

# PrimeTagSvc

Jets, samples and Wednesday working meeting

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# New Version Ready

Interface for output;

- <https://code.ihep.ac.cn/zhangkl/PrimeTagSvc>
- Code reconstructed;
  - Ensure PFO sorted by Energy, length up to 50.
  - Using variables less ECM correlated;
- Follow the tutorial JetDump

```
std::vector<float> GetProb() const override;  
int get_type_M11() const override;  
int get_type_M6() const override;  
  
// M11 Boolean functions (11 total)  
bool is_b_quark() const override;  
bool is_b_bar_quark() const override;  
bool is_c_quark() const override;  
bool is_c_bar_quark() const override;  
bool is_s_quark() const override;  
bool is_s_bar_quark() const override;  
bool is_u_quark() const override;  
bool is_u_bar_quark() const override;  
bool is_d_quark() const override;  
bool is_d_bar_quark() const override;  
bool is_gluon() const override;  
  
// M6 Boolean functions (6 total)  
bool is_b_jet() const override;  
bool is_c_jet() const override;  
bool is_s_jet() const override;  
bool is_u_jet() const override;  
bool is_d_jet() const override;  
bool is_gluon_jet() const override;
```

# Default: M11 model in Ref-TDR

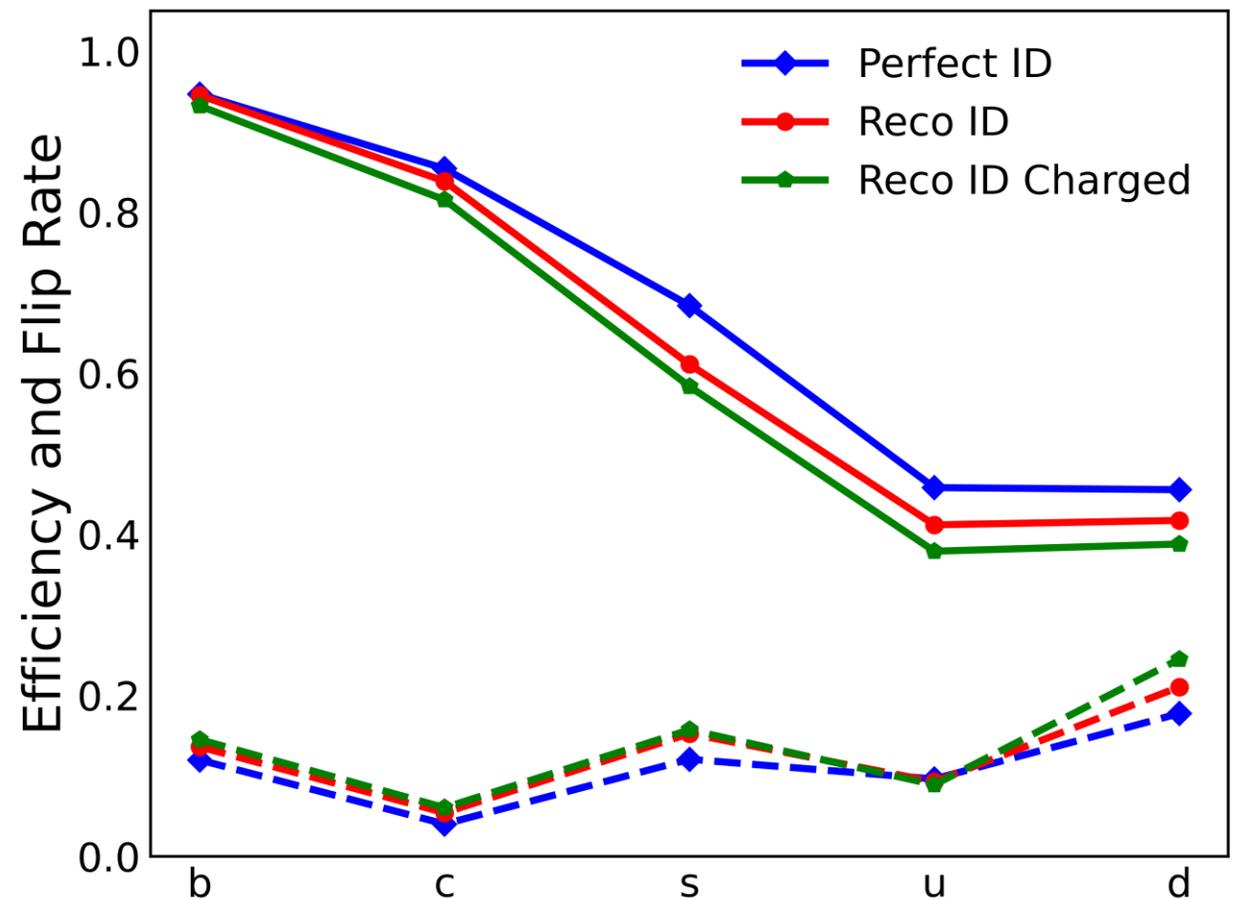
Other model like event level models in Onnx on the way.

**CEPC Ref-TDR**  $ZH \rightarrow \nu\nu qq, \sqrt{s} = 240 \text{ GeV}$

Truth \ Predicted	b	$\bar{b}$	c	$\bar{c}$	s	$\bar{s}$	u	$\bar{u}$	d	$\bar{d}$
b	0.811	0.132	0.019	0.016	0.002	0.001	0.001	0.002	0.002	0.001
$\bar{b}$	0.124	0.819	0.017	0.018	0.001	0.002	0.002	0.001	0.001	0.002
c	0.009	0.012	0.798	0.042	0.019	0.027	0.027	0.006	0.007	0.017
$\bar{c}$	0.013	0.011	0.049	0.790	0.027	0.022	0.006	0.026	0.016	0.007
s	0.002	0.001	0.016	0.019	0.488	0.095	0.028	0.119	0.093	0.053
$\bar{s}$	0.001	0.002	0.020	0.015	0.084	0.508	0.124	0.024	0.049	0.091
u	0.001	0.002	0.021	0.008	0.035	0.146	0.413	0.037	0.068	0.178
$\bar{u}$	0.002	0.001	0.008	0.021	0.139	0.040	0.045	0.391	0.189	0.070
d	0.002	0.001	0.011	0.019	0.124	0.088	0.066	0.218	0.296	0.080
$\bar{d}$	0.001	0.002	0.020	0.009	0.078	0.132	0.239	0.059	0.076	0.289
Other	0.011	0.012	0.029	0.029	0.074	0.077	0.072	0.066	0.057	0.057
Other										0.514

**CEPC Ref-TDR**

$ZH \rightarrow \nu\nu qq, \sqrt{s} = 240 \text{ GeV}$



# To do



- Shap
- Variable Validation
- Delphes Validation
- Event multihead