

علوم و تکنولوژی محیط زیست ، شماره ۲۶ ، پاییز ۸۴

*Nd:YAG*

)

(25',14" N 60',30" E

( )

*Beer-Lambert-Bouguer*

*Nd:YAG*

Beer

$\varepsilon_0(m^{-1})$

جهت تهیه فایل **WORD** این مقاله به سایت **DaneshResan.com** مراجعه نمایید و عنوان مقاله را جستجو کنید  
بیش از ۲ میلیون مقاله فارسی در این سایت موجود میباشد

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(Morel 1988)

(Mobley et al.

.1993)

Beer-Lambert-

Nd:YAG

: Beer

Bouguer

$$I_1 = I_0 e^{-\varepsilon_0 z_1} \quad ( )$$

$\varepsilon_0$

$k_0$

$\varepsilon_0(\lambda)$

$\sigma_0$

$$\varepsilon_0 = k_0 + \sigma_0 \quad ( )$$

(Kirk, 1994)

(Gallegos 1994)

|

|  $m^{-1}$

(450-550)

$a$

0.0168-  $m^{-1}$

(0.0045-  $m^{-1}$

(0.0648)

[Knauss ,286]

0.0019)

(KSS Lidar Data-Jan 2002)

1- Attenuation  
 2- Absorption  
 3- Scattering -



$$\ln \frac{I_r}{LI_0} = -2\varepsilon_0 z_1 \quad (1)$$

Nd:YAG

| m<sup>-1</sup> |

:

$$\varepsilon_0 = \ln \left( \frac{I_r}{LI_0} \right)^{-1/2z_1} \quad (2)$$

$$\alpha = \arcsin \left( \frac{I_0}{I_1} \right) \quad (z_1 = z_2)$$

(r = β)

$$(I_0) \quad (1)$$

(I<sub>r</sub>)

$$\frac{\sin \alpha}{\sin r} = \frac{n_r}{n_i} \quad (3)$$

:

$$\cos r = \frac{z_{water}}{z_1} \quad (4)$$

$$(L) \quad (5)$$

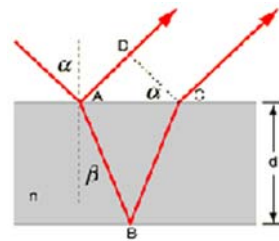
Excel

Beer

%

%

Nd:YAG



(25',14" N 60',30" E

$$I_r = LI_1 \exp(-\varepsilon_0 z_2) \quad (6)$$

$$(I_1)$$

$$z_2 = OB = z_1$$

1- Coating.

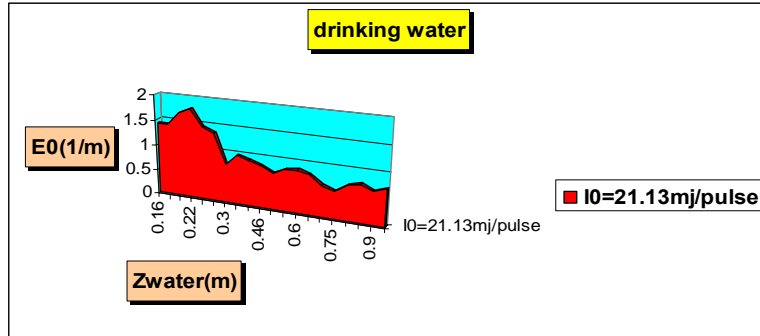


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$\epsilon_0(m^{-1})$

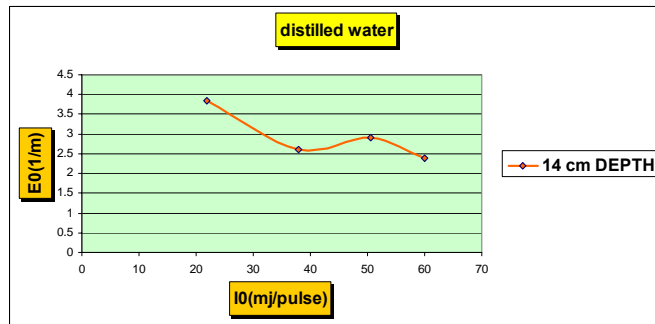
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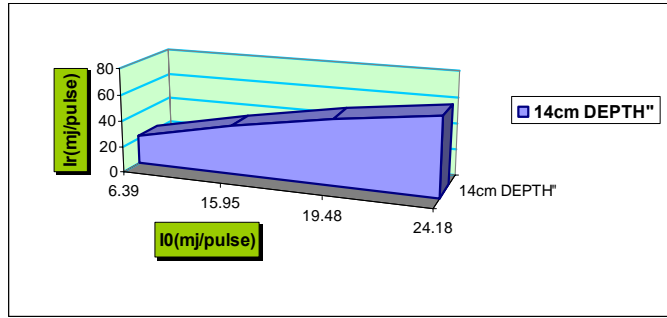
95cm

/

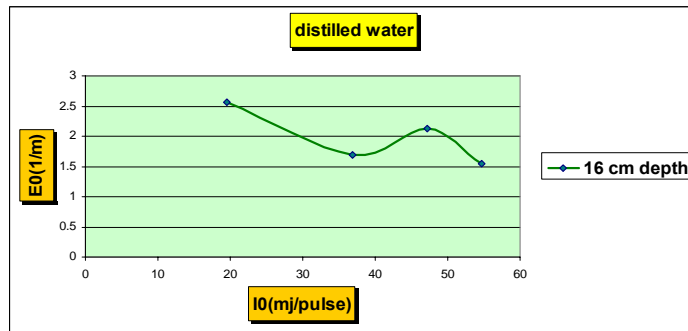
$\epsilon_0(m^{-1})$



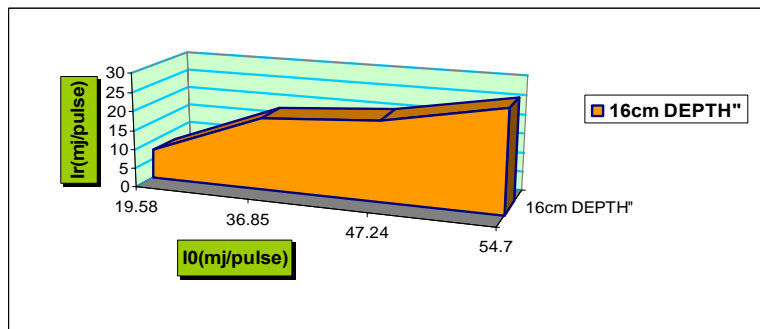
( cm )



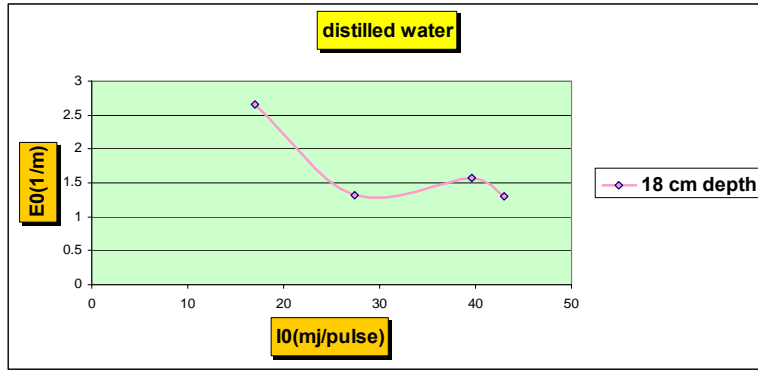
( cm )



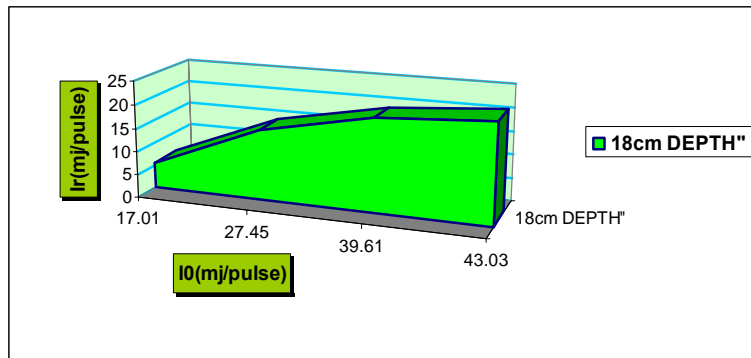
( cm )



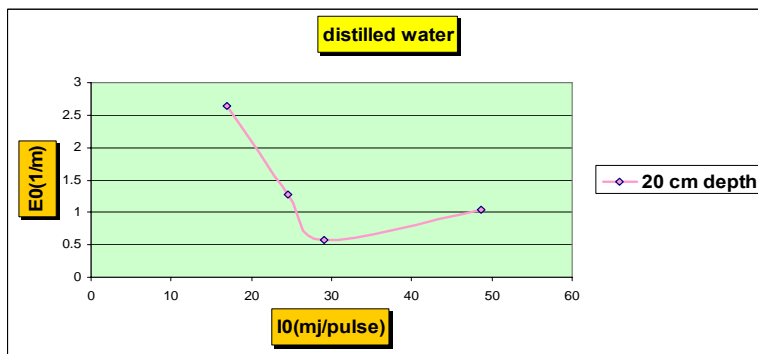
( cm )



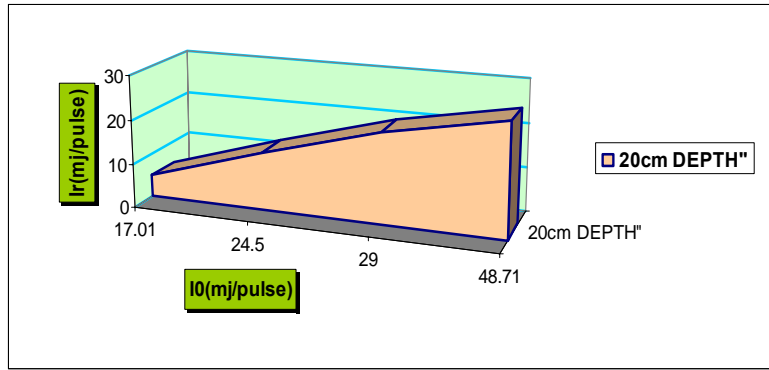
( *cm* )



( *cm* )

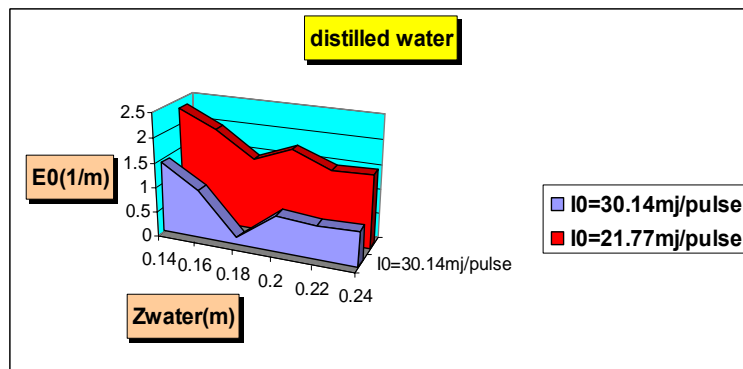


( *cm* )



( cm )

$\varepsilon_0(m^{-1})$  ( )



( )

(CTD)

$$S = \text{ppt}$$

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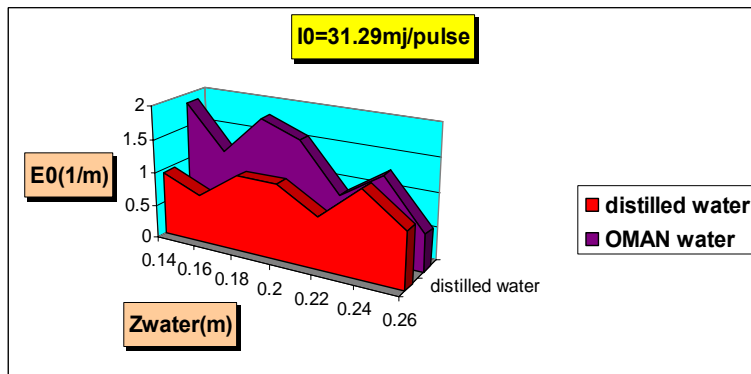
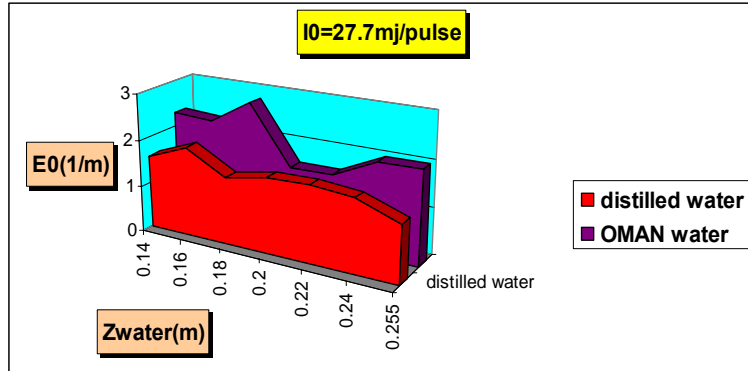
$\varepsilon_0(m^{-1})$

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( ) ( / mj/pulse)

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Beer

( ) ( ) ( ) ( )

$\epsilon_0(m^{-1})$  ( ) ( ) ( ) ( )



$\varepsilon_0(m^{-1})$

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$\varepsilon_0(m^{-1})$

*Laser*

*Line Scanning (LLS)*

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