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Title:Terahertz free space communication based on acoustic optical modulation and heterodyne detection

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Abstract:A terahertz free space communication system based on acoustic optical modulation and heterodyne detection is demonstrated. A high resistivity silicon acoustic optical modulator was used to modulate a continuous terahertz wave at 2.52THz. A pyroelectric detector was used to detect the modulated terahertz signal via heterodyne detection mode. A modulation frequency of 937kHz and sampling rate of 1kbit/s was achieved.

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