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Research Area 2

Decays of bottom, charm, and strange quarks

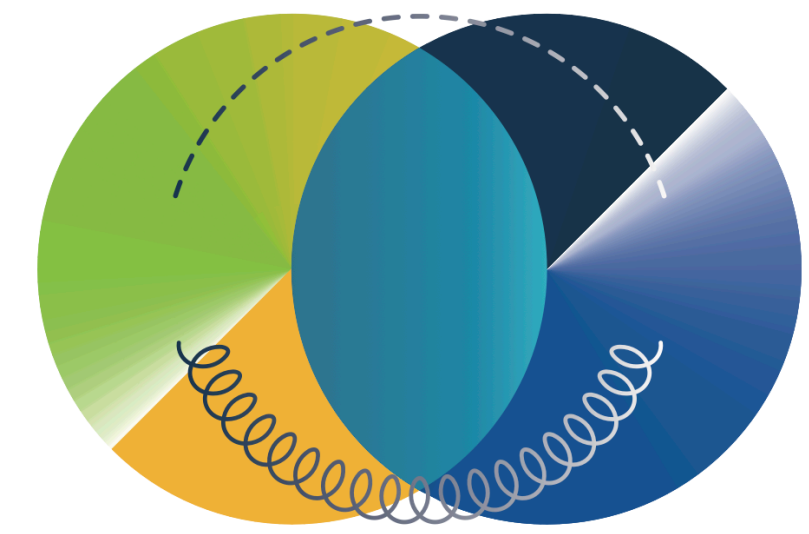
RA2 Meeting: CFT Kick-off

April 28th, 2026

Sally Stefkova

Thomas Mannel





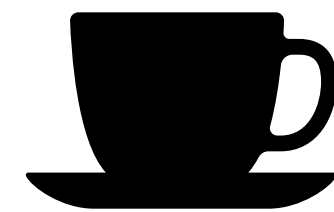
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Today's Program

CFT1: FCNC SL: Mulder, Gubernari (45 minutes)

CFT2: Charm physics: Hiller, Mitzel (45 minutes)

CFT3: CC SL decays: Mannel, Prim (45 minutes)

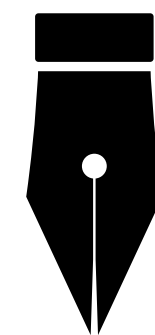


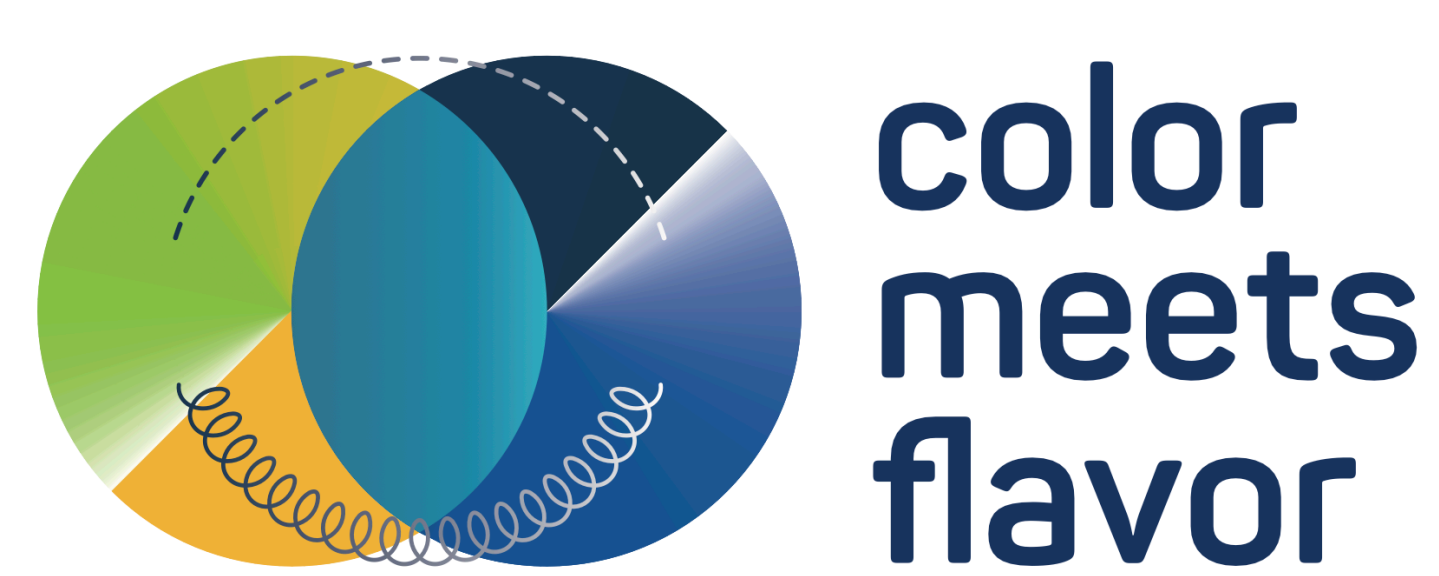
CFT4: Hadronic Multi-body: Kubis, Hanhart

CFT5: Light NP (connection with RA4): Stamou, Stefkova

CFT6: WET EFT Fits: Kroninger, Hiller, Feldmann, Bechtle

45 minutes





Today's Goals

A: Review the scientific scope of each CFT

- Review the assigned projects
- Identify and compile related ongoing work beyond the submitted proposals
- Invite relevant scientific presentations (from both submitted projects and ongoing work)

B: Establish working principles (e.g. communication, meeting frequency, documentation)

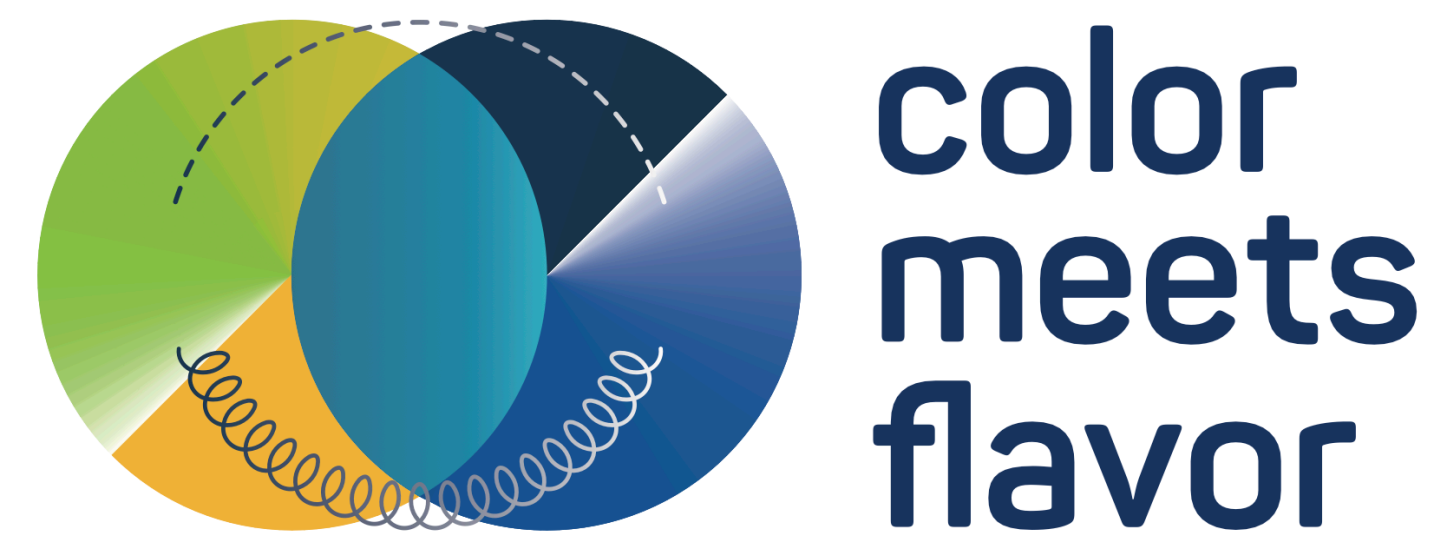
- Mailing lists for CFTs will be centrally set-up
- Documentation for RA2 projects to be compiled by the leads:
 - Project title and short description
 - Aim of the project (one sentence)
 - Proponents (email addresses, institution, exp/theory)
 - Expected timeline
- Up to CFT leads to schedule meetings

RA2	Team-FCNC	Gubernari, Mulder
RA2	Team-Charm	Hiller, Mitzel
RA2	Team-CCSemileptonic	Mannel, Prim
RA2	Team-HadronicMultibody	Hanhart, Kubis
RA2/RA4	Team-LightNP	Stamou, Stefkova
RA2	Team-EFTFits	Bechtle, Feldmann, Hiller, Kröninger

C: Discuss common RA2 topics

D: Anticipate the next major meeting round

- RA2 meeting one more time before CmF Cluster Assembly (July 13–15)



Common RA2 items

Central RA2 mailing list:

All RA2 members should subscribe to cmf-ra2@listen.uni-bonn.de

New Member Registration:

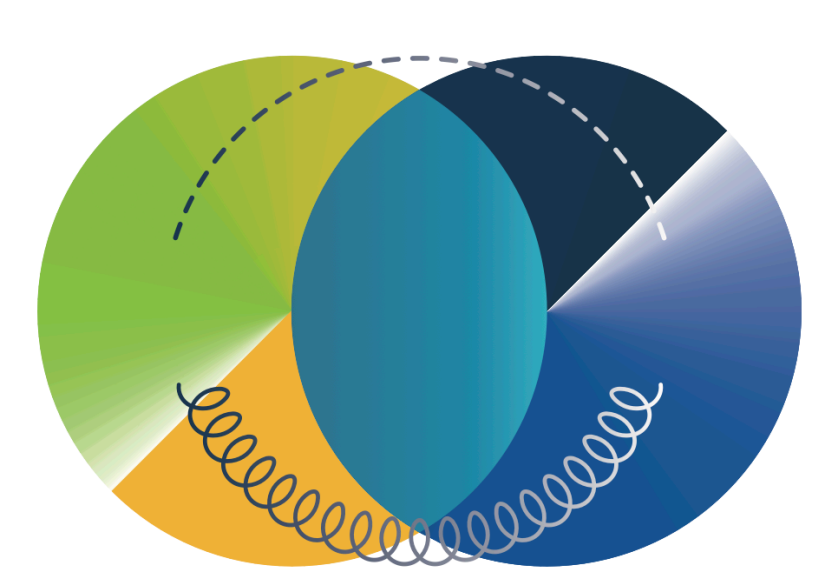
All new members should register with their PIs via:

https://indico.hiskp.uni-bonn.de/event/1355/registrations/227/?form_token=f815b2fc-dbcc-4e05-8a67-badc165baac2

Upcoming RA2 Events:

- 2nd week of May CmF Outreach Meeting
- May 18-22 FPCP Bad Honnef
- July 1 CmF Inauguration (in preparation, Bonn)
- July 13-15 [CmF Cluster Assembly](#) (Lyz)

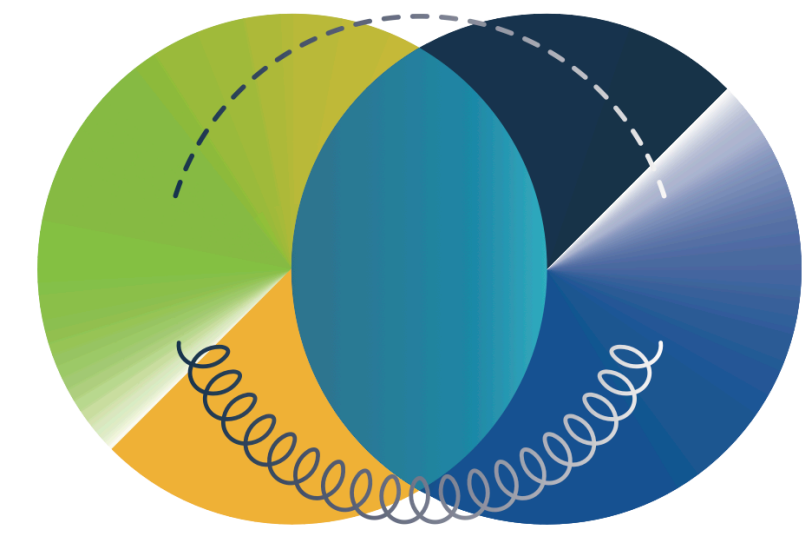




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Backup





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RA2 cross-functional teams proposals

We received 18 different projects together with expected starting date:

RA2-1: B Decays with multi-hadron final states (Hanhart, Kubis, Mannel)

RA2-2: Excited Lambda spectrum in rare B decays (Albrecht, Thoma)

RA2-3: Unraveling the D^{**} (Hanhart, Kubis, Neubert, Prim)

RA2-4: QED Corrections in Bottom decays (Albrecht, Mannel)

RA2-5: Charming Darwin (Albrecht, Bernlochner, Lenz)

RA2-6: Combined BelleII and LHCb Wilson Coefficient analysis (for CC semileptonics) (Albrecht, Bernlochner, Prim)

RA2-7: Phenomenology of Bs to 4 leptons (Albrecht, Stamou)

RA2-8: Vxb (Bernlochner, Dingfelder)

RA2-9: Light Cone distribution amplitudes of B hadrons (Feldmann, Gubernari)

RA2-10: Analytic Properties of the charm contribution in b to s II (Gubernari, Kubis)

RA2-11: Semi-inclusive semileptonic B decays (Mannel, Prim)

RA2-12: CPV in hadronic D decays (Feldmann, Hiller, Lenz, Mitzel)

RA2-13: Constraining NP in rare semileptonic charm decays (Hiller, Mitzel)

RA2-14: $R(D^*)$ with semileptonic tagging (Prim)

RA2-15: Charm decays with invisibles (Hiller, Stefkova)

RA2-16: Inclusive Semileptonic decay rates of B and Bs mesons (Garofolo, Gross, Ubrach)

RA2-17: Flavor Structure in Axion models and generic extension with light NP (Feldmann, Stamou, Stefkova)

RA2-18: Beyond the Standard Model effects in tree-level B decays (Albrecht, Lenz)