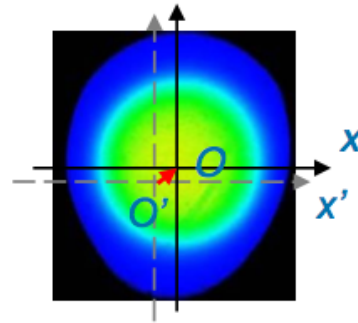
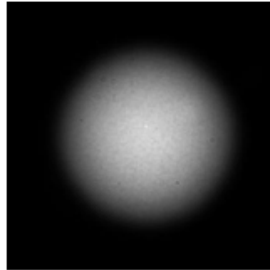


A proposal of launch condition at TP2

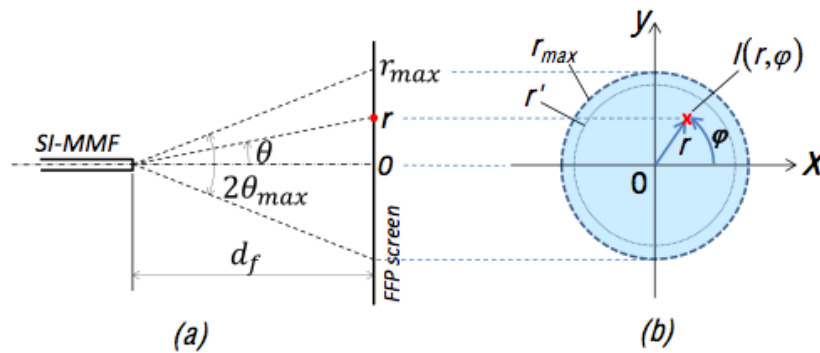
Satoshi Takahashi

POF promotion

Computation of EAF

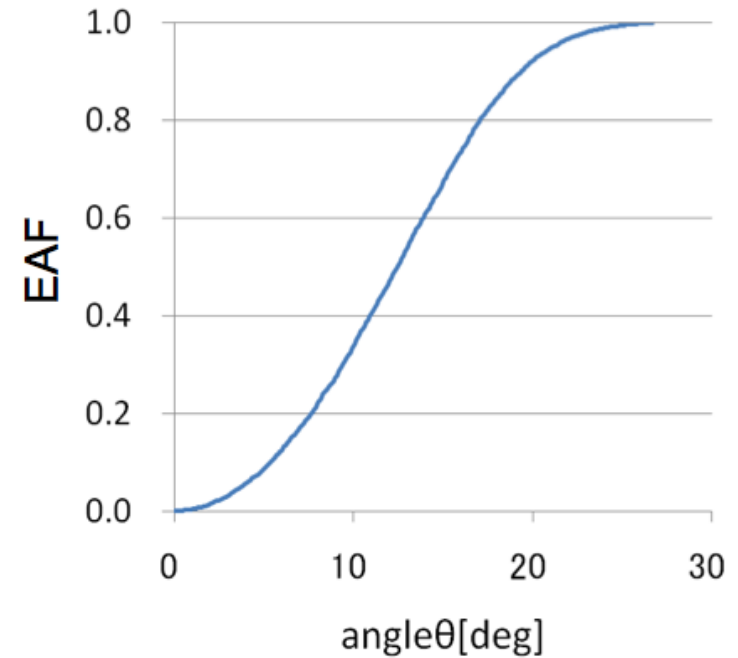


[1] Acquired FFP Image [2] Optical Center Determination



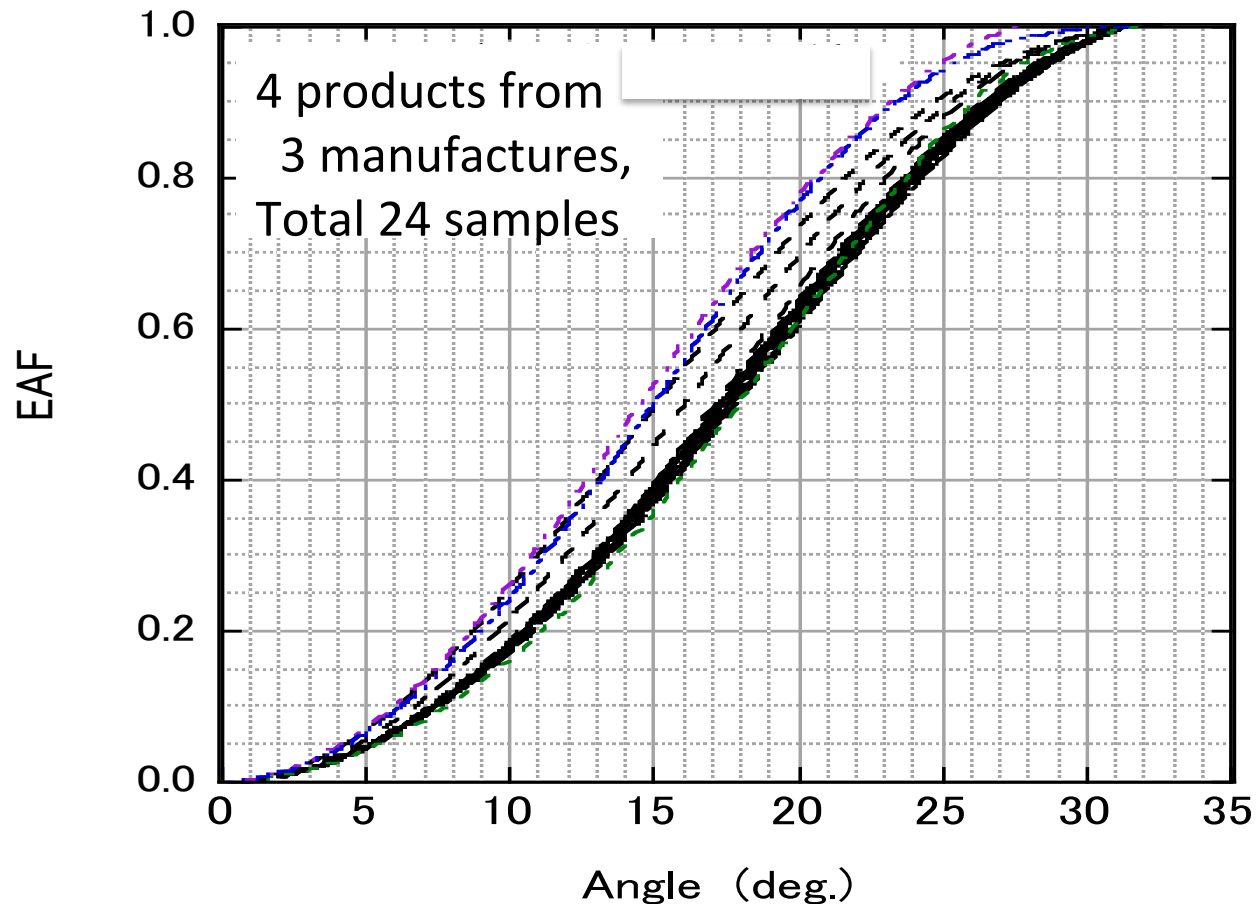
$$EAF(\theta') = \frac{\int_0^{2\pi} \int_0^{\theta'} I(r, \varphi) \cdot \frac{\sin(\theta)}{\cos^3(\theta)} \cdot d\theta d\varphi}{\int_0^{2\pi} \int_0^{\theta_{max}} I(r, \varphi) \cdot \frac{\sin(\theta)}{\cos^3(\theta)} \cdot d\theta d\varphi}$$

[3] EAF Calculation



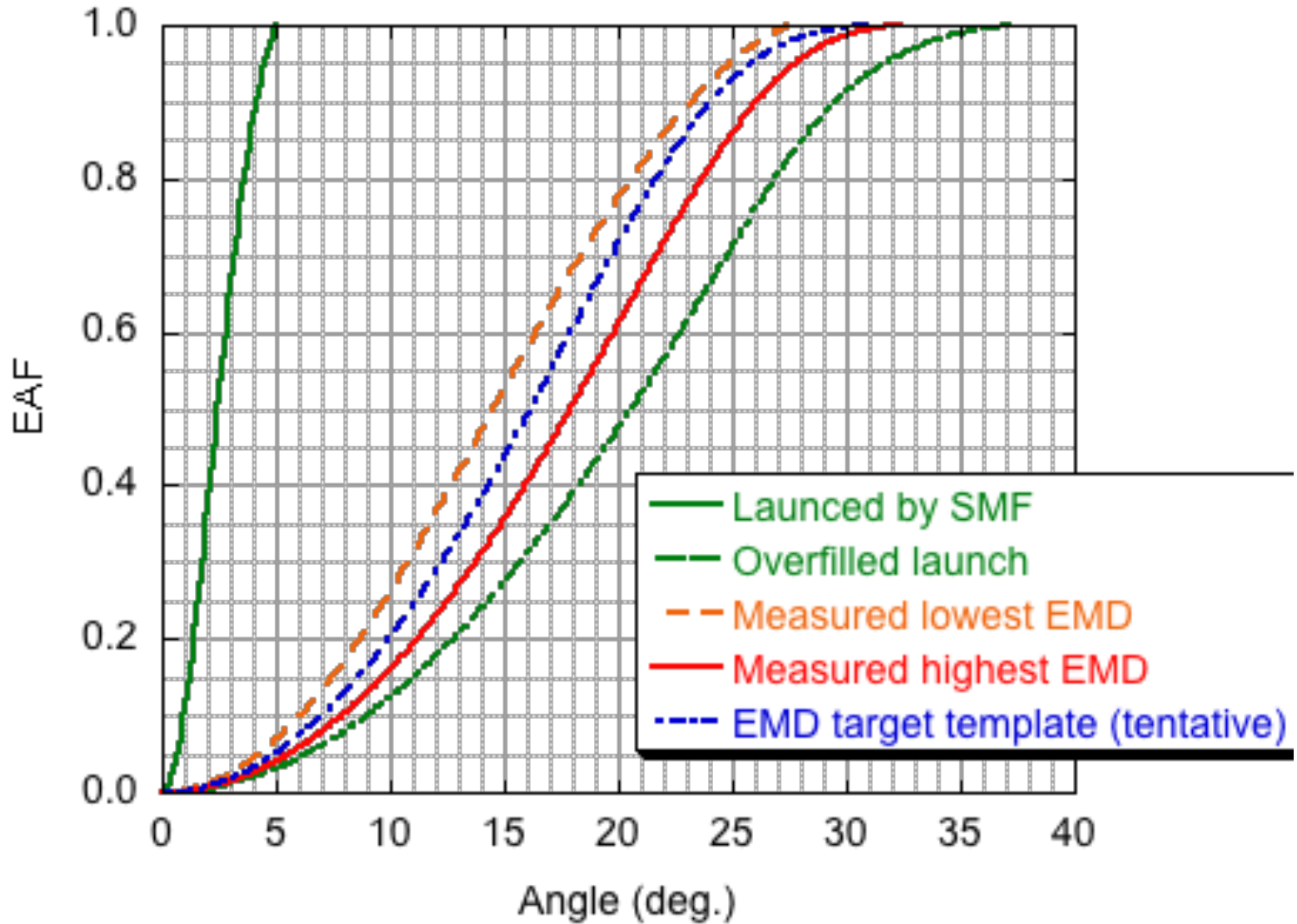
[4] Angular flux chart

Encircled Angular Flux of Equilibrium Mode Distribution of Commercially Available A4a.2 POFs

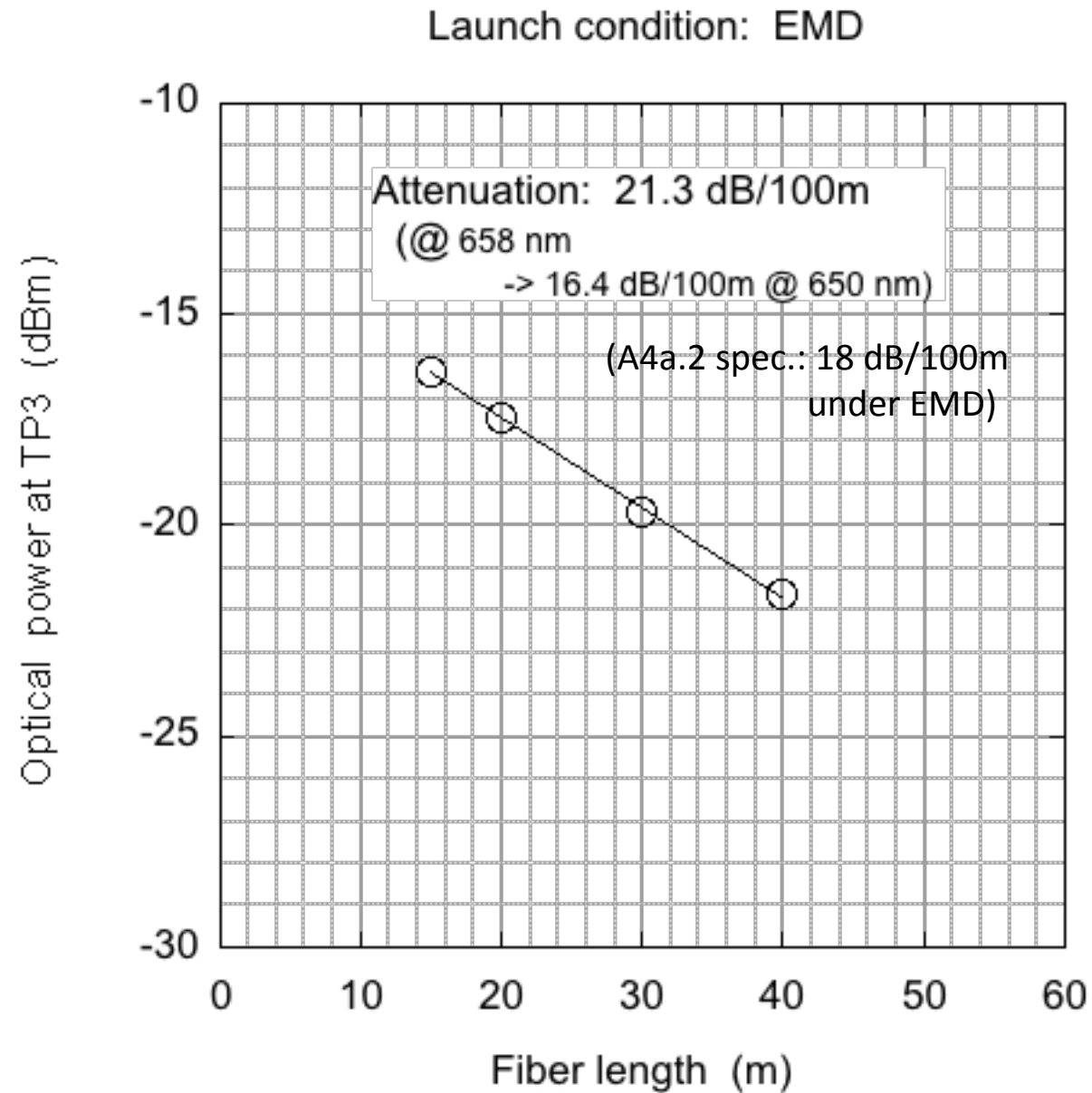


**Adopt Equilibrium Mode Distribution (EMD) of
A4a.2 POF as the launch condition**

Encircled Angular Flux

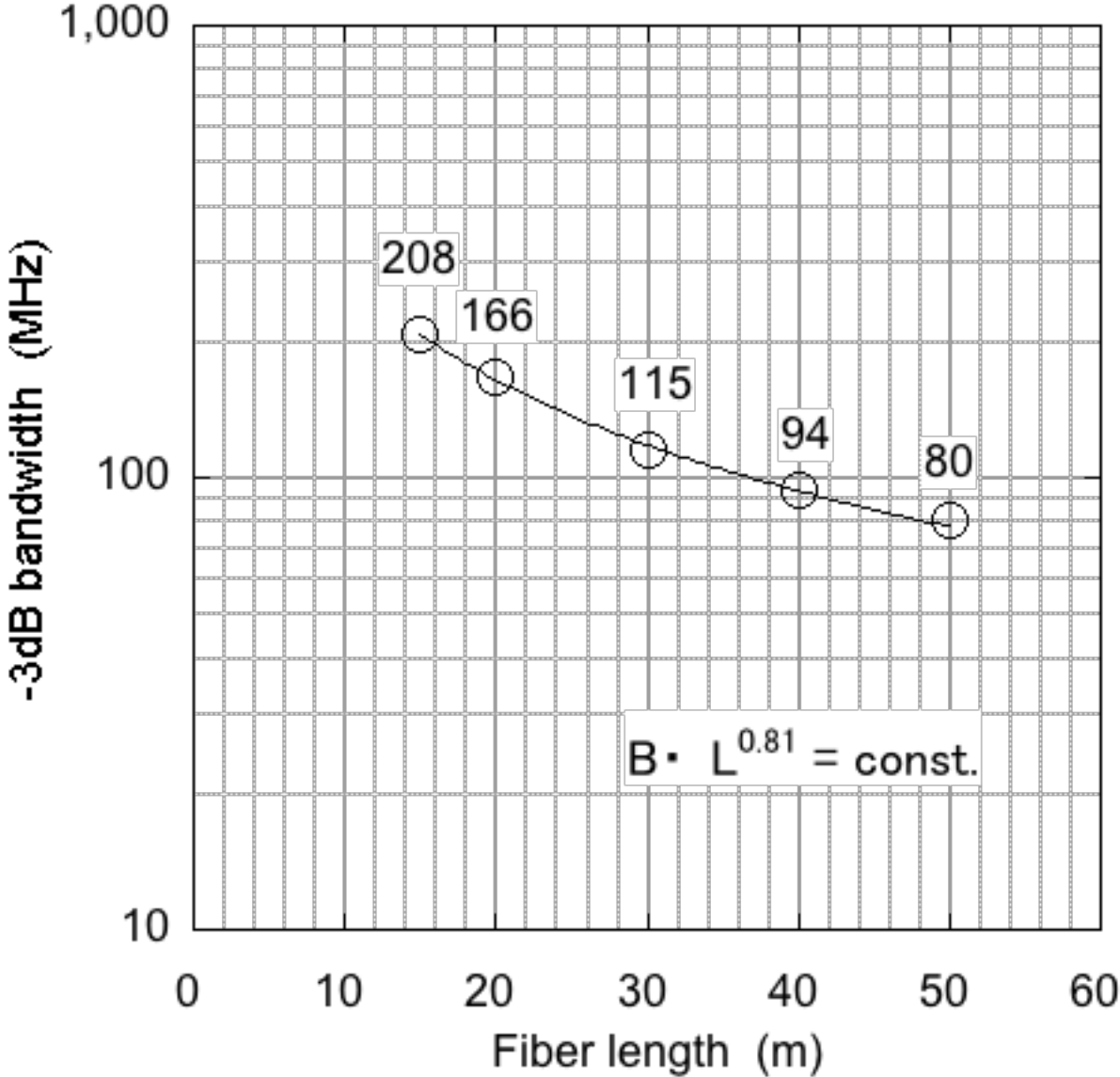


Attenuation measured under EMD launch condition



Insertion loss technique

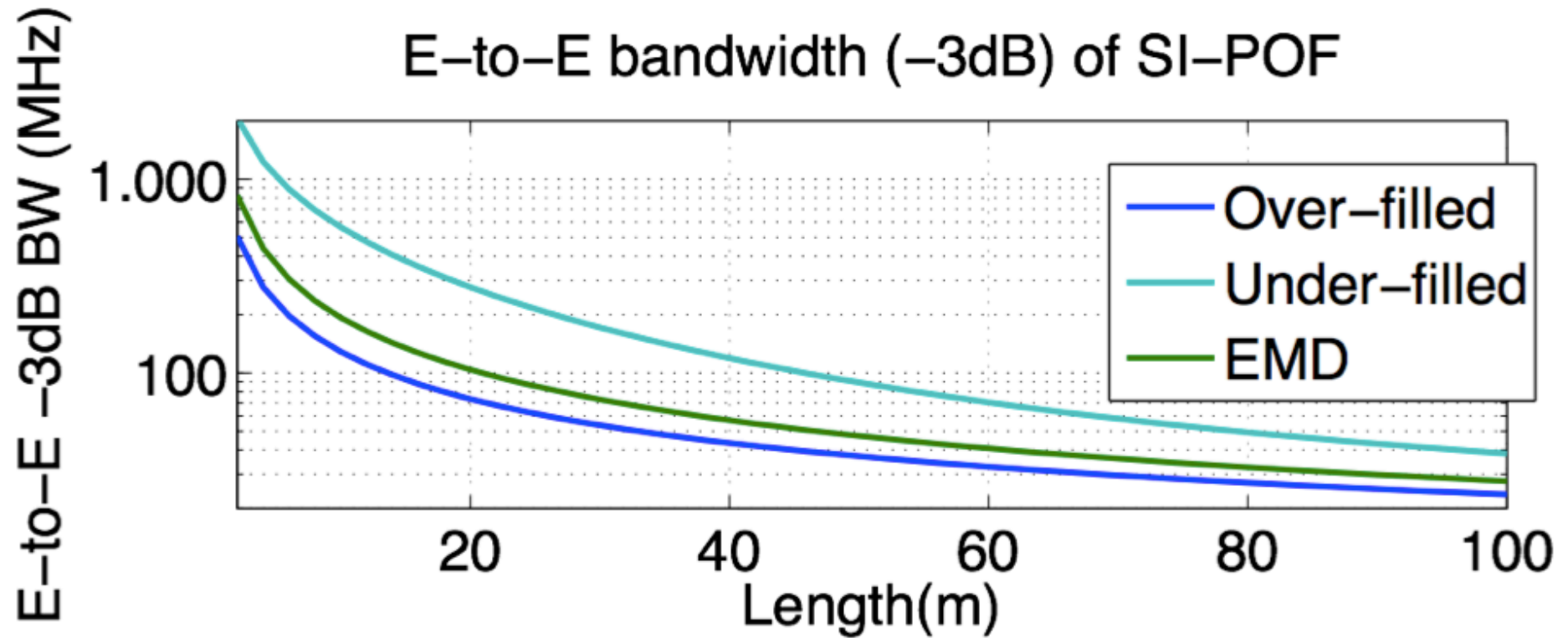
Bandwidth measured under EMD launch condition



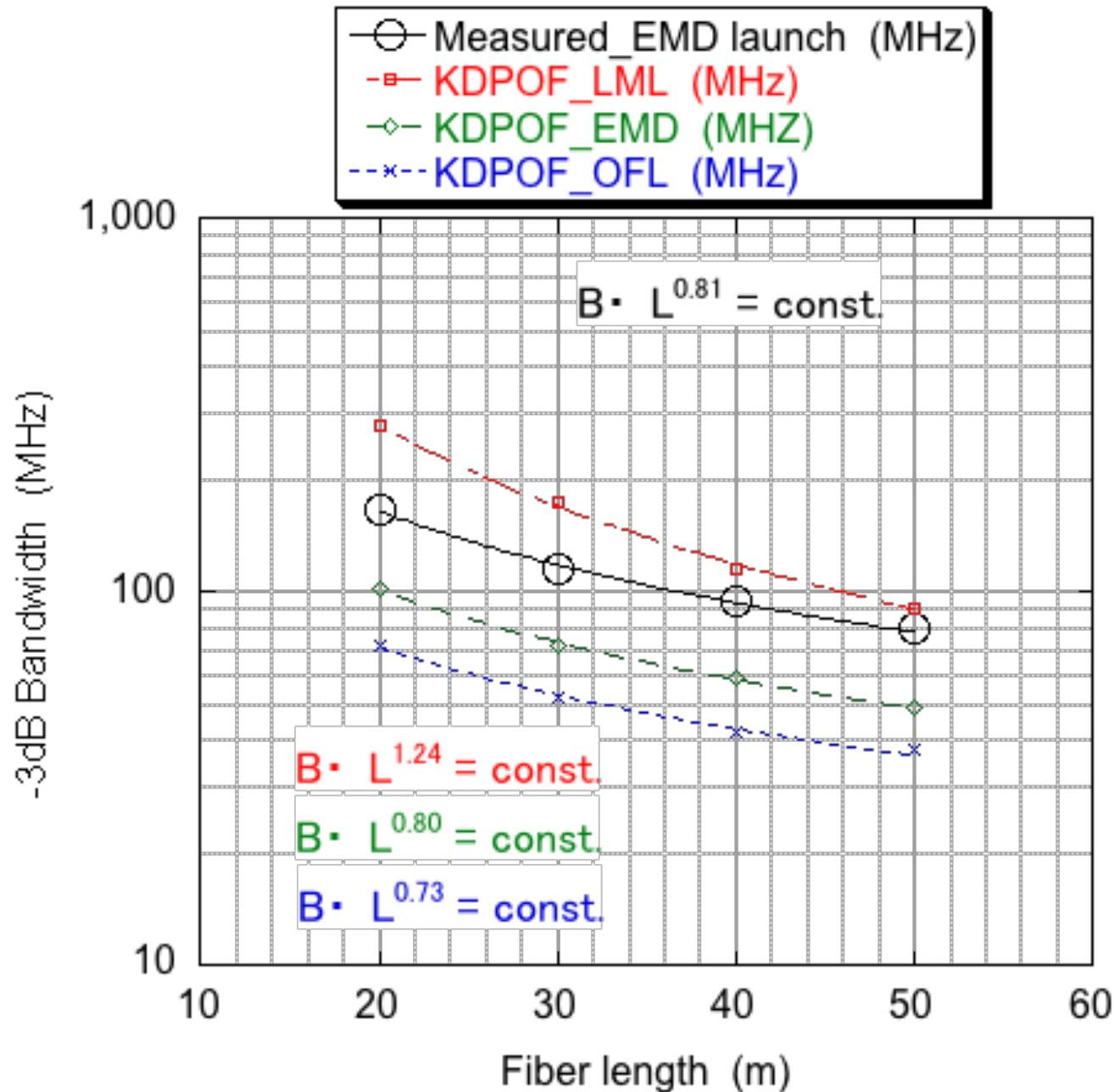
Extrapolated bandwidth
@ 100m: 44.4 MHz

(A4a.2 spec.: 40 MHz
under RML)

Basis of calculation by KDPOF (?)

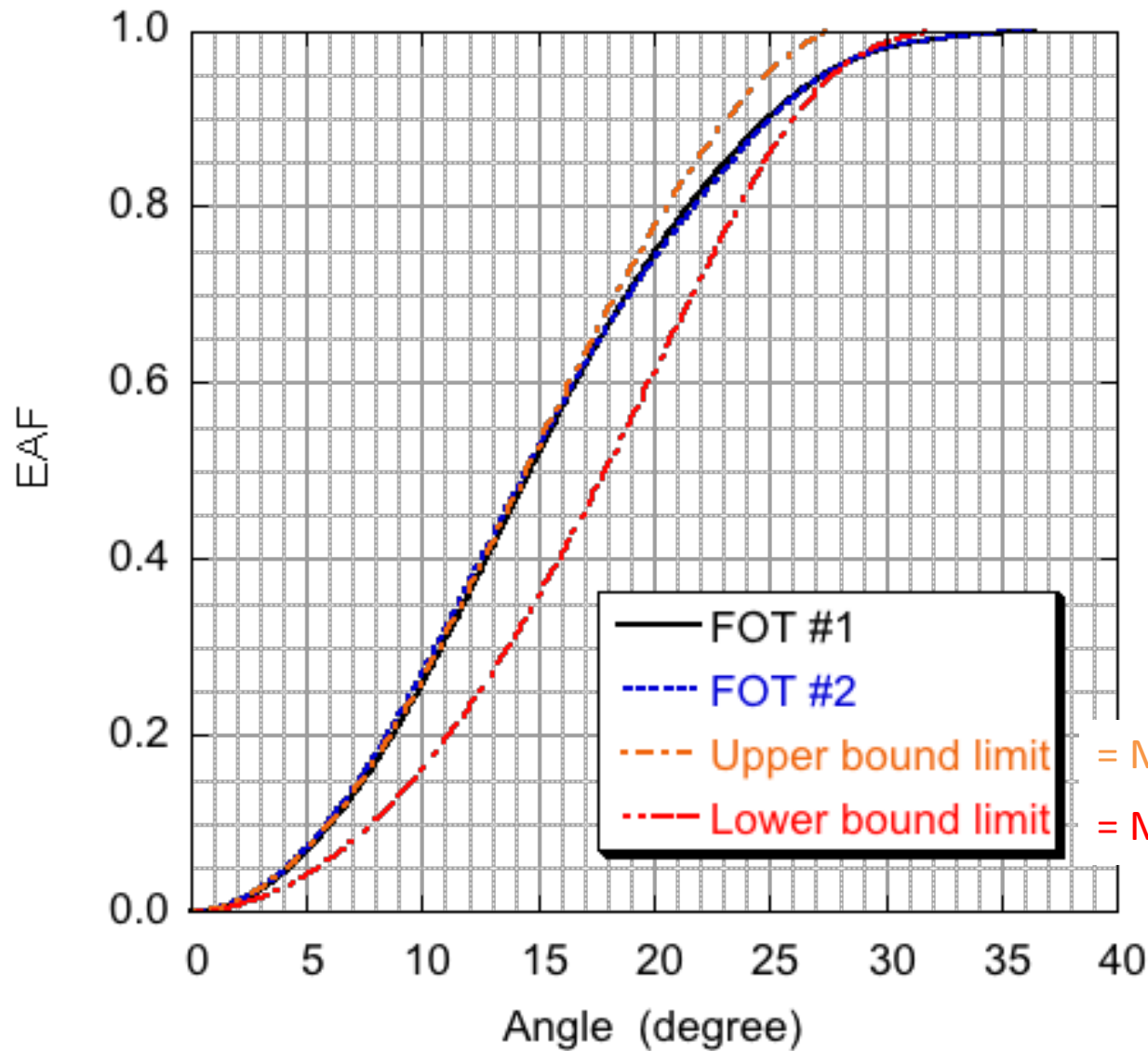


Source: Tutorial at IEEE 802.3 San Antonio plenary meeting



- Length dependence is similar to that of EMD launch by KDPOF
- Values are higher than those of EMD launch by KDPOF
→ we will have some margin

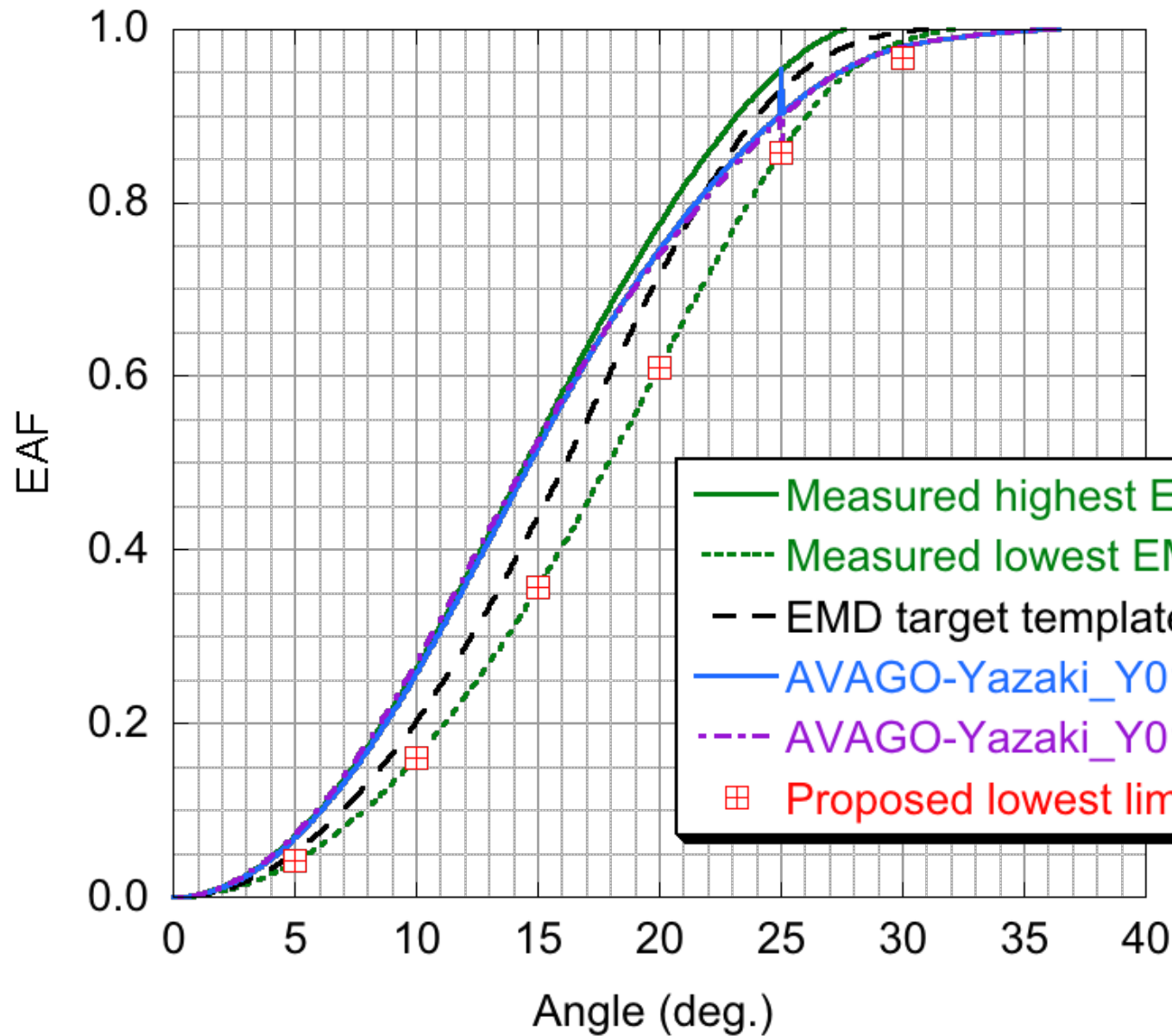
Encircled Angular Flux of FOTs measured at TP2



AVAGO FOT
in Yazaki Connector

= Measured highest EMD
= Measured lowest EMD

EAF template proposal



Angle (deg.)	EAF
5	0.041
10	0.161
15	0.356
20	0.610
25	0.858
30	0.966

— Measured highest EMD
- - Measured lowest EMD
- - EMD target template (tentative)
— AVAGO-Yazaki_Y010
- - AVAGO-Yazaki_Y011
⊠ Proposed lowest limit

