

$B^0 \rightarrow \tau^+ \tau^-$ Status



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- This slides are based on the recent lab meeting talks
 - **2022.07.04**
 - 2022.07.11

- **[Done]** Read all contents of WG1 Confluence page [2022.Jun.17(FRI) End]
 - Select useful information

- **[Done]** Similar Belle II Analyses [2022.Jul.01(FRI) End]
 - Gather slides / notes of the similar Belle II analyses
 - Analyses
 - $B \rightarrow \tau\nu$
 - $B \rightarrow K^*\tau\tau$
 - $B \rightarrow X\tau\nu$
 - $B \rightarrow K\nu\bar{\nu}$
 - $B \rightarrow X_S\nu\bar{\nu}$
 - Read all slides
 - Watch all recorded video (internal review process)
 - Organize the Information

- **[Ongoing]** Research Environment setting [2022.Jul.01(FRI) Start]

Table

- Table
 - Column
 - $b2\tau$ / $b2K\tau$ / $b2X\tau$ / $b2K\nu$ / $b2X\nu$
 - Rows
 - Authors
 - Status
 - Ongoing or Done
 - Period
 - Date of the first talks ~ Date of the latest talk
 - Completeness
 - In which stage of the analysis
 - Similarity
 - How similar with my analysis topic ($B_d \rightarrow \tau\tau$)
 - High / Medium / Low
 - Belle II note
 - Exist or not
 - How many pages
 - Code repository
 - Exist or not
 - (Additional) Information
 - Working group
 - # of talks
 - Subgroup (SG) / Working Group (WG) / Physics / Etc. / Total

	$B \rightarrow \tau\nu$	$B \rightarrow K^*\tau\tau$	$B \rightarrow X\tau\nu$	$B \rightarrow K\nu\bar{\nu}$	$B \rightarrow X_s\nu\bar{\nu}$
Authors	Mario Merola	Stefano Moneta	Henrik Junkerkalefeld / Dennis Benterbusch / Paolo Rocchetti	Filippo Dattola / Simon Kurz	Junewoo Park
Status	Ongoing	Ongoing	Ongoing	Done	Ongoing
Period	2019.03.06 ~ 2022.01.28 (~ 3 years)	2022.02.12 ~ 2022.06.01 (~ 4 months)	2020.05.06 ~ 2022.05.27 (~ 2 years)	2020.01.28 ~ 2021.03.16 (~ 1 years)	2021.11.16 ~ 2022.05.21 (~ 6 months)
Completeness	Box Open (ICHEP, Snowmass)	MC study	Box Open (ICHEP approval)	Published (PRL)	MC study
Similarity	High	High	Medium	Low	Low
Belle II note	O (9 pages)	X	O (134 pages)	O (219 pages)	O (29 pages)
Code repository	X	X	O	O	O
Info.	-	-	-	Belle II 4 th paper	MSc student (Korean, Yonsei)

		$B \rightarrow \tau\nu$	$B \rightarrow K^*\tau\tau$	$B \rightarrow X\tau\nu$	$B \rightarrow K\nu\nu$	$B \rightarrow X_s\nu\nu$
Working group		WG1 SLMissing (Leptonic SG)	WG2 EWP	WG1 SLMissing (Semitaucic SG)	WG2 EWP	WG2 EWP
Internal talks	Subgroup	10	0	6	0	0
	WG	3	2	4	2	6
	Physics	1	0	0	2	0
	Etc.	0	1	0	0	2
	Total	14	3	10	4	8

⊗ WG: Working Group
 ⊗ SG: Subgroup

$$B \rightarrow \tau\nu$$

- Speaker information
- Statistics
- Repository / Belle II note
- Talks

Speaker information

- Mario Merola
 - Position: Physicist - term limited
 - Institute: INFN and Federico II Univ. Napoli, Napoli, Italy
 - Groups: "ECL", "DP", "PERF"
 - Favorite Topics
 - "EW (Radiative and Electroweak Penguin)"
 - "SL+ME (Semileptonic and Missing Energy Decay)"
 - Roles: -
 - Referee Expertise: "SL+ME"
 - Physics Groups: -

Statistics

- First talk: 2019.03.06
- Latest talk: 2022.01.28

- Total talks: 13
 - Yearly
 - 2022 (1)
 - 2021 (2)
 - 2020 (5)
 - 2019 (5)
 - Category
 - Leptonic (10)
 - WG1(3)
 - Physics (1)

- First talk: 2019.03.06
- Latest talk: 2022.01.28

- Total talks: 13
 - Yearly - Category
 - 2022 (1)
 - Leptonic (0)
 - WG1 (1)
 - Physics (0)
 - 2021 (2)
 - Leptonic (2)
 - WG1 (0)
 - Physics (0)
 - 2020 (5)
 - Leptonic (3)
 - WG1(1)
 - Physics (1)
 - 2019 (5)
 - Leptonic (4)
 - WG1 (1)
 - Physics (0)

- First talk: 2019.03.06
- Latest talk: 2022.01.28

- Total talks: 13
 - Category - Yearly
 - Leptonic (9)
 - 2022 (0)
 - 2021 (2)
 - 2020 (3)
 - 2019 (4)
 - WG1(3)
 - 2022 (1)
 - 2021 (0)
 - 2020 (1)
 - 2019 (1)
 - Physics (1)
 - 2022 (0)
 - 2021 (0)
 - 2020 (1)
 - 2019 (0)

Repository / Belle II note

- Repository
 - X

- Belle II note
 - Approved plots (2020.07.21)
 - <https://docs.belle2.org/record/2013>
 - Approved plots (2020.07.28)
 - <https://docs.belle2.org/record/2051>
 - Physics note (2019.02.25)
 - <https://docs.belle2.org/record/1308>
 - Physics note (2020.05.29)
 - <https://docs.belle2.org/record/1929>

Talks

- **[Done]** 2022.01.28. **WG1 Snowmass Meeting** [22.06.20.(MON)]
 - Title: $B \rightarrow l \nu, \tau \nu$
 - Slide title: NO SLIDES
 - Speakers: Daniel Jacobi (BELLE (BELLE II Experiment)), Mario Merola (BELLE (BELLE II Experiment)), Yen-Ting Chin (BELLE (BELLE II Experiment))
 - <https://indico.belle2.org/event/6060/#4-b-l-nu-tau-nu>

- **[Done]** 2021.09.23. Leptonic Meeting [22.06.20.(MON)]
 - Title: $B \rightarrow \tau \nu$ (hadronic tag) analysis
 - Slide title: $B \rightarrow \tau \bar{\nu}$ hadronic tagging, focus on missing quantities
 - Speaker: Mario Merola (BELLE (BELLE II Experiment))
 - <https://indico.belle2.org/event/5167/#2-b-taunu-hadronic-tag-analysi>

- **[Done]** 2021.04.15. Leptonic Meeting [22.06.20.(MON)]
 - Title: $B \rightarrow \tau \nu$ (hadronic tag)
 - Slide title: $B \rightarrow \tau \bar{\nu}$ (status hadronic tag)
 - Speaker: Mario Merola (BELLE (BELLE II Experiment))
 - <https://indico.belle2.org/event/4210/#1-b-tau-nu-hadronic-tag>

- **[Done]** 2020.07.23. **Physics General Meeting (ICHEP approvals 2)** [22.06.20.(MON)]
 - Title: Study of $B \rightarrow \tau \nu$
 - Slide title: Plots approval for $B \rightarrow \tau \bar{\nu}$ study in Phase III data
 - Speaker: Mario Merola (Belle (SuperKEKB Experiment))
 - <https://indico.belle2.org/event/2655/#6-study-of-b-tau-nu>

- **[Done]** 2020.07.14. **WG1 Meeting** [22.06.20.(MON)]
 - Title: had FEI, B \rightarrow tau nu
 - Slide title: $B \rightarrow \tau \bar{\nu}$ in early phase III data
 - Speaker: Mario Merola (Belle (SuperKEKB Experiment))
 - <https://indico.belle2.org/event/2554/#13-had-fei-b-tau-nu>

- **[Done]** 2020.06.18. Leptonic Meeting [22.06.20.(MON)]
 - B \rightarrow tau nu update
 - Slide title: $B \rightarrow \tau \bar{\nu}$ status and plans
 - Speaker: Mario Merola (Belle (SuperKEKB Experiment))
 - <https://indico.belle2.org/event/2424/#2-b-tau-nu-update>

- **[Done]** 2020.05.28. Leptonic Meeting [22.06.17.(FRI)]
 - Title: B \rightarrow tau nu update
 - Slide title: $B \rightarrow \tau \bar{\nu}$ status and plans
 - Speaker: Mario Merola (Belle (SuperKEKB Experiment))
 - <https://indico.belle2.org/event/2311/#2-b-tau-nu-update>

- **[Done]** 2020.02.06. B2GM F2F Meeting [22.06.17.(FRI)]
 - Title: Eextra studies with B to tau nu
 - Slide title: $B \rightarrow \tau \bar{\nu}$ EExtra studies
 - Speaker: Mario Merola (Belle (SuperKEKB Experiment))
 - <https://indico.belle2.org/event/1589/#13-eextra-studies-with-b-to-ta>

- **[Done]** 2019.11.19. **WG1 Meeting** [22.06.17.(FRI)]
 - Title: First look at $B \rightarrow \tau \nu$ sidebands with Phase 3 data
 - Slide title: $B \rightarrow \tau \bar{\nu}$ first look at data
 - Speaker: Mario Merola (Belle (SuperKEKB Experiment))
 - <https://indico.belle2.org/event/1188/#5-first-look-at-b-tau-nu-sideb>

- **[Done]** 2019.11.07. Leptonic Meeting [22.06.17.(FRI)]
 - Title: $B \rightarrow \tau \nu$ in phase 3 data
 - Slide title: $B \rightarrow \tau \bar{\nu}$ first look at data
 - Speaker: Mario Merola (Belle (SuperKEKB Experiment))
 - <https://indico.belle2.org/event/1087/#2-b-tau-nu-in-phase-3-data>

- **[Done]** 2019.06.12. Leptonic Meeting [22.06.17.(FRI)]
 - Title: $B \rightarrow \tau \nu$ status
 - Slide title: $B \rightarrow \tau \bar{\nu}$ data challenge
 - Speaker: Mario Merola (Belle (SuperKEKB Experiment))
 - <https://indico.belle2.org/event/471/#3-b-tau-nu-status>

- **[Done]** 2019.05.15. Leptonic Meeting [22.06.17.(FRI)]
 - Title: $B \rightarrow \tau \nu$ status
 - Slide title: $B \rightarrow \tau \bar{\nu}$ data challenge status
 - Speaker: Mario Merola (Belle (SuperKEKB Experiment))
 - <https://indico.belle2.org/event/415/#3-b-tau-nu-status>

- **[Done]** 2019.03.06. Leptonic Meeting [22.06.17.(FRI)]
 - Title: Introduction and updates on $B \rightarrow \tau \nu$
 - Slide title: $B \rightarrow \tau \bar{\nu}$ status / Intro (supplementary)
 - Speakers: Mario Merola (Belle (SuperKEKB Experiment)), Steven Robertson (McGill University)
 - <https://indico.belle2.org/event/145/#1-introduction-and-updates-on>

$$B \rightarrow K^* \tau \tau$$

- Stefano Moneta
 - Position: PhD student
 - Institute: INFN and Univ. Perugia, Perugia, Italy
 - Groups: "ECL"
 - Favorite Topics: -
 - Roles: -
 - Referee Expertise: -
 - Physics Groups: -

Talks

- **[Done]** 2022.06.01. 17th EWP group meeting of 2022 - B2GM parallel session [22.06.21.(TUE)]
 - B- \rightarrow K* $\tau\tau$ with FEI
 - Slide title: $B^0 \rightarrow K^{*0} \tau\tau$ with hadronic tag
 - Speaker: Stefano Moneta (BELLE (BELLE II Experiment))
 - <https://indico.belle2.org/event/6934/#8-b-ktautau-with-fei>
- **[Done]** 2022.05.04. **DESY missing energy workshop** [22.06.21.(TUE)]
 - Title: K* $\tau\tau$ with hadronic tag
 - Slide title: Search for $B \rightarrow K^* \tau\tau$
 - Speaker: Stefano Moneta (BELLE (BELLE II Experiment))
 - <https://indico.belle2.org/event/6650/contributions/35112/>
- **[Done]** 2022.02.15. 4th EWP Group Meeting of 2022 [22.06.21.(TUE)]
 - Title: B- \rightarrow K* $\tau\tau$: Snowmass projections
 - Slide title: Search for $B \rightarrow K^* \tau\tau$: Snowmass projection
 - Speaker: Stefano Moneta (BELLE (BELLE II Experiment))
 - <https://indico.belle2.org/event/6208/#2-b-ktautau-snowmass-projectio>

$$B \rightarrow X\tau\nu$$

- Speaker information
- Statistics
- Repository / Belle II note
- Talks

Speaker information

- Henrik Junkerkalefeld
 - Position: PhD student
 - Institute: Univ. of Bonn, Bonn, Germany
 - Status: Active
 - Groups: "SOFT"
 - Favorite Topics
 - "GEN (Belle II status/prospects talks)"
 - "SL+ME (Semileptonic and Missing Energy Decay)"
 - Roles: -
 - Referee Expertise: -
 - Physics Groups: -

- Dennis Benterbusch
 - Position: MSc student
 - Institute: Univ. of Bonn, Bonn, Germany
 - Status: Expired
 - Groups: -
 - Favorite Topics: -
 - Roles: -
 - Referee Expertise: -
 - Physics Groups: -

- Paolo Rocchetti
 - Position: MSc student
 - Institute: Univ. of Melbourne, Melbourne, Australia
 - Status: Active
 - Groups: -
 - Favorite Topics: -
 - Roles: -
 - Referee Expertise: -
 - Physics Groups: -

Statistics

- First talk: 2020.05.06
- Latest talk: 2022.05.27

- Total talks: 10
 - Yearly
 - 2022 (4)
 - 2021 (4)
 - 2020 (2)
 - Category
 - Semitauonic (6)
 - WG1(4)

- First talk: 2020.05.06
- Latest talk: 2022.05.27

- Total talks: 10
 - Yearly - Category
 - 2022 (4)
 - Semitauonic (2)
 - WG1 (2)
 - 2021 (4)
 - Semitauonic (2)
 - WG1 (2)
 - 2020 (2)
 - Semitauonic (2)
 - WG1(0)

- First talk: 2020.05.06
- Latest talk: 2022.05.27

- Total talks: 10
 - Category - Yearly
 - Semitauonic (6)
 - 2022 (2)
 - 2021 (2)
 - 2020 (2)
 - WG1(4)
 - 2022 (2)
 - 2021 (2)
 - 2020 (0)

Repository / Belle II note

- Repository
 - https://stash.desy.de/projects/B2A/repos/wg1_xtaunu/browse
- Belle II note
 - <https://docs.belle2.org/record/2682/>

Talks

- **[Done]** 2022.05.27. **WG1 ICHEP Approval Talks** [22.06.22.(WED)] [22.06.24.(FRI) Video]
 - Title: $R(X)$ ($B \rightarrow X$ tau nu with had FEI) ICHEP WG Approval (20m) **(Recorded Video File)**
 - Slide title:
 - Speaker: Henrik Junkerkalefeld (BELLE (BELLE II Experiment))
 - <https://indico.belle2.org/event/6904/#1-rx-b-x-tau-nu-with-had-fei-i>

- **[Done]** 2022.05.12. **WG1 ICHEP Full Status Reports** [22.06.21.(TUE)] [22.06.24.(FRI) Video]
 - Title: R(X) (B→X tau nu with had FEI) ICHEP Full Status (25m) (**Recorded Video File**)
 - Slide title: R(X) AND $B \rightarrow X\tau\nu$: FULL STATUS REPORT
 - Speaker: Henrik Junkerkalefeld (BELLE (BELLE II Experiment))
 - <https://indico.belle2.org/event/6819/#1-rx-b-x-tau-nu-with-had-fei-i>
 - Noticeable information
 - Belle II note / Code repository

- **[Done]** 2022.05.03. Semitauonic sub-group meeting [22.06.21.(TUE)]
 - Title: Update on B→X tau nu (30m)
 - Slide title: R(X) AND $B \rightarrow X\tau\nu$: X-SYSTEM REWEIGHTING
 - Speakers: Henrik Junkerkalefeld (BELLE (BELLE II Experiment)), Paolo Rocchetti (Belle II (SuperKEKB Experiment))
 - <https://indico.belle2.org/event/6797/#1-update-on-b-x-tau-nu>

- **[Done]** 2022.03.21. Semitauonic sub-group meeting [22.06.21.(TUE)]
 - Title: Update on B→X tau nu (20m)
 - Slide title: R(X) AND $B \rightarrow X\tau\nu$: TACKLING THE DISCREPANCIES
 - Speaker: Paolo Rocchetti (Belle II (SuperKEKB Experiment))
 - <https://indico.belle2.org/event/6494/#2-update-on-b-x-tau-nu>

- **[Done]** 2021.12.14. **WG1 meeting** [22.06.21.(TUE)]
 - Title: B \rightarrow X tau nu update (20m)
 - Slide title: HAD. TAGGED $B \rightarrow X\tau\nu$: OVERVIEW AND CURRENT STATUS
 - Speaker: Henrik Junkerkalefeld (BELLE (BELLE II Experiment))
 - <https://indico.belle2.org/event/5839/#14-b-x-tau-nu-update>

- **[Done]** 2021.12.01. Semitauonic sub-group meeting [22.06.21.(TUE)]
 - Title: Update on B \rightarrow X tau nu (20m)
 - Slide title: $B \rightarrow X\tau\nu$: FORM FACTORS AND $X\tau\nu$ BRANCHING RATIOS
 - Speaker: Henrik Junkerkalefeld (BELLE (BELLE II Experiment))
 - <https://indico.belle2.org/event/5725/#1-update-on-b-x-tau-nu>

- **[Done]** 2021.10.06. Semitauonic sub-group meeting [22.06.21.(TUE)]
 - Title: Update on B \rightarrow X tau nu (20m)
 - Slide title: $B \rightarrow X\tau\nu$: UPDATE AND RECENT DEVELOPMENTS
 - Speaker: Henrik Junkerkalefeld (BELLE (BELLE II Experiment))
 - <https://indico.belle2.org/event/5380/#1-update-on-b-x-tau-nu>

- **[Done]** 2021.09.07. **WG1 meeting** [22.06.21.(TUE)]
 - Title: R(X) from B \rightarrow X tau nu (20m)
 - Slide title: Analysis of inclusive $B \rightarrow X\tau\nu$ decays
 - Speaker: Paolo Rocchetti (Belle II (SuperKEKB Experiment))
 - <https://indico.belle2.org/event/5085/#2-rx-from-b-x-tau-nu>

- **[Done]** 2020.05.06. Semitauonic sub-group meeting **(Two talks)** [22.06.21.(TUE)]
 - Title: B to X tau nu (20m)
 - Slide title: A short introduction: analysis of the inclusive $B \rightarrow X\tau\nu$ decay
 - Speaker: Henrik Junkerkalefeld (Belle (SuperKEKB Experiment))
 - Title: B to X tau nu (20m)
 - Slide title: Generator vs. detector level studies for the X of the Decay $B \rightarrow X\tau\nu_\tau$
 - Speaker: Dennis Benterbusch (Belle (SuperKEKB Experiment))
 - <https://indico.belle2.org/event/2160/#2-b-to-x-tau-nu>

$$B \rightarrow K \nu \bar{\nu}$$

- Speaker information
- Repository / Belle II note
- Talks

Speaker information

- Filippo Dattola
 - Position: PhD student
 - Institute: Deutsches Elektronen-Synchrotron(DESY), Hamburg, Germany
 - Status: Active
 - Groups: "PERF"
 - Favorite Topics
 - "EW (Radiative and Electroweak Penguin)"
 - "SL+ME (Semileptonic and Missing Energy Decay)"
 - Roles: -
 - Referee Expertise: "EW"
 - Physics Groups: "PHYSICS_EW"

- Simon Kurz
 - Position: Physicist - term limited
 - Institute: Deutsches Elektronen-Synchrotron(DESY), Hamburg, Germany
 - Status: Expired
 - Groups: "PXD", "SOFT"
 - Favorite Topics: "GEN (Belle II status/prospects talks)"
 - Roles
 - "PXD_SW_LIAISON"
 - "PXD_AUTHOR"
 - "PXD_PERF_LIAISON"
 - Referee Expertise: -
 - Physics Groups: -

Repository / Belle II note

- Repository
 - <https://stash.desy.de/projects/MYS/repos/b2hnn/browse?at=refs/tags/version-17>
- Fitting Tools
 - <https://indico.belle2.org/event/2595/>
- Belle II note
 - <https://docs.belle2.org/record/2003?>

Talks

- **[Done]** 2021.03.16. 5th EWP group meeting of 2021 / Practice talk for the Moriond Electroweak conference [22.06.25.(SAT)]
 - Title: Moriond EWP rehearsal: Search for $B^+ \rightarrow K^+ \nu \bar{\nu}$ (40m)
 - Slide title: Search for decays $B^+ \rightarrow K^+ \nu \bar{\nu}$ with an inclusive tagging method at the Belle II experiment
 - Speaker: Filippo Dattola (BELLE (BELLE II Experiment))
 - <https://indico.belle2.org/event/3999/#7-moriond-ewp-rehearsal-search>
 - <https://indico.belle2.org/event/4004/>

- **[Done]** 2021.03.05. Special Physics Meeting [22.06.25.(SAT)]
 - Title: Search for inclusive $B^+ \rightarrow K^+ \nu \bar{\nu}$ (1h) **(Recorded Video File)** [슬라이드 녹화 안 되어 있어서 알아보기 힘들어서 안 보기로 함 (22.06.26)]
 - Slide title: Search for decays $B^+ \rightarrow K^+ \nu \bar{\nu}$ using an inclusive tagging method at Belle II
 - Speaker: Filippo Dattola (BELLE (BELLE II Experiment))
 - <https://indico.belle2.org/event/3961/#2-search-for-inclusive-b-k-nu>

- **[Done]** 2020.09.24. Physics General Meeting [22.06.25.(SAT)]
 - Title: Status of $B^+ \rightarrow K^+ \nu \bar{\nu}$ (20m)
 - Slide title: Studies of the $B^\pm \rightarrow K^\pm \nu \bar{\nu}$ decay using an inclusive tagging method
 - Speaker: Simon Kurz (BELLE (BELLE II Experiment))
 - <https://indico.belle2.org/event/2926/#4-status-of-b-k-nu-nubar>
 - Noticeable information from the talks
 - Fitting tools
 - Code repository

- **[Done]** 2020.01.28. EWP group meeting [22.06.24.(FRI)]
 - Title: Inclusive tagging approach for $B \rightarrow K \nu \bar{\nu}$ (20m)
 - Slide title: Untagged $B \rightarrow K \nu \bar{\nu}$: a feasibility study
 - Speaker: Filippo Dattola (BELLE (BELLE II Experiment))
 - <https://indico.belle2.org/event/1585/#7-inclusive-tagging-approach-f>

$$B \rightarrow K \nu \bar{\nu}$$

- Speaker information
- Repository / Belle II note
- Talks

Speaker information

- Junewoo Park
 - Position: MSc student
 - Institute: Yonsei Univ., Seoul, Korea
 - Status: Active
 - Groups: -
 - Favorite Topics: -
 - Roles: -
 - Referee Expertise: -
 - Physics Groups: -

Repository / Belle II note

- Repository
 - https://stash.desy.de/users/jwpark/repos/junewoo_btoxsnunubar/browse
- Belle II note
 - <https://docs.belle2.org/record/3019?ln=en>

Talks

- **[Done]** 2022.06.14. 18th EWP group meeting of 2022 [22.06.28.(TUE)]
 - Title: B \rightarrow Xs nunu update (10m)
 - Slide title: $B \rightarrow X_s \nu \bar{\nu}$ study at Belle2
 - Speaker: Junewoo Park (BELLE (BELLE II Experiment))
 - <https://indico.belle2.org/event/7043/#3-b-xs-nunu-update>

- **[Done]** 2022.06.01. 17th EWP group meeting of 2022 - B2GM parallel session [22.06.28.(TUE)]
 - Title: B \rightarrow Xs $\nu \nu$ semi exclusive (20m)
 - Slide title: $B \rightarrow X_s \nu \bar{\nu}$ study at Belle2
 - Speaker: Junewoo Park (BELLE (BELLE II Experiment))
 - <https://indico.belle2.org/event/6934/#6-b-xs-semi-exclusive>
 - Noticeable information
 - Belle II note

- **[Done]** 2022.05.21. KB2GM at CNU [22.06.28.(TUE)]
 - Title: Search for $B \rightarrow X_s \nu \nu$ (25m)
 - Slide title: $B \rightarrow X_s \nu \bar{\nu}$ study at Belle2
 - Speaker: Mr Junewoo Park (Yonsei U.)
 - <https://yhep-indico.yonsei.ac.kr/event/457/timetable/?view=standard> (PWD: CAU2022)

- **[Done]** 2022.05.04. DESY missing energy workshop [22.06.28.(TUE)]
 - Title: B - X nunu analysis (20m)
 - Slide title: $B \rightarrow X_s \nu \bar{\nu}$ study at Belle2
 - Speaker: Junewoo Park (BELLE (BELLE II Experiment))
 - <https://indico.belle2.org/event/6650/sessions/2196/#20220504>

- **[Done]** 2022.04.19. 12th EWP group meeting of 2022 [22.06.26.(SUN)]
 - Title: $B \rightarrow X_s \nu \nu$ semi exclusive (20m)
 - Slide title: $B \rightarrow X_s \nu \bar{\nu}$ study at Belle2
 - Speaker: Junewoo Park (BELLE (BELLE II Experiment))
 - <https://indico.belle2.org/event/6680/#3-b-xs-semi-exclusive>

- **[Done]** 2022.03.22. 8th EWP group meeting of 2022 [22.06.26.(SUN)]
 - Title: $B \rightarrow X_s \nu \bar{\nu}$ semi exclusive (20m)
 - Slide title: $B \rightarrow X_s \nu \bar{\nu}$ study at Belle2
 - Speaker: Junewoo Park (BELLE (BELLE II Experiment))
 - <https://indico.belle2.org/event/6495/#9-b-xs-semi-exclusive>

- **[Done]** 2022.02.22. 5th EWP group meeting of 2022 [22.06.26.(SUN)]
 - Title: $B \rightarrow X_s \nu \bar{\nu}$ semi exclusive (20m)
 - Slide title: $B \rightarrow X_s \nu \bar{\nu}$ study at Belle2
 - Speaker: Junewoo Park (BELLE (BELLE II Experiment))
 - <https://indico.belle2.org/event/6249/#2-b-xs-semi-exclusive>
 - Noticeable information
 - MC sample pull request
 - <https://stash.desy.de/projects/B2/repos/basf2/pull-requests/560/overview>

- **[Done]** 2021.11.16. 32th EWP group meeting of 2021 [22.06.26.(SUN)]
 - Title: $B \rightarrow X_s \nu \bar{\nu}$ (Sum of Exclusives) (20m)
 - Slide title: $B \rightarrow X_s \nu \bar{\nu}$ study at Belle2
 - Speaker: Junewoo Park (BELLE (BELLE II Experiment))
 - <https://indico.belle2.org/event/5654/#1-b-xs-sum-of-exclusives>

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WG1 Confluence Page

- Link
 - <https://confluence.desy.de/display/BI/Physics+SLMissing>

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