Errata

The following tables were inadvertently left out of W. M. Folkner and M. H. Finger's article, "Photon Statistical Limitations for Daytime Optical Tracking," that appeared in the *Telecommunications and Data Acquisition Progress Report 42-99*, vol. July–September 1989, November 15, 1989:

Table 1. Characteristics of nominal astrometric tracking system

Receiver characteristics	
Aperture diameter d_r, m	1.0
Filter bandwidth $\Delta\lambda$, nm	100.0
Atmospheric transmission η_a	0.5
Obscuration factor η_{ra}	0.9
Optics efficiency η_{ro}	0.8
Filter transmission η_e	0.8
Detector efficiency η_d	0.5
Transmitter characteristics	
Laser power P, W	2.00
Laser wavelength λ, nm	532.00
Transmitter diameter d_t, m	0.30
Distance from Earth, au	10.00
Obscuration factor η_{ta}	0.71
Pointing efficiency η_{tp}	0.84
Optics efficiency η_{to}	0.65

Table 2. Integration times needed for photon statistical error to reach a specified angular accuracy, considering a star of magnitude m = 8 and a 2-W laser on the spacecraft. Several different filter bandpasses are considered. Note that the 0.03-nm filter has a different transmission efficiency.

Source	Star	Star	S/C	S/C	S/C
m_v or power	8	8	2 W	2 W	2 W
Bandpass, nm	100	1.0	100	1.0	0.03
Count rate, photons/s	6.8×10^5	6.8×10^3	2.6×10^4	2.6×10^4	2.6×10^4
Background rate, photons/s	2.6×10^9	2.6×10^7	2.6×10^9	2.6×10^7	3.8×10^5
T for 50 nrad, s (no background)	0.0099	0.99	0.26	0.26	0.52
T for 5 nrad, s (no background)	0.99	99	26	26	52
T for 50 nrad, s (with background)	38	3.8×10^5	2.6×10^4	260	15
T for 5 nrad, s (with background)	3.8×10^3	3.8×10^7	2.6×10^6	2.6×10^4	1.5×10^3