

## Accepted Manuscript

Title: Exact Form of the Physical Optics Integral

Author: Yusuf Ziya Umul

PII: S0030-4026(16)31414-0

DOI: <http://dx.doi.org/doi:10.1016/j.ijleo.2016.11.088>

Reference: IJLEO 58503

To appear in:

Received date: 24-9-2016

Accepted date: 13-11-2016

Please cite this article as: Yusuf Ziya Umul, Exact Form of the Physical Optics Integral, *Optik - International Journal for Light and Electron Optics* <http://dx.doi.org/10.1016/j.ijleo.2016.11.088>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



# Exact Form of the Physical Optics Integral

**Yusuf Ziya Umul**

Electronic and Communication Engineering Department, Cankaya University, Eskisehir yolu 29.

km, Yukarıyurtcu Mah., Mimar Sinan Cad., No:4, Etimesgut, Ankara 06790, Turkiye

[yziya@cankaya.edu.tr](mailto:yziya@cankaya.edu.tr)

**Abstract:** The exact structure of the physical optics integral is obtained. With this aim, the rigorous solution of the diffraction problem of waves by a perfectly conducting half-plane is considered. The Fresnel integrals of the incident and reflected scattered fields are transformed into the physical optics integrals by defining a suitable variable transform. The relation of the obtained integral with the modified theory of physical optics is discussed.

**Key words:** electromagnetic diffraction; optical diffraction; physical optics.

Download English Version:

<https://daneshyari.com/en/article/5025919>

Download Persian Version:

<https://daneshyari.com/article/5025919>

[Daneshyari.com](https://daneshyari.com)