	4.5052e-02	5.9157e-03	2.4522e-03	1.0687e-03	5.0825e-04	2.9642e-04	5.9782e-05
	2	7.2868e-07	1.9742e-07	3.1180e-07	2.5295e-07	2.4840e-07	2.3657e-07	1.2303e-07
	3	1.9788e-07	6.4228e-03	1.5183e-07	1.1069e-07	1.0336e-07	8.9270e-08	4.6567e-08
	4	1.5080e-07	1.2132e-07	3.2889e-07	2.2886e-07	1.8328e-07	1.4859e-07	7.3018e-08
	5	4.4190e-03	5.0282e-04	1.3070e-04	2.8639e-05	1.4145e-05	7.6189e-06	1.6106e-06
	mv	9.8945e-03	2.5683e-03	5.1675e-04	2.1958e-04	1.0459e-04	6.0902e-05	1.2327e-05
2	1	7.5061e-02	1.1242e-02	3.3914e-03	1.3899e-03	6.7452e-04	3.9254e-04	7.9669e-05
	2	1.2140e-06	3.7936e-07	6.0233e-07	4.1359e-07	3.2126e-07	2.9219e-07	1.8488e-07
	3	3.2969e-07	1.2346e-02	2.7607e-07	1.7097e-07	1.6003e-07	1.4290e-07	5.8816e-08
	4	2.5124e-07	2.3515e-07	5.5828e-07	5.0663e-07	3.4800e-07	2.5259e-07	9.0277e-08
	5	7.3628e-03	1.1026e-03	2.8289e-04	4.6886e-05	1.9668e-05	8.6743e-06	1.4910e-06
	mv	1.6485e-02	4.9383e-03	7.3514e-04	2.8758e-04	1.3900e-04	8.0381e-05	1.6299e-05
5.5	1	9.4439e-02	1.7159e-02	5.7661e-03	1.8864e-03	8.3820e-04	4.5909e-04	9.4683e-05
	2	1.5423e-06	6.0592e-07	1.1192e-06	5.5946e-07	4.9279e-07	4.6534e-07	2.8929e-07
	3	4.4814e-07	2.0356e-02	5.1995e-07	2.9157e-07	2.3130e-07	2.0909e-07	1.1065e-07
	4	4.4942e-07	4.0735e-07	1.0501e-06	8.2781e-07	5.8072e-07	4.7794e-07	1.7424e-07
	5	1.7596e-02	3.1971e-03	1.0744e-03	1.8029e-04	6.2265e-05	2.9560e-05	3.7497e-06
	mv	2.2407e-02	8.1427e-03	1.3686e-03	4.1368e-04	1.8035e-04	9.7960e-05	1.9801e-05
11	1	1.1442e-01	2.4130e-02	8.6441e-03	2.0183e-03	1.1325e-03	5.9559e-04	9.8602e-05
	2	1.8907e-06	8.9858e-07	1.8200e-06	1.1683e-06	7.4535e-07	6.8281e-07	4.3588e-07
	3	5.9260e-07	3.1242e-02	8.5070e-07	5.6249e-07	3.8893e-07	3.2026e-07	1.9172e-07
	4	7.4301e-07	6.5654e-07	1.7294e-06	1.1610e-06	9.4422e-07	7.3805e-07	3.3388e-07
	5	3.3725e-02	7.1118e-03	2.5478e-03	4.9889e-04	1.7112e-04	7.8434e-05	8.2279e-06
	mv	2.9631e-02	1.2497e-02	2.2392e-03	5.0401e-04	2.6114e-04	1.3515e-04	2.1558e-05

Table O.1: Immission power at 10000m distance (BER 10^{-6})

Speed [MBit/s]	P	Immission power in [mW]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	5.9352e-02	7.7933e-03	3.1826e-03	1.4137e-03	6.7945e-04	3.9302e-04	8.1435e-05
	2	9.5997e-07	2.6009e-07	4.0925e-07	3.3347e-07	3.1814e-07	3.0656e-07	1.5870e-07
	3	2.6069e-07	8.4614e-03	2.0060e-07	1.4424e-07	1.3496e-07	1.1890e-07	6.2241e-08
	4	1.9866e-07	1.5983e-07	4.3674e-07	2.8684e-07	2.3702e-07	2.0929e-07	1.0072e-07
	5	5.8217e-03	6.6242e-04	1.7294e-04	3.5408e-05	1.8488e-05	1.1806e-05	2.2424e-06
	mv	1.3035e-02	3.3835e-03	6.7132e-04	2.8998e-04	1.3973e-04	8.1092e-05	1.6800e-05
2	1	9.8886e-02	1.4811e-02	4.4678e-03	1.8560e-03	8.9060e-04	5.1057e-04	1.0528e-04
	2	1.5994e-06	4.9977e-07	7.9351e-07	5.4211e-07	4.2356e-07	3.9796e-07	2.4285e-07
	3	4.3434e-07	1.6264e-02	3.6370e-07	2.2347e-07	2.1206e-07	1.8766e-07	7.9653e-08
	4	3.3099e-07	3.0979e-07	7.3549e-07	6.6502e-07	4.6028e-07	3.2289e-07	1.1888e-07
	5	9.6998e-03	1.4526e-03	3.7269e-04	5.9080e-05	2.3859e-05	1.3784e-05	1.6594e-06
	mv	2.1718e-02	6.5057e-03	9.6848e-04	3.8330e-04	1.8311e-04	1.0505e-04	2.1476e-05
5.5	1	1.3255e-01	2.4085e-02	8.0934e-03	2.6537e-03	1.1834e-03	6.3143e-04	1.2987e-04
	2	2.1648e-06	8.5047e-07	1.5710e-06	7.8271e-07	6.8370e-07	6.5084e-07	3.9447e-07
	3	6.2901e-07	2.8572e-02	7.2981e-07	4.0941e-07	3.2834e-07	2.9413e-07	1.5469e-07
	4	6.3081e-07	5.7176e-07	1.4740e-06	1.1640e-06	8.1638e-07	6.6753e-07	2.5692e-07
	5	2.4698e-02	4.4875e-03	1.5081e-03	2.5318e-04	8.5824e-05	3.9861e-05	5.6487e-06
	mv	3.1451e-02	1.1429e-02	1.9211e-03	5.8185e-04	2.5421e-04	1.3458e-04	2.7265e-05
11	1	1.6250e-01	3.4269e-02	1.2276e-02	3.0782e-03	1.4875e-03	8.4551e-04	1.3378e-04
	2	2.6852e-06	1.2761e-06	2.5847e-06	1.8020e-06	1.1415e-06	9.5022e-07	5.7268e-07
	3	8.4160e-07	4.4369e-02	1.2082e-06	8.7375e-07	5.7875e-07	4.3833e-07	2.8467e-07
	4	1.0552e-06	9.3241e-07	2.4561e-06	1.7589e-06	1.2703e-06	1.1310e-06	5.1465e-07
	5	4.7896e-02	1.0100e-02	3.6183e-03	8.2031e-04	2.6373e-04	1.1944e-04	1.2402e-05
	mv	4.2081e-02	1.7748e-02	3.1801e-03	7.8058e-04	3.5085e-04	1.9349e-04	2.9510e-05

Table O.2: Immission power at 10000m distance (BER 10^{-8})

Speed [MBit/s]	P	99% percentil of imission power in [mW]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	5.8165e-02	1.4541e-02	6.4628e-03	2.3266e-03	1.1871e-03	7.1810e-04	1.6114e-04
	2	9.3062e-07	2.5851e-07	9.4274e-07	9.4926e-07	9.6113e-07	9.5844e-07	9.5294e-07
	3	2.3266e-07	1.4541e-02	2.5869e-07	2.5849e-07	2.6339e-07	2.6364e-07	2.8334e-07
	4	9.3062e-07	2.5851e-07	9.4050e-07	9.5339e-07	9.3906e-07	9.5539e-07	9.3842e-07
	5	5.8165e-02	1.4541e-02	6.4627e-03	2.3266e-03	1.1871e-03	7.1809e-04	1.6112e-04
2	1	1.1633e-01	2.9082e-02	1.2925e-02	4.6532e-03	2.3741e-03	1.4362e-03	3.2227e-04
	2	1.8612e-06	4.6531e-07	1.8625e-06	1.8759e-06	1.8723e-06	1.8713e-06	1.8831e-06
	3	4.6532e-07	2.9082e-02	4.6567e-07	4.8388e-07	4.9241e-07	9.3052e-07	4.8381e-07
	4	1.8612e-06	4.6531e-07	1.8580e-06	1.8759e-06	1.8619e-06	1.8847e-06	1.8499e-06
	5	1.1633e-01	2.9082e-02	1.2925e-02	4.6532e-03	2.3741e-03	1.4362e-03	3.2224e-04
5.5	1	2.4292e-01	6.0731e-02	2.6992e-02	9.7170e-03	4.9576e-03	2.9991e-03	6.7293e-04
	2	3.8867e-06	9.7168e-07	3.8893e-06	3.8852e-06	3.9003e-06	3.8928e-06	3.9158e-06
	3	9.7169e-07	6.0731e-02	9.7244e-07	9.7160e-07	9.9211e-07	9.9316e-07	9.8396e-07
	4	3.8867e-06	9.7168e-07	3.8800e-06	3.9025e-06	3.8786e-06	3.9208e-06	3.8488e-06
	5	2.4292e-01	6.0731e-02	2.6992e-02	9.7170e-03	4.9576e-03	2.9991e-03	6.7293e-04
11	1	4.6615e-01	1.1654e-01	5.1794e-02	1.8646e-02	9.5132e-03	5.7549e-03	1.2913e-03
	2	7.4582e-06	1.8646e-06	7.4633e-06	7.4554e-06	7.4585e-06	7.4985e-06	7.5015e-06
	3	1.8646e-06	1.1654e-01	1.8660e-06	1.8644e-06	1.8657e-06	1.8907e-06	1.8795e-06
	4	7.4582e-06	1.8646e-06	7.4454e-06	7.4554e-06	7.4338e-06	7.5046e-06	7.3740e-06
	5	4.6615e-01	1.1654e-01	5.1794e-02	1.8646e-02	9.5132e-03	5.7549e-03	1.2913e-03

Table O.3: 99% percentil of imission power at 10000m distance (BER 10^{-6})

Speed [MBit/s]	P	99% percentil of imission power in [mW]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	7.6627e-02	1.9157e-02	8.5141e-03	3.0651e-03	1.5638e-03	9.4603e-04	2.1228e-04
	2	1.2260e-06	3.4056e-07	1.2420e-06	1.2506e-06	1.2662e-06	1.2501e-06	1.2503e-06
	3	3.0651e-07	1.9157e-02	3.4080e-07	3.4053e-07	3.4700e-07	3.4732e-07	3.4044e-07
	4	1.2260e-06	3.4056e-07	1.2390e-06	1.2560e-06	1.2343e-06	1.2618e-06	1.2363e-06
	5	7.6627e-02	1.9157e-02	8.5141e-03	3.0651e-03	1.5638e-03	9.4602e-04	2.1226e-04
2	1	1.5325e-01	3.8313e-02	1.7028e-02	6.1301e-03	3.1276e-03	1.8920e-03	4.2454e-04
	2	2.4520e-06	6.1300e-07	2.4537e-06	2.4713e-06	2.4666e-06	2.4652e-06	2.4797e-06
	3	6.1301e-07	3.8313e-02	6.1348e-07	6.3747e-07	6.4871e-07	1.2259e-06	6.3551e-07
	4	2.4520e-06	6.1300e-07	2.4478e-06	2.4713e-06	2.4529e-06	2.4829e-06	2.4328e-06
	5	1.5325e-01	3.8313e-02	1.7028e-02	6.1301e-03	3.1276e-03	1.8920e-03	4.2452e-04
5.5	1	3.4097e-01	8.5243e-02	3.7886e-02	1.3639e-02	6.9586e-03	4.2095e-03	9.4454e-04
	2	5.4554e-06	1.3639e-06	5.4591e-06	5.4533e-06	5.4745e-06	5.4549e-06	5.4871e-06
	3	1.3639e-06	8.5243e-02	1.3649e-06	1.3637e-06	1.3925e-06	1.3940e-06	1.3811e-06
	4	5.4554e-06	1.3639e-06	5.4460e-06	5.4776e-06	5.4441e-06	5.5033e-06	5.4087e-06
	5	3.4097e-01	8.5243e-02	3.7886e-02	1.3639e-02	6.9586e-03	4.2095e-03	9.4452e-04
11	1	6.6201e-01	1.6550e-01	7.3557e-02	2.6481e-02	1.3511e-02	8.1730e-03	1.8339e-03
	2	1.0592e-05	2.6480e-06	1.0599e-05	1.0588e-05	1.0592e-05	1.0582e-05	1.0634e-05
	3	2.6480e-06	1.6550e-01	2.6501e-06	2.6478e-06	2.6497e-06	2.6525e-06	2.6693e-06
	4	1.0592e-05	2.6480e-06	1.0574e-05	1.0588e-05	1.0533e-05	1.0658e-05	1.0552e-05
	5	6.6201e-01	1.6550e-01	7.3557e-02	2.6481e-02	1.3511e-02	8.1730e-03	1.8338e-03

Table O.4: 99% percentil of imission power at 10000m distance (BER 10^{-8})

Speed [MBit/s]	P	Peak immission power in [mW]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	5.8165e-02	1.4541e-02	6.4628e-03	2.3267e-03	1.1871e-03	7.1816e-04	1.6120e-04
	2	9.3062e-07	4.6531e-07	1.0719e-06	1.0786e-06	1.0767e-06	1.0902e-06	1.0929e-06
	3	2.3266e-07	1.4541e-02	4.9124e-07	4.9112e-07	5.0012e-07	5.0519e-07	5.2444e-07
	4	9.3062e-07	4.6531e-07	1.0439e-06	1.0750e-06	1.0738e-06	1.0959e-06	1.0703e-06
	5	5.8165e-02	1.4541e-02	6.4628e-03	2.3267e-03	1.1871e-03	7.1816e-04	1.6119e-04
2	1	1.1633e-01	2.9082e-02	1.2926e-02	4.6533e-03	2.3742e-03	1.4363e-03	3.2237e-04
	2	1.8612e-06	4.6531e-07	2.0693e-06	2.0756e-06	2.0909e-06	2.1455e-06	2.1014e-06
	3	4.6532e-07	2.9082e-02	9.3079e-07	9.8224e-07	9.8159e-07	9.9745e-07	9.4937e-07
	4	1.8612e-06	4.6531e-07	1.9325e-06	2.1053e-06	2.0851e-06	2.1013e-06	2.0785e-06
	5	1.1633e-01	2.9082e-02	1.2925e-02	4.6533e-03	2.3742e-03	1.4363e-03	3.2237e-04
5.5	1	2.4292e-01	6.0731e-02	2.6992e-02	9.7172e-03	4.9579e-03	2.9994e-03	6.7324e-04
	2	3.8867e-06	9.7168e-07	3.8893e-06	4.3964e-06	4.4738e-06	4.4631e-06	4.4149e-06
	3	9.7169e-07	6.0731e-02	9.7244e-07	2.0512e-06	2.0499e-06	2.0512e-06	2.0437e-06
	4	3.8867e-06	9.7168e-07	3.8800e-06	4.3964e-06	4.3453e-06	4.5011e-06	4.4286e-06
	5	2.4292e-01	6.0731e-02	2.6992e-02	9.7172e-03	4.9579e-03	2.9993e-03	6.7317e-04
11	1	4.6615e-01	1.1654e-01	5.1794e-02	1.8646e-02	9.5138e-03	5.7555e-03	1.2919e-03
	2	7.4582e-06	1.8646e-06	7.4633e-06	8.5824e-06	8.5848e-06	8.5643e-06	8.6124e-06
	3	1.8646e-06	1.1654e-01	1.8660e-06	3.9360e-06	3.9336e-06	3.9591e-06	3.9275e-06
	4	7.4582e-06	1.8646e-06	7.4454e-06	8.4363e-06	8.5444e-06	8.6781e-06	8.5007e-06
	5	4.6615e-01	1.1654e-01	5.1794e-02	1.8646e-02	9.5137e-03	5.7555e-03	1.2917e-03

Table O.5: Peak immission power at 10000m distance (BER 10^{-6})

Speed [MBit/s]	P	Peak immission power in [mW]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	7.6627e-02	1.9157e-02	8.5142e-03	3.0652e-03	1.5639e-03	9.4612e-04	2.1237e-04
	2	1.2260e-06	6.1300e-07	1.4121e-06	1.4209e-06	1.4184e-06	1.4352e-06	1.4441e-06
	3	3.0651e-07	1.9157e-02	6.4717e-07	6.5927e-07	6.6510e-07	6.8106e-07	6.7971e-07
	4	1.2260e-06	6.1300e-07	1.3753e-06	1.3922e-06	1.4118e-06	1.4515e-06	1.4185e-06
	5	7.6627e-02	1.9157e-02	8.5142e-03	3.0652e-03	1.5639e-03	9.4611e-04	2.1237e-04
2	1	1.5325e-01	3.8313e-02	1.7028e-02	6.1303e-03	3.1278e-03	1.8922e-03	4.2472e-04
	2	2.4520e-06	6.1300e-07	2.7261e-06	2.7438e-06	2.7743e-06	2.8157e-06	2.8555e-06
	3	6.1301e-07	3.8313e-02	1.2262e-06	1.2259e-06	1.2932e-06	1.3261e-06	1.2918e-06
	4	2.4520e-06	6.1300e-07	2.5458e-06	2.7438e-06	2.7469e-06	2.8328e-06	2.7459e-06
	5	1.5325e-01	3.8313e-02	1.7028e-02	6.1303e-03	3.1278e-03	1.8922e-03	4.2472e-04
5.5	1	3.4097e-01	8.5243e-02	3.7886e-02	1.3639e-02	6.9590e-03	4.2099e-03	9.4496e-04
	2	5.4554e-06	1.3639e-06	5.4591e-06	6.1708e-06	6.2795e-06	6.2796e-06	6.2957e-06
	3	1.3639e-06	8.5243e-02	1.3649e-06	2.8790e-06	2.8773e-06	2.8791e-06	2.8681e-06
	4	5.4554e-06	1.3639e-06	5.4460e-06	6.1708e-06	6.2500e-06	6.1955e-06	6.2160e-06
	5	3.4097e-01	8.5243e-02	3.7886e-02	1.3639e-02	6.9589e-03	4.2099e-03	9.4495e-04
11	1	6.6201e-01	1.6550e-01	7.3557e-02	2.6481e-02	1.3511e-02	8.1739e-03	1.8347e-03
	2	1.0592e-05	2.6480e-06	1.0599e-05	1.2189e-05	1.2192e-05	1.2163e-05	1.2224e-05
	3	2.6480e-06	1.6550e-01	2.6501e-06	5.5898e-06	5.8806e-06	5.6440e-06	5.5896e-06
	4	1.0592e-05	2.6480e-06	1.0574e-05	1.1981e-05	1.2135e-05	1.2237e-05	1.2199e-05
	5	6.6201e-01	1.6550e-01	7.3557e-02	2.6481e-02	1.3511e-02	8.1737e-03	1.8345e-03

Table O.6: Peak immission power at 10000m distance (BER 10^{-8})

Speed [MBit/s]	P	Peak immission energy in [mWs]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	5.4081e+00	8.7858e-03	6.3077e-06	4.7657e-05	7.6949e-06	7.6269e-07	2.4180e-09
	2	8.6529e-05	2.8114e-07	1.0462e-09	2.2093e-08	6.1662e-09	5.2984e-10	1.0120e-09
	3	2.3754e-05	8.9486e-03	4.7945e-10	1.9429e-09	5.2253e-09	3.6323e-10	2.7900e-10
	4	8.4873e-06	5.2119e-09	1.1410e-09	3.8163e-10	6.5070e-10	8.7671e-10	9.9537e-11
	5	5.3046e-01	1.6288e-04	7.0638e-06	8.2597e-07	2.4692e-07	5.5945e-07	4.2555e-08
2	1	5.4077e+00	1.3522e+00	2.0783e-03	1.8879e-04	1.3296e-06	2.0511e-06	1.5635e-07
	2	8.6522e-05	4.5391e-05	3.3273e-07	3.0926e-10	1.0203e-09	7.6811e-10	4.7702e-10
	3	2.3753e-05	1.4849e+00	1.9634e-07	9.5572e-10	4.7902e-10	4.8376e-10	2.6962e-10
	4	8.4870e-06	2.5879e-05	4.0763e-07	2.0485e-09	2.9358e-09	1.0233e-09	9.3530e-11
	5	5.3044e-01	1.3261e-01	5.8660e-03	4.8464e-05	1.7260e-06	2.9588e-07	1.1928e-08
5.5	1	4.5513e+00	1.1378e+00	5.0570e-01	7.2879e-07	4.7150e-06	7.1085e-07	8.6174e-08
	2	7.2819e-05	3.9802e-05	8.6445e-05	6.3924e-09	3.1853e-09	1.0622e-09	4.1500e-10
	3	2.1597e-05	1.3498e+00	2.1614e-05	1.9404e-09	2.6198e-09	9.7432e-10	4.8843e-10
	4	1.3568e-05	2.4989e-05	8.6238e-05	4.1590e-09	1.0342e-09	3.5514e-09	2.0947e-09
	5	8.4800e-01	2.1200e-01	9.4225e-02	1.1369e-06	6.3064e-06	2.7714e-06	2.6254e-08
11	1	5.0380e+00	1.2595e+00	5.5977e-01	5.4243e-05	5.3658e-06	2.8490e-06	2.1316e-07
	2	8.0606e-05	4.6243e-05	1.0443e-04	2.4966e-08	4.2323e-09	5.7210e-09	1.0335e-09
	3	2.6091e-05	1.6307e+00	2.6112e-05	3.2755e-08	3.9139e-09	6.6117e-10	4.1632e-10
	4	2.3757e-05	3.2030e-05	1.0419e-04	4.0511e-08	1.4098e-09	1.4406e-09	5.5254e-10
	5	1.4849e+00	3.7120e-01	1.6498e-01	3.7313e-03	9.9894e-07	9.5541e-07	1.3693e-07

Table O.7: Peak immission energy at 10000m distance (BER 10^{-6})

Speed [MBit/s]	P	Peak immission energy in [mWs]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	7.1247e+00	1.1574e-02	3.8808e-05	3.2429e-05	5.5899e-05	7.6635e-08	3.1006e-08
	2	1.1399e-04	3.7037e-07	6.4364e-09	1.5033e-08	1.4742e-08	1.3275e-09	5.7185e-10
	3	3.1294e-05	1.1789e-02	2.9498e-09	3.4869e-09	6.4847e-10	1.7980e-10	3.3781e-10
	4	1.1181e-05	6.8663e-09	8.3615e-10	9.4184e-09	1.4684e-08	1.8580e-09	3.2341e-10
	5	6.9883e-01	2.1457e-04	5.1766e-06	2.9916e-06	2.9401e-07	4.3521e-08	9.5566e-09
2	1	7.1242e+00	1.7813e+00	2.7380e-03	1.6484e-05	1.5264e-06	9.2339e-07	1.5290e-08
	2	1.1399e-04	5.9799e-05	4.3834e-07	2.7849e-09	1.3538e-09	1.3740e-09	1.7990e-10
	3	3.1292e-05	1.9562e+00	2.5866e-07	1.7613e-07	6.3109e-10	5.7286e-10	6.3041e-10
	4	1.1181e-05	3.4093e-05	5.3702e-07	4.0114e-09	5.4196e-09	1.3796e-09	1.3372e-09
	5	6.9881e-01	1.7470e-01	7.7279e-03	8.3862e-06	1.2142e-05	8.2879e-07	6.4557e-08
5.5	1	6.3882e+00	1.5971e+00	7.0980e-01	1.0229e-06	8.2464e-06	1.9997e-06	3.8743e-08
	2	1.0221e-04	5.5866e-05	1.2134e-04	1.0460e-08	4.4773e-09	7.2216e-10	2.6694e-09
	3	3.0314e-05	1.8946e+00	3.0337e-05	7.6035e-09	2.0429e-09	6.8522e-10	1.3624e-09
	4	1.9044e-05	3.5075e-05	1.2105e-04	5.8376e-09	1.4812e-09	4.9873e-09	2.9340e-09
	5	1.1903e+00	2.9756e-01	1.3226e-01	1.5958e-06	1.5936e-06	9.9774e-07	1.0394e-08
11	1	7.1548e+00	1.7887e+00	7.9498e-01	8.7918e-06	2.2429e-06	1.3487e-06	3.0272e-07
	2	1.1448e-04	6.5673e-05	1.4832e-04	4.0466e-09	2.0239e-09	6.0450e-09	1.0182e-08
	3	3.7054e-05	2.3159e+00	3.7083e-05	3.6949e-09	9.7617e-10	1.8794e-09	9.2228e-10
	4	3.3740e-05	4.5489e-05	1.4796e-04	1.9889e-09	1.6370e-08	1.2176e-08	2.0129e-09
	5	2.1088e+00	5.2718e-01	2.3431e-01	8.4359e-02	3.7831e-06	1.1729e-05	4.5863e-08

Table O.8: Peak immission energy at 10000m distance (BER 10^{-8})

Speed [MBit/s]	P	Immission energy in [mWs]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	5.4081e+00	1.8504e+00	1.3600e+00	1.1054e+00	6.5878e-01	4.6947e-01	3.5100e-02
	2	8.7472e-05	6.1752e-05	1.7293e-04	2.6164e-04	3.2198e-04	3.7469e-04	7.2237e-05
	3	2.3754e-05	2.0090e+00	8.4207e-05	1.1450e-04	1.3397e-04	1.4139e-04	2.7341e-05
	4	1.8102e-05	3.7949e-05	1.8241e-04	2.3673e-04	2.3756e-04	2.3534e-04	4.2872e-05
	5	5.3047e-01	1.5728e-01	7.2485e-02	2.9624e-02	1.8334e-02	1.2067e-02	9.4565e-04
	mv	1.1877e+00	8.0335e-01	2.8659e-01	2.2713e-01	1.3556e-01	9.6458e-02	7.2376e-03
2	1	5.4077e+00	1.3522e+00	8.5423e-01	7.0048e-01	5.1447e-01	3.5962e-01	4.4362e-02
	2	8.7465e-05	4.5627e-05	1.5172e-04	2.0844e-04	2.4503e-04	2.6769e-04	1.0295e-04
	3	2.3753e-05	1.4849e+00	6.9538e-05	8.6163e-05	1.2206e-04	1.3091e-04	3.2751e-05
	4	1.8101e-05	2.8283e-05	1.4062e-04	2.5533e-04	2.6543e-04	2.3141e-04	5.0269e-05
	5	5.3045e-01	1.3262e-01	7.1256e-02	2.3629e-02	1.5001e-02	7.9469e-03	8.3022e-04
	mv	1.1877e+00	5.9394e-01	1.8517e-01	1.4493e-01	1.0602e-01	7.3640e-02	9.0756e-03
5.5	1	4.5513e+00	1.1378e+00	5.0571e-01	3.9312e-01	2.6156e-01	1.8978e-01	7.4795e-02
	2	7.4327e-05	4.0179e-05	9.8161e-05	1.1659e-04	1.5377e-04	1.9236e-04	2.2853e-04
	3	2.1597e-05	1.3498e+00	4.5601e-05	6.0761e-05	7.2177e-05	8.6434e-05	8.7411e-05
	4	2.1659e-05	2.7012e-05	9.2100e-05	1.7251e-04	1.8121e-04	1.9757e-04	1.3764e-04
	5	8.4801e-01	2.1200e-01	9.4232e-02	3.7572e-02	1.9430e-02	1.2219e-02	2.9621e-03
	mv	1.0799e+00	5.3995e-01	1.2003e-01	8.6208e-02	5.6279e-02	4.0495e-02	1.5642e-02
11	1	5.0380e+00	1.2595e+00	5.5978e-01	2.7756e-01	2.2056e-01	1.5983e-01	6.4314e-02
	2	8.3246e-05	4.6903e-05	1.1786e-04	1.6067e-04	1.4516e-04	1.8324e-04	2.8430e-04
	3	2.6091e-05	1.6307e+00	5.5091e-05	7.7357e-05	7.5749e-05	8.5943e-05	1.2505e-04
	4	3.2714e-05	3.4269e-05	1.1199e-04	1.5967e-04	1.8390e-04	1.9806e-04	2.1777e-04
	5	1.4849e+00	3.7121e-01	1.6499e-01	6.8611e-02	3.3327e-02	2.1048e-02	5.3667e-03
	mv	1.3046e+00	6.5231e-01	1.4501e-01	6.9315e-02	5.0859e-02	3.6269e-02	1.4062e-02

Table O.9: Immission energy at 10000m distance (BER 10^{-6})

Speed [MBit/s]	P	Immission energy in [mWs]						
		2 STAs	3 STAs	4 STAs	6 STAs	8 STAs	10 STAs	20 STAs
1	1	7.1247e+00	2.4377e+00	1.7589e+00	1.4789e+00	8.9660e-01	5.9835e-01	7.3130e-02
	2	1.1524e-04	8.1353e-05	2.2617e-04	3.4883e-04	4.1982e-04	4.6672e-04	1.4251e-04
	3	3.1294e-05	2.6467e+00	1.1086e-04	1.5088e-04	1.7809e-04	1.8102e-04	5.5893e-05
	4	2.3847e-05	4.9994e-05	2.4136e-04	3.0005e-04	3.1277e-04	3.1863e-04	9.0451e-05
	5	6.9884e-01	2.0720e-01	9.5578e-02	3.7039e-02	2.4397e-02	1.7974e-02	2.0137e-03
	mv	1.5647e+00	1.0583e+00	3.7101e-01	3.0334e-01	1.8438e-01	1.2346e-01	1.5086e-02
2	1	7.1242e+00	1.7814e+00	1.1254e+00	9.4761e-01	6.7200e-01	4.6412e-01	1.7252e-01
	2	1.1523e-04	6.0110e-05	1.9987e-04	2.7679e-04	3.1959e-04	3.6176e-04	3.9795e-04
	3	3.1292e-05	1.9562e+00	9.1610e-05	1.1410e-04	1.6001e-04	1.7058e-04	1.3053e-04
	4	2.3846e-05	3.7260e-05	1.8526e-04	3.3954e-04	3.4730e-04	2.9351e-04	1.9481e-04
	5	6.9882e-01	1.7471e-01	9.3874e-02	3.0165e-02	1.8003e-02	1.2530e-02	2.7193e-03
	mv	1.5646e+00	7.8247e-01	2.4395e-01	1.9570e-01	1.3817e-01	9.5496e-02	3.5193e-02
5.5	1	6.3882e+00	1.5971e+00	7.0981e-01	5.5262e-01	3.6930e-01	2.5986e-01	1.0265e-01
	2	1.0433e-04	5.6395e-05	1.3778e-04	1.6299e-04	2.1336e-04	2.6785e-04	3.1179e-04
	3	3.0314e-05	1.8946e+00	6.4006e-05	8.5256e-05	1.0246e-04	1.2104e-04	1.2227e-04
	4	3.0401e-05	3.7914e-05	1.2927e-04	2.4239e-04	2.5476e-04	2.7471e-04	2.0307e-04
	5	1.1903e+00	2.9757e-01	1.3227e-01	5.2722e-02	2.6782e-02	1.6404e-02	4.4647e-03
	mv	1.5157e+00	7.5787e-01	1.6848e-01	1.2117e-01	7.9330e-02	5.5385e-02	2.1550e-02
11	1	7.1548e+00	1.7887e+00	7.9499e-01	3.1661e-01	2.6781e-01	2.0904e-01	8.3020e-02
	2	1.1822e-04	6.6611e-05	1.6738e-04	1.8534e-04	2.0551e-04	2.3493e-04	3.5540e-04
	3	3.7054e-05	2.3159e+00	7.8239e-05	8.9871e-05	1.0419e-04	1.0837e-04	1.7666e-04
	4	4.6459e-05	4.8669e-05	1.5905e-04	1.8092e-04	2.2869e-04	2.7963e-04	3.1938e-04
	5	2.1088e+00	5.2719e-01	2.3432e-01	8.4374e-02	4.7480e-02	2.9530e-02	7.6965e-03
	mv	1.8528e+00	9.2640e-01	2.0594e-01	8.0288e-02	6.3165e-02	4.7839e-02	1.8314e-02

Table O.10: Immission energy at 10000m distance (BER 10^{-8})

Appendix P

ABBREVIATIONS

abbreviation	meaning
<i>s</i>	Seconds
<i>ms</i>	Milliseconds
<i>m or M</i>	Meter
<i>cm</i>	Centimeter
<i>nm</i>	Nanometer
<i>dB</i>	Decibel
<i>mW</i>	Milliwatt
<i>mWs</i>	Milliwatt seconds
<i>f</i>	Frequency
<i>Hz</i>	Hertz
<i>MHz</i>	Mega Hertz
<i>GHz</i>	Giga Hertz
<i>ACK</i>	Acknowledgment
<i>AP</i>	Access Point
<i>AID</i>	Association Identity
<i>ATIM(w)</i>	Asynchronous Traffic Indication Map (window)
<i>BER</i>	Bit Error Rate
<i>BSS</i>	Basic Service Set
<i>BSA</i>	Basic Service Area
<i>CCK</i>	Complementary Code Keying
<i>CF</i>	Contention Free

abbreviation	meaning
<i>CFP</i>	Contention Free Period
<i>CRC</i>	Cyclic Redundancy Check
<i>CSMA/CA</i>	Carrier Sense Multiple Access with Collision Avoidance
<i>CTS</i>	Clear To Send
<i>CW</i>	Contention Window
<i>D</i>	Distance
<i>DBPSK</i>	Differential Binary Phase Shift Keying
<i>DCF</i>	Distributed Coordination Function
<i>DIFS</i>	Distributed Inter-Frame Space
<i>DQPSK</i>	Differential Quadrature Phase Shift Keying
<i>DR</i>	Data Rate
<i>DS</i>	Distribution System
<i>DSS</i>	Distribution System Service
<i>DSSS</i>	Direct Sequence Spread Spectrum
<i>DTIM</i>	Delivery Traffic Indication Map
<i>EIFS</i>	Extended Inter-Frame Space
<i>ESS</i>	Extended Service Set
<i>FC</i>	Frame Control
<i>FCS</i>	Frame Check Sequence
<i>FHSS</i>	Frequency-Hopping Spread Spectrum
<i>GFSK</i>	Gaussian Frequency Shift Keying
<i>GPSK</i>	Gaussian Phase Shift Keying
<i>HEC</i>	Header Error Check
<i>IBSS</i>	Independent Basic Service Set
<i>ICNIRP</i>	International Commission on Non-Ionizing Radiation Protection
<i>IEEE</i>	Institute of Electrical and Electronic Engineering

abbreviation	meaning
<i>IFS</i>	Inter-Frame Space
<i>IR</i>	Infrared
<i>ISO/IEC</i>	International Standard Organization
<i>LAN</i>	Local Area Network
<i>MAC</i>	Medium Access Control
<i>MPDU</i>	MAC Protocol Data Units
<i>MPEG</i>	Moving Picture Expert Group
<i>MSDU</i>	MAC Service Data Units
<i>NAV</i>	Network Allocation Vector
<i>NCRP</i>	National Council on Radiation Protection and Measurements
<i>NRPB</i>	National Radiation Protection Board
<i>OSI</i>	Open System Interconnection
<i>OFDM</i>	Orthogonal Frequency Division Multiplexing
<i>P or MP or point</i>	Measuring Point for the immission radiation
<i>PCF</i>	Point Coordination Function
<i>PCM</i>	Pulse Code Modulation
<i>PHY</i>	Physical layer
<i>PIFS</i>	Priority Inter-Frame Space
<i>PLW</i>	PSDU Length Word
<i>PMD</i>	Physical Medium Dependent
<i>PLCP</i>	Physical Layer Convergence Procedure
<i>PPM</i>	Pulse Position Modulation
<i>PS</i>	Power Save
<i>PSDU</i>	Protocol Service Data Unit
<i>PSF</i>	PLPC signal field
<i>QAM</i>	Quadrature Amplitude Modulation

abbreviation	meaning
<i>RF</i>	Radio Frequency
<i>RTS</i>	Request To Send
<i>SAR</i>	Specific Absorption Rate
<i>SAP</i>	Service Access Point
<i>SD</i>	Silence Detection
<i>SFD</i>	Start Frame Delimiter
<i>SINR</i>	Signal to Interference plus Noise Ratio
<i>SNR</i>	Signal to Noise Ratio
<i>SS</i>	Station Service
<i>STA</i>	Station
<i>SYNC</i>	Synchronization
<i>TKN</i>	Telecommunication Networks (group)
<i>TSF</i>	Timing Synchronization Function
<i>TIM</i>	Traffic Indication Map
<i>WLAN</i>	Wireless Local Area Network
<i>WM</i>	Wireless Medium

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