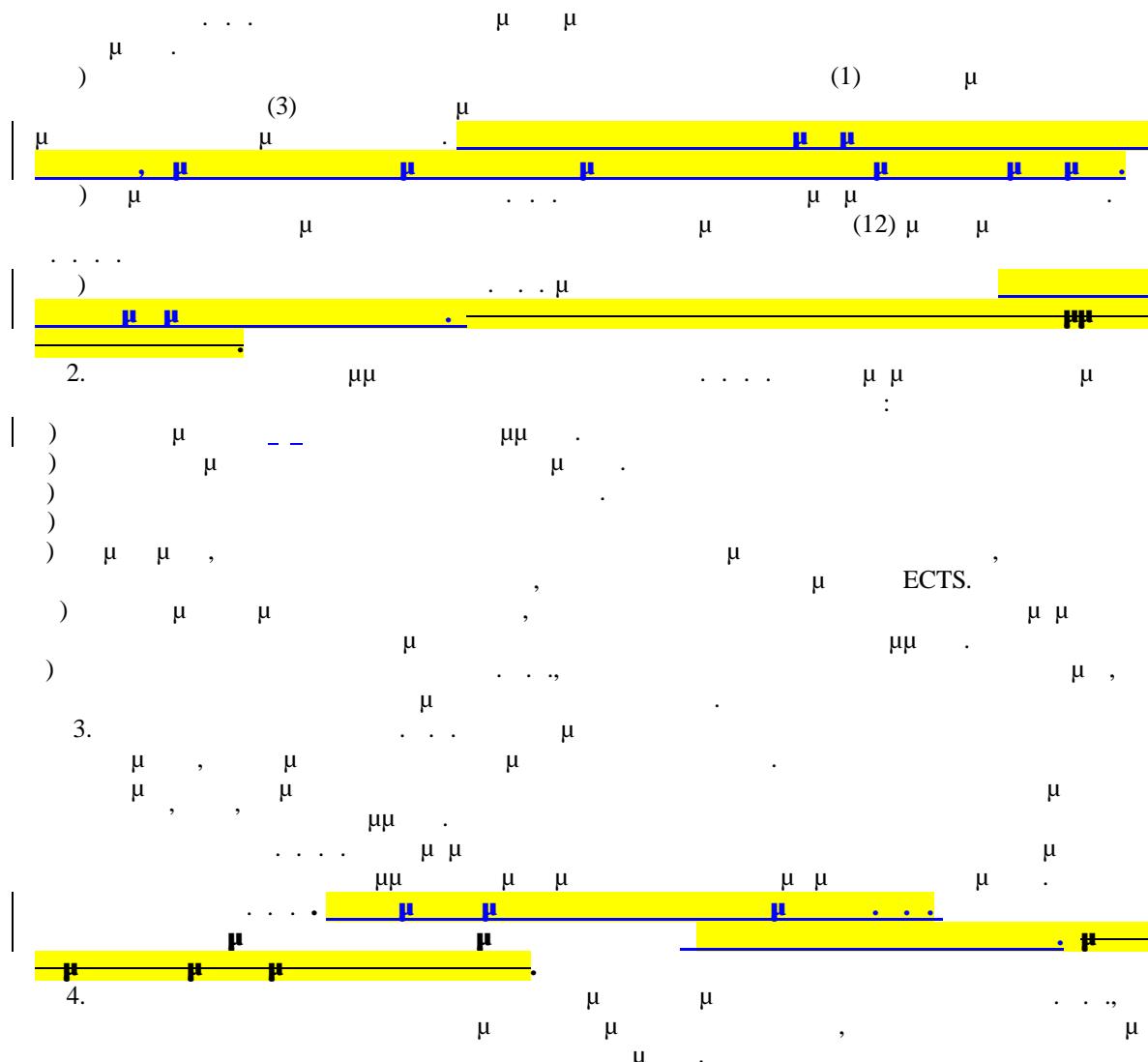


1

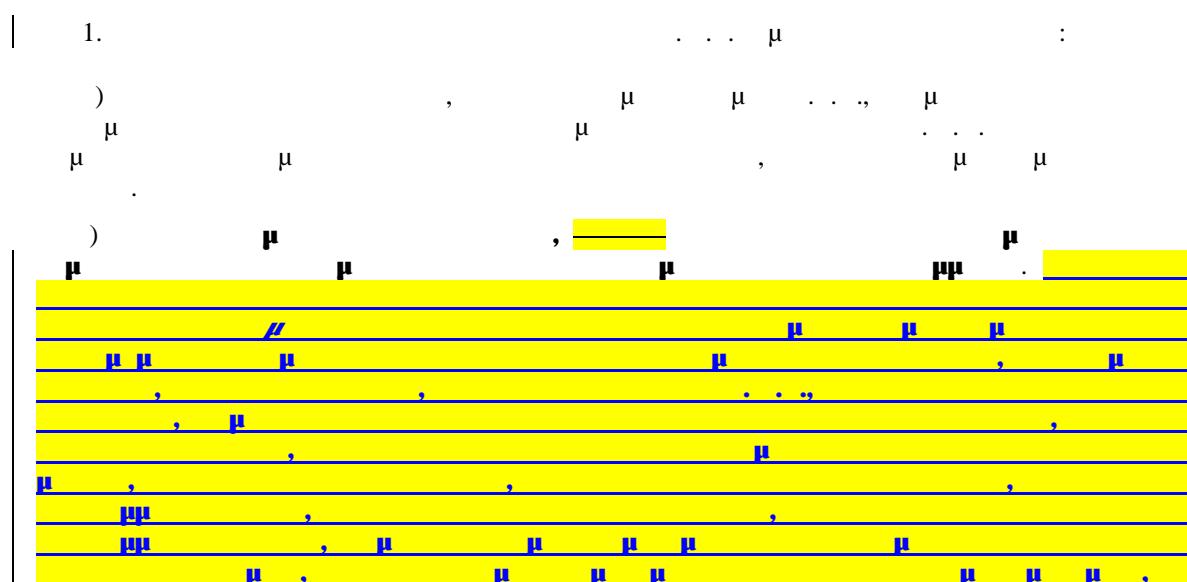
Feynman diagram illustrating the annihilation of two muons ( $\mu^+$  and  $\mu^-$ ) into two photons ( $\gamma$ ). The incoming particles are shown as blue lines with arrows indicating their direction of motion. The outgoing particles are shown as yellow lines. The annihilation vertex is at the center of the diagram.

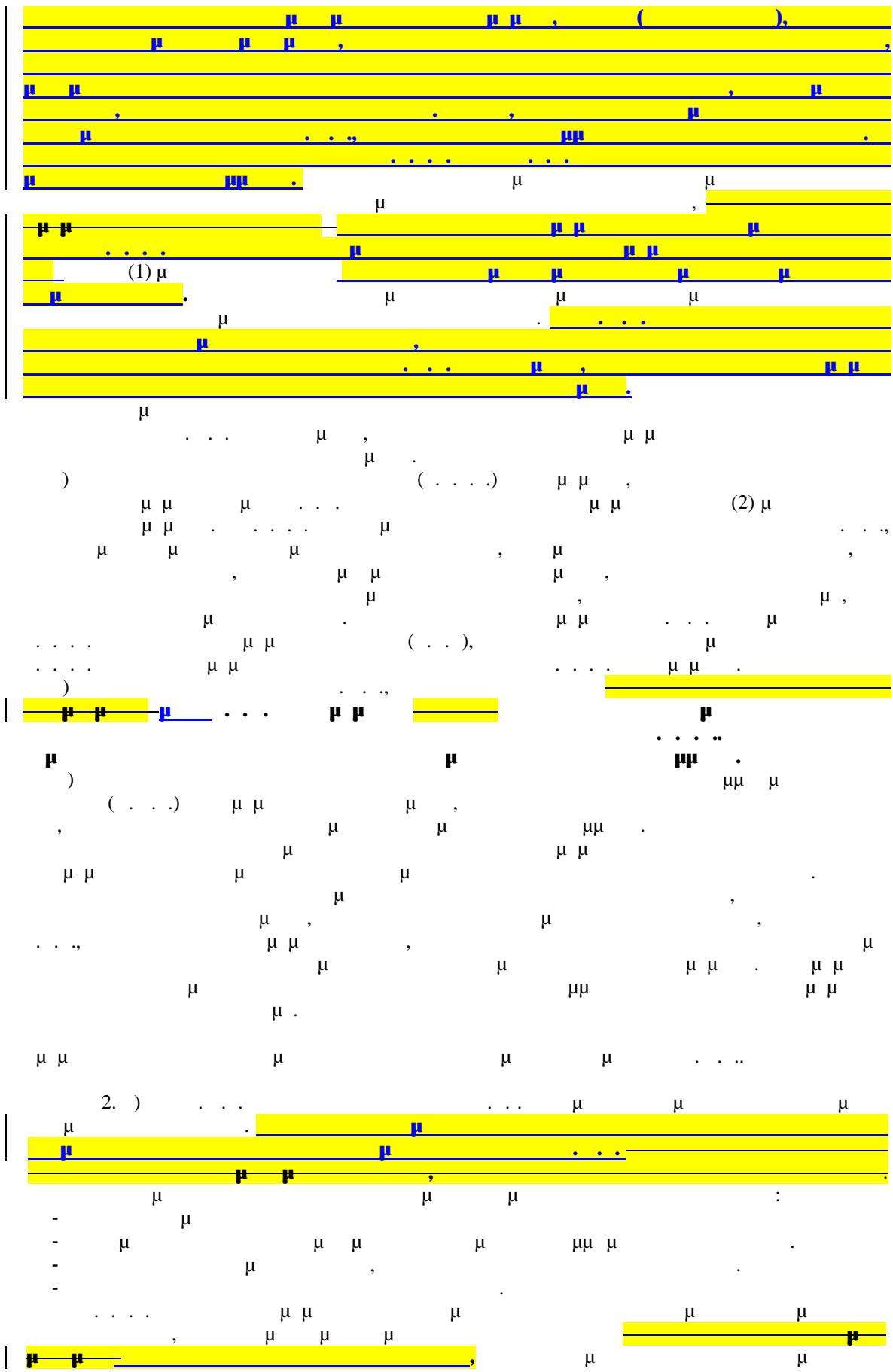
$$3. \quad \begin{matrix} & \mu & & \mu & & \mu & & \dots, & \dots \mu \\ \mu & & & \mu & & \mu & & , & \mu \\ & \mu & & \mu\mu & & , & & \mu & \dots \\ & & \mu & & & , & & \mu & \mu \end{matrix}$$

2



3





)	$\mu$	.	.	.	.	$\mu$	.	$\mu \mu$
)	.	.	.	$\mu$	.	,		(1)
3.)	$\mu$	(1)	.	$\mu \mu$	.	$\mu$	.	$\mu$
	-	.	.	,	$\mu \mu$	.	$\mu \mu$	.
	,			$\mu$	.	$\mu$	.	407/80
	-			$\mu$	.	$\mu$	.	,
	-			$\mu$	.	$\mu$	.	,
$\mu$	-			$\mu$	.	$\mu$	.	$\mu$
$\mu$	-			.	.	.	$\mu \mu$	.
)	$\mu$	.	.	$\mu$	.	.	.	407/80,
)	$\mu$	.	.	$\mu$	.	.	.	.
)	$\mu$	.	.	$\mu \mu$	.	.	.	$\mu \mu$
,						$\mu$	.	.
						$\mu$	.	$\mu \mu$
						$\mu$	.	.
4.)	$\mu$			.	.	.	.	$\mu$
$\mu$		$\mu$		.	.	.	.	
		.	.	.	.	.	$\mu$	
$\mu$			$\mu$	.	.	.	$\mu$	.
$\mu \mu$			$\mu$	.	.	.	$\mu \mu$	.
			$\mu$	.	.	.	$\mu$	.
			$\mu$	.	.	.	$\mu$	.
)	$\mu$			$\mu \mu$		$\mu$	.	
)	$\mu$			$\mu \mu$		$\mu$	.	
)	$\mu$			$\mu \mu$		$\mu$	.	
				$\mu \mu$		$\mu$	.	
				$\mu \mu$		$\mu$	.	
				$\mu \mu$		$\mu$	.	
				$\mu \mu$		$\mu$	.	
5.)	$\mu$			.	8	.	.43	.2413/96
)		$\mu$		.	13	.	2640/1998	$\mu$
)	$\mu$		$\mu$		.	.	.	$\mu$
)	$\mu$		$\mu$		.	.	.	
6.)	$\mu$		.	.	$\mu \mu$	.	.	$\mu$
	$\mu$		.	.	$\mu \mu$	.	.	
	$\mu$		.	.	$\mu \mu$	.	.	
	$\mu$		.	.	$\mu \mu$	.	.	
7.)	$\mu$		$\mu$		$\mu$	.	$\mu$	
8.)	$\mu$		$\mu$		$\mu$	.	$\mu$	
9.)	$\mu$		$\mu$		.	.	(8)	$\mu$
					$\mu$	.	.	$\mu \mu$
					$\mu \mu$	.	$\mu$	.
					$\mu$	.	$\mu$	.
					$\mu$	.	$\mu$	.

4

5

$$1. \quad \overline{\mu\mu} \quad \overline{\mu\mu} \quad \overline{\mu\mu} \\ \underline{\mu\mu} \quad \underline{\mu\mu} \quad \underline{\mu\mu}.$$



6

7

4



