With the NYMTP tables λ need not be an integer; multiples of 0.1, for example, will also serve. We may also use relations such as

$$\tan^{-1}(\lambda + 10/3) = \tfrac{1}{2}\pi + \tan^{-1}\lambda - \tan^{-1}(3\lambda^2 + 10\lambda + 3)/10.$$

Such relations have been found useful when $3\lambda^2 + \lambda + 3$ tends to be too big to be a tabular argument.

In some individual cases, it was found necessary to search rather carefully for suitable expressions, and in these circumstances, no saving of time results when comparison is made with straightforward methods of interpolation. It may be of interest, however, to note a few of these special cases,[1] suitable for use with the NYMTP tables:

$$\begin{aligned}
\tan^{-1}(4.9/9) &= \tan^{-1}0.5 - \tan^{-1}13 + \tan^{-1}23.88 \\
\tan^{-1}(4.7/9) &= \tan^{-1}0.5 - \tan^{-1}25.5 + \tan^{-1}46.34 \\
\tan^{-1}(3.1/6) &= \tfrac{1}{2}\pi + \tan^{-1}0.5 - \tan^{-1}75.5 \\
\tan^{-1}(3.7/6) &= \pi - \tan^{-1}1.625 - \tan^{-1}1076 \\
\tan^{-1}(4.1/7) &= -\tfrac{1}{2}\pi + \tan^{-1}0.6 + \tan^{-1}94.6
\end{aligned}$$

The first two of these cases are the only ones I have found so far which seem to need three tabular values; the others are typical of a fairly large number needing two tabular values together with a multiple of π. As a rule, I tried to express each value required in terms of two values only, one being a tabular value and the other a multiple of π if possible or, if not, a tabular value.[2]

J. C. P. MILLER

[1] It has been found that

$$\begin{aligned}
\tan^{-1}(4.9/9) &= -\tfrac{1}{2}\pi + \tan^{-1}0.6 + \tan^{-1}23.88 \text{ (S.A.J.)}, \\
\tan^{-1}(4.7/9) &= -\tfrac{1}{2}\pi + \tan^{-1}0.55 + \tan^{-1}46.34 \text{ (S.A.J.)}, \\
&= \tfrac{1}{2}\pi + \tan^{-1}0.3 - \tan^{-1}5.205 \text{ (J.C.P.M.)};
\end{aligned}$$

we may also note that

$$\tan^{-1}(3.7/6) = \tfrac{1}{2}\pi + \tan^{-1}0.6 - \tan^{-1}8\dot{2}.2 \text{ (S.A.J.)}.$$

[2] Considerations in connection with this communication have suggested the question: What values of $\tan^{-1}N$ (N being an integer) are fundamental? For instance,

$$\begin{aligned}
\tan^{-1}3 &= 3\tan^{-1}1 - \tan^{-1}2 \\
\tan^{-1}7 &= 2\tan^{-1}2 - \tan^{-1}1 \\
\tan^{-1}8 &= 2\tan^{-1}1 + \tan^{-1}3 - \tan^{-1}5 \\
\tan^{-1}13 &= 5\tan^{-1}1 - \tan^{-1}2 - \tan^{-1}4
\end{aligned}$$

So we certainly do not need $N = 3, 7, 8, 13$. But do we need all of 1, 2, 4, 5, 6, 9, 10, 11, 12?

CORRIGENDA

P. 54, l. -2, *for* e^{100} (117D), *read* e^{100} (116S); l. -3, *for* e^{8} (255D), *read* e^{8} (254D).

P. 55, l. 18, *for* ln 17 to 224D, *read* ln 17 to 274D.

P. 56, l. 1, *for* Recalculation of the modulus, *read* Recalculation and extension of the modulus; l. 16, *for* e^{10} to 289D, *read* e^{10} to 284D.

P. 59, l. -21, *for* The correct value, *read* The value.

P. 227, *delete* A_3 5, 13.

P. 229, *delete* B_3 3, 4.

P. 253, l. -4, *for* $2^{\frac{1}{2}}$, *read* $2^{-\frac{1}{2}}$; *for* $\mathrm{ber}'x$, *read* $-\mathrm{ber}'x$; l. -2, *for* $\mathrm{ker}'x$, *read* $-\mathrm{ker}'x$; *for* kei_2x, *read* $-\mathrm{kei}_2x$.

P. 283, BAASMTC, l. 5, *for* $I_n(x)$ and $i_n(x) = x^{-n}I_n(x)$, and $e^{-x}I_n(x) \cdots n = 2(1)12$, ***read*** $i_n(x) = x^{-n}I_n(x)$, or $e^{-x}I_n(x) \cdots n = 2(1)11$; ***for*** $K_n(x)$, and $k_n(x) = x^nK_n(x)$, and $e^xK_n(x) \cdots n = 2(1)12$, *read* $k_n(x) = x^nK_n(x)$, or $e^xK_n(x) \cdots n = 2(1)11$.

P. 289, FRESNEL l. 2, *for* "apparently calculated without knowledge of Fresnel's table," ***read*** "exactly Fresnel's table with its errors"; under l. 3 ***delete*** "thus, while some improvements were made, very little is added to Fresnel's table."

P. 294, KARAS, l. 1, *for* 1937, ***read*** 1936.

P. 304, B. A. SMITH, l. 1, *for* 1926, ***read*** 1896.

P. 305, 432, 478, *for* J. STEINER, ***read*** L. Steiner; and p. 305, under H. STRUVE, l. 1, 4, ***for*** *s*. 2, ***read*** s. 3.

P. 415, l. −12, *for Proc.*, ***read Trans.***

P. 449, ***delete*** line 14.

P. 456, l. 2, *for* vanish., ***read*** vanish.".

RMT **233** Addendum, p. 13

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