

 $\begin{array}{c} \textbf{,} & (\delta \overset{0}{,} \\ (& (- &)_{\textbf{4}}) \overset{1}{,} \end{array}$ ţ tjt . ا **۱** ۱ . j t , t J t ļ (., 200 Ļ 2004 2011', 200, 200', t 2011', 201, 2012', 2012' 201,). , t , 200 J ţ ى ر**ا** 🛔 🕺 🏌 🚽 ., 200 200 ., 201 201). , (_____ , 2012). - 1 2012 . (201) 1.1. ŗ)4,1 . ^t . (. ₁) 2012). ر اړ ħ,1 . . (200) **t**, **j** 1 , t, 🚶 , jt $(..., 0.4 \mu)$, 20 0 μ J J , 201). J , (_)4 **ٌ** ţ 1 - 1 **į** .

$$\begin{array}{c} \mathbf{t} \\ 11 & \mathbf{2} \\ (\delta \end{array}) \begin{array}{c} \mathbf{0} \\ \mathbf{0} \end{array}) \begin{array}{c} \mathbf{0} \\ \mathbf{0} \end{array} \right) \begin{array}{c} \mathbf{0} \\ \mathbf{0} \\ \mathbf{0} \end{array}$$









 			(1) , B . S . S	/2-00 -2 (2) %	\vec{B} , \vec{t} (%) \vec{O} \vec{C} \vec{O} \vec{J} - \vec{J} 10	t t % B (%) C	<i>E</i> , B , <i>E</i> , B , <i>E</i> , <i>M</i>
(%)	1 0 ⁻	(%)	<u>)</u> % . (%)	(%)	30 ggg	(%)	(%)
0.	24	4	4		1.55	61	39
0		1		4	1.60	61	39
0.	114	2	4		1.71	78	22
1.12	11	, 0	l	0	1.59	76	24
l.,	11	-4	12	1	1.59	74	26
ι, Γ	0		14	44	1.66	76	24
l	201	4.	1	, 4	1.56	80	20
1. 2	1, 2	4	10	2	1.58	62	38
2.0	0	4.	22	4	1.56	69	31
2	. 4	÷	4	•	1.72	76	24

44 1.59 17.39.21470 1.76820 1.7234930.576- 95.13944 11 4-39.9829-1.62519 2.08-5656303-8885.146-6468.822-6013.5544 1215.39.21474 1...76820 1.564 .



4.1.1. R	"B,	$\delta^{30}S_{,S,O2}$ $\delta^{30}S_{,C_{,,B}}$								
, -, _e , ,	عر ار									
t ,	δ	f(-)	-							

t, T., B., B.



í ^ki ډ ډ ډ . **,** j J ., 201). J ţ, δ^{0} .2 δ 2 4.1% , (0 t ţ G S. ₿ , ١ Ļ 2 G S. J t I 1) S. 0.). ţ J b δ _2 t (+0. % , (+0. ‰) Δ 4 2 +0..%). 1 **k**, **k** Į, 0 1). δ^{0} . J (_ J J J 0 Δ J Δ ţ, 2 ار آر t δ^{30} 4.3 1 S- -I. --SS , ٩ t ļ J J **,** δ^{0} J ĭ ٦ ţ, 1 ļ ... - 1 J. Ļ 1). . (201) ‡ ļ . .

0, ‰ 👗 2.1‰, j ‡ t t 0 ţ, J Ļ ,t ٧Ì $\overset{\mathbf{J}}{0}$ δ J ţ, ⁰ε. t J ,B J в J t. 201). S. B T 0.4 1. ‰, 1.2% 0.4 t 1.1‰ J J. J 3^0 2.0 %0 Ļ ţ, J . . J 00 -2 $b_{0_{\mathcal{E}}}$ t t (201)ې J. J (E_B ى J 79573(the)-499(-1.2203 TD [(i/F34 0 -1.226arTJ 079573(40 TD [1reviou0

 ε_{ass} ¼ ðC/100 ð 2.0, ‰ÞÞ þ ðO/100 ð 1.1‰ÞÞ ð1Þ

	C ,	1 (0	J	ţ	J.		G	,	,B				
(,) t 1	۲. ۲	ے 4).		- 1		,	J.		(0 _e ,	t-			
%3 80	.4(coi	rre-)]	Т [(Suttor)-350).6(e	et)(308	313 1	l Tf	5267	Tm5	24.0(,)-438.	.2(tł

δ⁰, ε**, β**