

FlavBit status and future plans

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- We needed a framework that will calculate the actual χ^2 , taking into account all errors correlations etc.
- Theory predictions comes from Nazila SuperIso wrapper.
- Used Yaml to pass the arguments.
- Boost for mathematic operations.

```
– name: BR_Bs2mumu
  islimit: false
  value: 2.1e-9
  stat_error_minus: 0.1e-9
  sys_error_minus: 0.1e-9
  stat_error_plus: 0.3e-9
  sys_error_plus: 0.3e-9
  source: PDG
  correlation:
– name: B02mumu
  value: 0.1
```

- This cards style I adopted from HFAG.
- Additionally code check if the correlation matrix makes sense \rightarrow symmetric.
- Claculates the total χ^2 and returns.
- In principle we will have assymmetric errors. The treatment of the standard:

$$\chi^2 = \Delta^T V^{-1} \Delta \quad (1)$$

- We will have four covariance matrix: V_{++} , V_{-+} , V_{+-} , V_{--} .

What is missing?

- We do not have theory errors in.
- Started discussion with Nazila about them.
- This is tricky, we need to properly recalculate the errors from SM values.
- Limit treatment procedure. We had some discussion about this but we should make a decision here.
- My personal view: procedure should be as unbiased as possible.