

**2018**  
**3-6 APRIL**

**Local organising committee:**  
Martin Bauer · Oleg Brandt (chair)  
Monica Dunford · Petra Pfeifer  
Tilman Plehn · Hans-Christian  
Schultz-Coulon · Susanne Westhoff

**DARK MATTER**  
**@ LHC**

**International organising committee:**  
David Berge · Roni Harnik · JoAnne Hewett  
Valentin Khoze · Rocky Kolb · Tongyan Lin  
Juan Alcaraz Maestre · Geraldine Servant  
Tim Tait · Dan Tovey · Steve Worm

**Low-energy/flavour searches  
& interplay**

Monika Blanke  
Martino Borsato  
Paula Alvarez Cartelle  
Nazila Mahmoudi

Joerg Jaeckel  
Niklaus Emanuel Berger  
Nikolai Krasnikov  
Torben Ferber

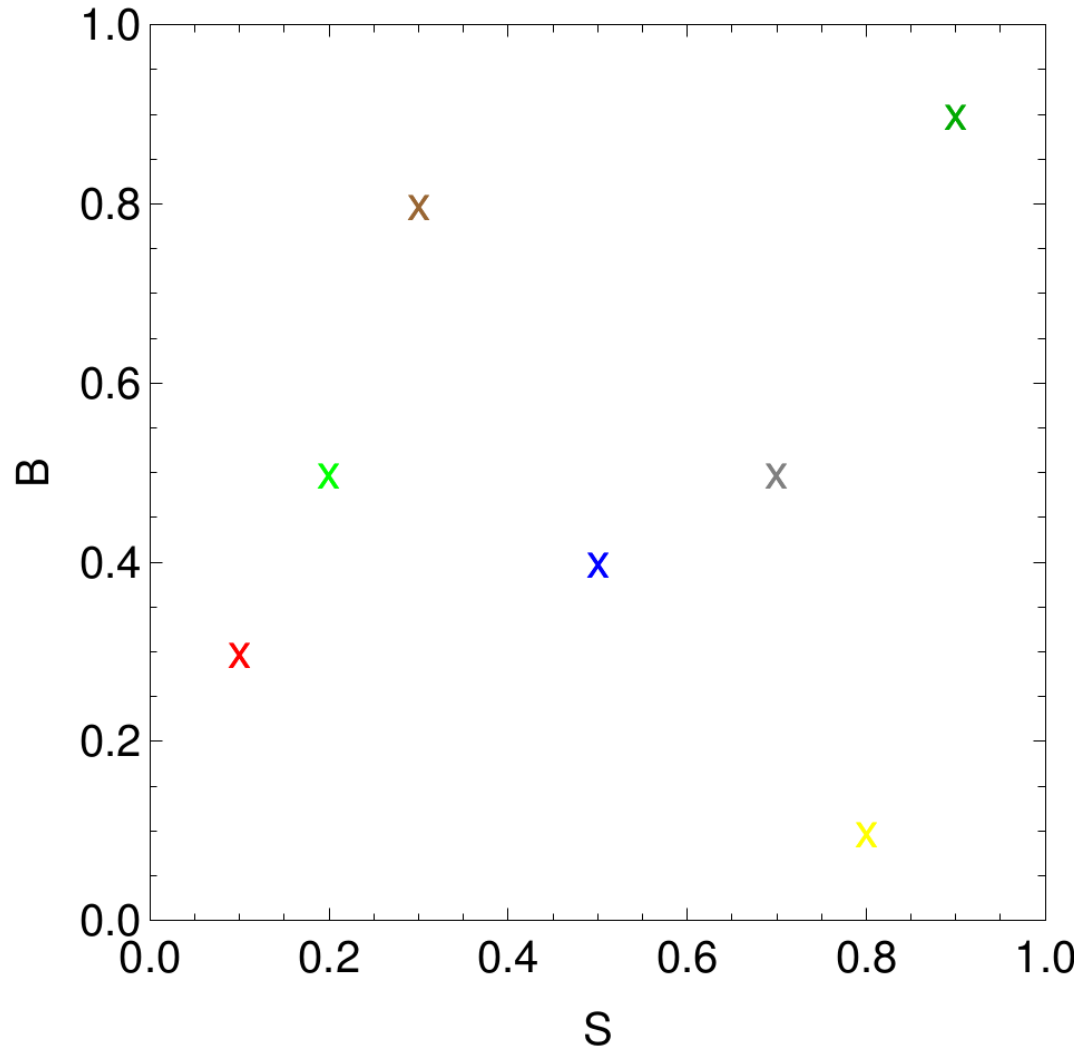
# Flavored Dark Matter

- Different avenues of connections:
  - MFV, DMFV ( $\rightarrow$  DM stability)
  - Flavorful  $Z'$  (anomaly cancellation,  $Z'$  portal with VL fermions, ...)
  - Relations with flavor puzzle  $\rightarrow$  Axiflavor?
  - ...  
*... not necessarily addressing flavor anomalies*
- Ways of addressing  $B$ -physics anomalies:
  - 'Phenomenological' models vs. 'UV driven' approaches

# Relations with $B$ anomalies

- If by [DM@LHC '19](#)  $B$ -physics anomalies were confirmed, how would this influence our DM searches?
  - Would the WIMP paradigm be as motivated as before?
  - WISPy avenue?

# Flavored Dark Matter: Model Space



- S(rength): connection with flavor strong / motivated?
- B(eauty): addressing other problems, economical, ... ?

Following Adam Falkowskis BS plot  
@Neutral Naturalness (CERN)

# Axions, ALPs and Dark Photons

- Large parameter space will be covered in the near future
- In case of a discovery, what could be the implications for WIMP searches?

