**国内外研究现状总结**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 时间 | 研究单位 | 信号中心频率 | 传输速率 | 信号带宽 | 频谱效率 | 传输距离 | BER |
| 国外 | 2006[1] | NTT Corporation | 125GHz | 10Gb/s | 17GHz | 0.6bit/s/Hz | Estimated 3~4km | ~10-12 |
| 2007[2] | CSIRO ICT Centre | 83.5GHz | 6Gbit/s | 2.5GHz | 2.4bit/s/Hz | 250m | <5×10-7 |
| 2008[3] | NTT Corporation | 125GHz | 10Gb/s | 17GHz | 0.6bit/s/Hz | 800 m | <10-12 |
| 2010[4] | NTT Corporation | 125GHz | 10Gb/s | 17GHz | 0.6bit/s/Hz | 5.8 km | <10-12 |
| 2012[5] | NTT Corporation | 125GHz | 11.1Gb/s | 17GHz | 0.65bit/s/Hz | >1km (5.8 km fine weather) | <10-12 |
| 2012[6] | NTT Corporation | 300GHz | 24Gbit/s | 19GHz | 1.26 bit/s/Hz | 0.5m | <10-10 |
| 2012[7] | University College London | 146GHz | 1Gbit/s | - | <1bit/s/Hz | 0.025 | - |
| 2013[8] | Karlsruhe Institute of Technology | 237.5GHz | 100Gbit/s | 25GHz | 4bit/s/Hz | 20m | 10-2 |
| 2014[9] | DTU | 81.4GHz | 16Gbit/s | 8GHz | 2bit/s/Hz | 15m | 10-5 |
| 2014[10] | Micro électronique et de Nanotechnologies (IEMN) | 400GHz | 46Gbit/s | 80GHz | 0.58bit/s/Hz | 2m | <10-3 |
| 2017[11] | University Duisburg-Essen | 328GHz | 59Gbit/s | 10GHz | 5.9bit/s/Hz  | 1.5m | 3×10-3 |
| 2018 | DARPA | 83.5GHz | 100Gbit/s | 5GHz | 20bit/s/Hz(极化复用，空间复用) | 20km（城市环境） | - |
| 国内 | 2013[12] | 复旦 | 100GHz | 100Gbit/s | 27GHz | 4bit/s/Hz(极化复用) | 0.7m | <3.8×10-3 |
| 2016[13] | 电子科大 | 218.8GHz | 3.52Gb/s | 2.2GHz | 1.6bit/s/Hz | 200m | <10-5 |
| 2017[14] | 浙大 | 400GHz | 106Gb/s | 40GHz | 2.65 bit/s/Hz | 0.5m | ~10-2 |
| 2017[15] | 复旦 | 94GHz | 54 Gb/s | 19GHz | 3 bit/s/Hz | 2.5km | <3.8×10-3 |
| 2017[16] | 工程物理研究院 | 140GHz | 5Gb/s | 1.8GHz | 2.8 bit/s/Hz | 21km | <10-12 |

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