

Errata: Computing the solid angle subtended by a planar figure

John S. Asvestas

U.S. Navy Naval Air Systems Command
 Radar and Antenna Systems Division
 B 2187, S 2190
 Patuxent River, Maryland 20670-1906
 E-mail: john.asvestas@navy.mil

[DOI: 10.1117/1.3582189]

This article [*Opt. Eng.* **33**(12), 4055–4059 (1994)] was published in December 1994. We correct two mathematical expressions.

In the original paper, a negative sign is missing in Eq. (6). The correct expression is

$$\hat{\xi} = \hat{\eta} \times \hat{\zeta} = -\frac{\hat{R}_n \times (\hat{R}_n \times \hat{R}_{n+1})}{|\hat{R}_n \times \hat{R}_{n+1}|}. \quad (1)$$

The same mistake appears in Eq. (16). The correct expression is

$$I_n = 2 \arctan \left[\frac{\frac{\hat{q} \cdot (\hat{R}_n \times \hat{R}_{n+1})}{|\hat{R}_n \times \hat{R}_{n+1}|} \left(\frac{1 - \hat{R}_n \cdot \hat{R}_{n+1}}{1 + \hat{R}_n \cdot \hat{R}_{n+1}} \right)^{1/2}}{1 - \hat{q} \cdot \hat{R}_n + \frac{\hat{q} \cdot [\hat{R}_n \times (\hat{R}_n \times \hat{R}_{n+1})]}{|\hat{R}_n \times \hat{R}_{n+1}|} \left(\frac{1 - \hat{R}_n \cdot \hat{R}_{n+1}}{1 + \hat{R}_n \cdot \hat{R}_{n+1}} \right)^{1/2}} \right]. \quad (2)$$

All the results presented in the original paper are correct. In numerical implementations* the atan2 function should be used for the arctangent.

*<http://en.wikipedia.org/wiki/Atan2>.