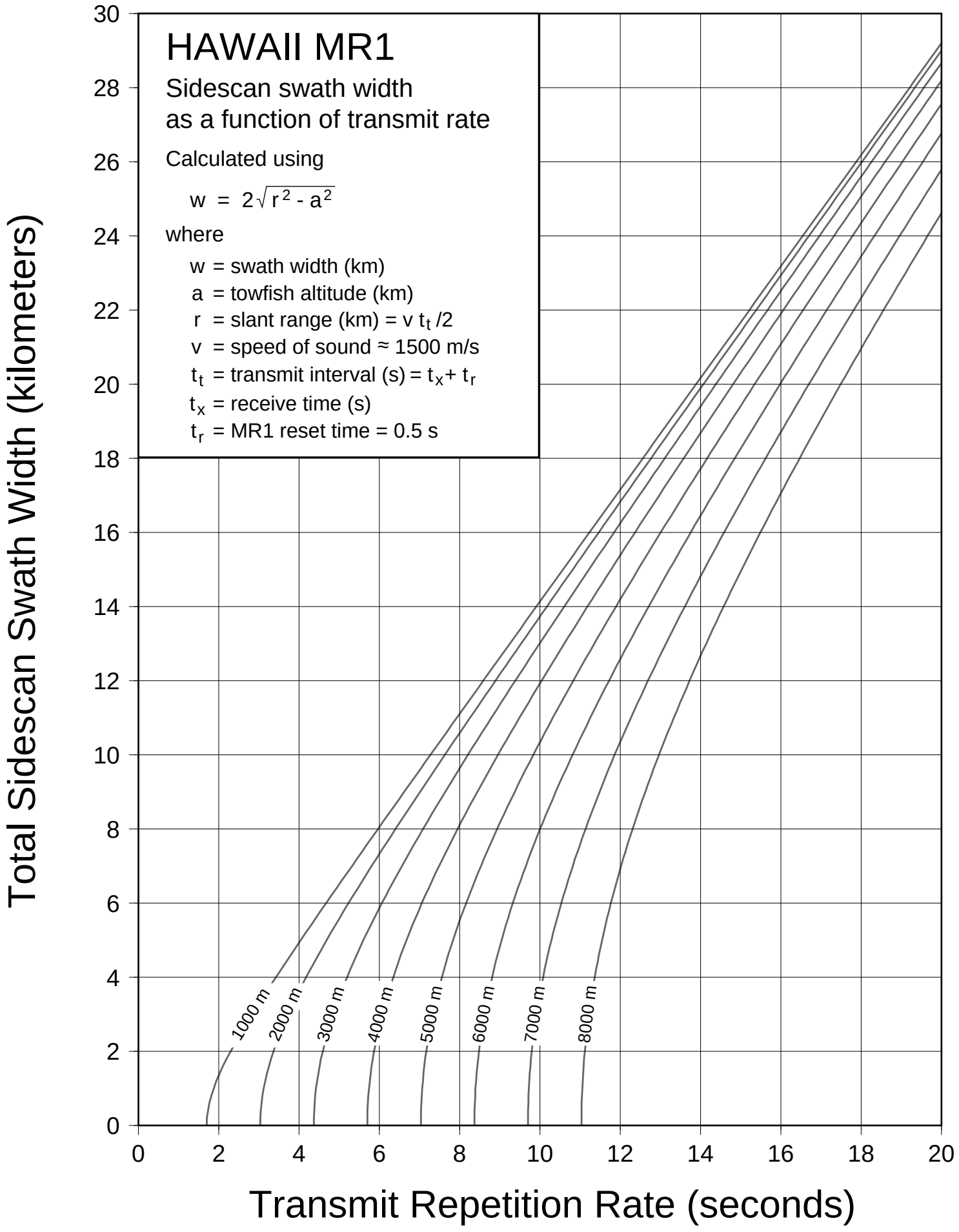
HAWAII MR1
Sidescan swath width
as a function of transmit rate
Calculated using
$w = 2\sqrt{r^2 - a^2}$
where
w = swath width (km)
a = towfish altitude (km)
r = slant range (km) = v t_t /2
v = speed of sound ≈ 1500 m/s
t_t = transmit interval (s) = t_x + t_r
t_x = receive time (s)
t_r = MR1 reset time = 0.5 s
1000 m
2000 m
3000 m
4000 m
5000 m
6000 m
7000 m
8000 m
Total Sidescan Swath Width (kilometers)
Transmit Repetition Rate (seconds)
0
2
4
6
8
10
12
14
16
18
20
22
24
26
28
30