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Accession number:20112814134870 Title:Reference phase in diffractive lens antennas: A review Authors: Minin, Igor V. (1); Minin, O.V. (1) Author affiliation:(1) Novosibirsk State Technical University, 20 K.Marksa Ave, Novosibirsk 630092, Russia Corresponding author: Minin, I.V. (Prof. minin@gmail.com) Source title: Journal of Infrared, Millimeter, and Terahertz Waves Abbreviated source title: J. Infrared. Millim. Terahertz Waves Volume:32 Issue:6 Issue date:June 2011 Publication year:2011 Pages:801-822 Language:English ISSN:18666892 E-ISSN:18666906 Document type: Journal article (JA) Publisher:Springer New York, 233 Springer Street, New York, NY 10013-1578, United States Abstract: We review a free parameter in the design of Fresnel zone plate lens antennas. Historically, zone plate antennas have been designed with a specific choice for this parameter, which can be taken as a type of phase reference. Two methods of interpreting the parameter have been identified, either in terms of a reference radius or equivalently a reference phase. Here, for simplicity, we treat this variable parameter as a reference phase. Importantly, the reference phase can be chosen to have non-standard values which have been shown to improve important aspects of antenna

performance and to add a new functionality to zone plate antennas. & copy; 2011 Springer