# Squantikz squimports

### Saverio Monaco

### September 22, 2025

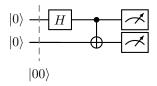
### **Contents**

| 1 | I Commands     |      |      | 3  |
|---|----------------|------|------|----|
|   | bellcircuit1   | <br> | <br> | 3  |
|   | bellcircuit2   | <br> | <br> | 3  |
|   | bellcircuit3   | <br> | <br> | 3  |
|   | bellspins1     | <br> | <br> | 3  |
|   | bellspins2     | <br> | <br> | 3  |
|   | bellspins3     | <br> | <br> | 4  |
|   | blochRX        | <br> | <br> | 4  |
|   | blochRY        | <br> | <br> | 4  |
|   | blochRZ        | <br> | <br> | 4  |
|   | clic8          | <br> | <br> | 5  |
|   | gateRX         | <br> | <br> | 5  |
|   | gateRY         | <br> | <br> | 5  |
|   | gateRz         | <br> | <br> | 5  |
|   | pbellcircuit1  | <br> | <br> | 6  |
|   | pbellcircuit2  | <br> | <br> | 6  |
|   | pbellcircuit3  | <br> | <br> | 6  |
|   | psg            | <br> | <br> | 6  |
|   | psg_model      | <br> | <br> | 6  |
|   | qag            | <br> | <br> | 7  |
|   | qag_model      | <br> | <br> | 7  |
|   | qag_small      | <br> | <br> | 7  |
|   | qag_train      | <br> | <br> | 8  |
|   | qagalt         | <br> | <br> | 8  |
|   | qc             | <br> | <br> | 8  |
|   | spin           | <br> | <br> | 9  |
|   | spindown       | <br> | <br> | 9  |
|   | spindowns      | <br> | <br> | 9  |
|   | spinrand       | <br> | <br> | 9  |
|   | spinrandalt    | <br> | <br> | 10 |
|   | spinrandaltalt | <br> | <br> | 10 |
|   | sninun         |      |      | 10 |

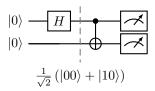
| twospinsdown |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 10 |
|--------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|----|
| twospinsup   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1  |

### 1 Commands

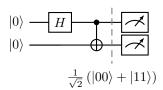
#### bellcircuit1



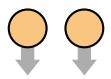
#### bellcircuit2



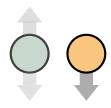
#### bellcircuit3



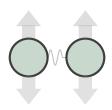
### bellspins1



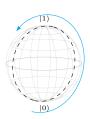
#### bellspins2



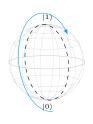
## bellspins3



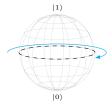
## blochRX



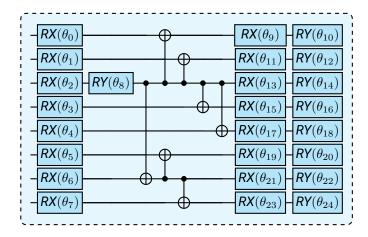
## blochRY



blochRZ



### clic8



### gateRX

$$-\frac{RX(\theta)}{-i\sin(\frac{\theta}{2})} = \begin{pmatrix} \cos(\frac{\theta}{2}) & -i\sin(\frac{\theta}{2}) \\ -i\sin(\frac{\theta}{2}) & \cos(\frac{\theta}{2}) \end{pmatrix}$$

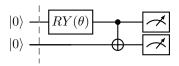
#### gateRY

$$-\frac{RY(\theta)}{-\sin(\frac{\theta}{2})} = \begin{pmatrix} +\cos(\frac{\theta}{2}) & -\sin(\frac{\theta}{2}) \\ -\sin(\frac{\theta}{2}) & +\cos(\frac{\theta}{2}) \end{pmatrix}$$

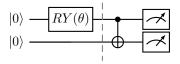
#### gateRz

$$-\frac{RZ(\theta)}{0} = \begin{pmatrix} e^{-i\theta/2} & 0 \\ 0 & e^{+i\theta/2} \end{pmatrix}$$

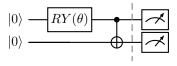
### pbellcircuit1



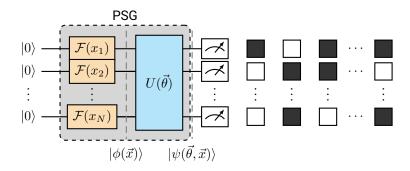
### pbellcircuit2



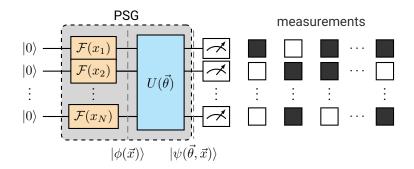
### pbellcircuit3



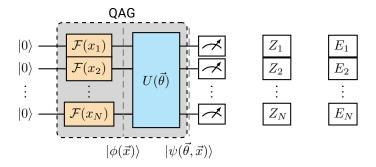
#### psg



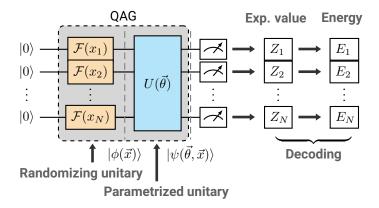
### psg\_model



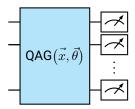
#### qag



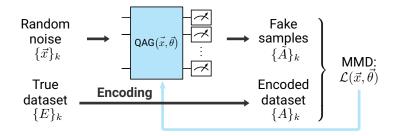
### $qag\_model$



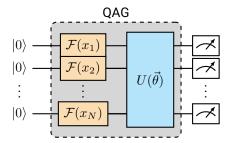
qag\_small



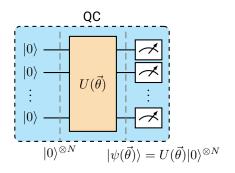
### $qag\_train$



## qagalt



### qc



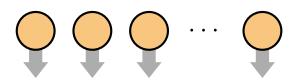
### spin



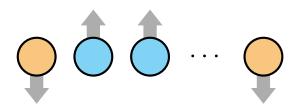
### spindown



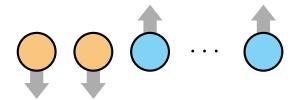
## spindowns



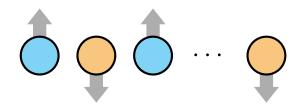
### spinrand



### spinrandalt



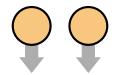
### spinrandaltalt



### spinup



## twospinsdown



## twospinsup

