

CERN ‘**xxxxxxxx CP xxxxxx**’ **xxxxxxxxxxxx xxxxx xxxxxxxxxx xxxxx**
xxxxxxxxxxxxxxxx xxxxxxxxxxxxxxx

××××××××××××××××××××

××××××××××××××××××××

××××××××××××××××××××

××××××××××××××××××××

××××××××××××××××

××××××××××××××××

📖 ××××××××××××

📖 PDF/ePub ××××××××××××

bd.cosmicphilosophy.org/cp-violation/

××××××××××××××××

××××××××××××××××××××:

××××××××××××××××××××

[××××××××××××××××××××→](#)

××××××××××××, ××××××××××××

 CosmicPhilosophy.org

✗ ✗ ✗ ✗ ✗ ✗ ✗ ✗

[illegible]

X.X.XX XX XXXX XXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

1. 1. 1111111111: "111111111111"

X.X.X. XXXXX XXXXXXXX:XXXXXXXXXXXXXXXXXXXXXXXX

x.x.x. xxxxxxxx xxxxxx xxxxxxxx: xxxxxxxxxx xxxxxxxxxx xxxxxxxxxx

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115. 116. 117. 118. 119. 120. 121. 122. 123. 124. 125. 126. 127. 128. 129. 130. 131. 132. 133. 134. 135. 136. 137. 138. 139. 140. 141. 142. 143. 144. 145. 146. 147. 148. 149. 150. 151. 152. 153. 154. 155. 156. 157. 158. 159. 160. 161. 162. 163. 164. 165. 166. 167. 168. 169. 170. 171. 172. 173. 174. 175. 176. 177. 178. 179. 180. 181. 182. 183. 184. 185. 186. 187. 188. 189. 190. 191. 192. 193. 194. 195. 196. 197. 198. 199. 200. 201. 202. 203. 204. 205. 206. 207. 208. 209. 210. 211. 212. 213. 214. 215. 216. 217. 218. 219. 220. 221. 222. 223. 224. 225. 226. 227. 228. 229. 230. 231. 232. 233. 234. 235. 236. 237. 238. 239. 240. 241. 242. 243. 244. 245. 246. 247. 248. 249. 250. 251. 252. 253. 254. 255. 256. 257. 258. 259. 260. 261. 262. 263. 264. 265. 266. 267. 268. 269. 270. 271. 272. 273. 274. 275. 276. 277. 278. 279. 280. 281. 282. 283. 284. 285. 286. 287. 288. 289. 290. 291. 292. 293. 294. 295. 296. 297. 298. 299. 300. 301. 302. 303. 304. 305. 306. 307. 308. 309. 310. 311. 312. 313. 314. 315. 316. 317. 318. 319. 320. 321. 322. 323. 324. 325. 326. 327. 328. 329. 330. 331. 332. 333. 334. 335. 336. 337. 338. 339. 340. 341. 342. 343. 344. 345. 346. 347. 348. 349. 350. 351. 352. 353. 354. 355. 356. 357. 358. 359. 360. 361. 362. 363. 364. 365. 366. 367. 368. 369. 370. 371. 372. 373. 374. 375. 376. 377. 378. 379. 380. 381. 382. 383. 384. 385. 386. 387. 388. 389. 390. 391. 392. 393. 394. 395. 396. 397. 398. 399. 400. 401. 402. 403. 404. 405. 406. 407. 408. 409. 410. 411. 412. 413. 414. 415. 416. 417. 418. 419. 420. 421. 422. 423. 424. 425. 426. 427. 428. 429. 430. 431. 432. 433. 434. 435. 436. 437. 438. 439. 440. 441. 442. 443. 444. 445. 446. 447. 448. 449. 450. 451. 452. 453. 454. 455. 456. 457. 458. 459. 460. 461. 462. 463. 464. 465. 466. 467. 468. 469. 470. 471. 472. 473. 474. 475. 476. 477. 478. 479. 480. 481. 482. 483. 484. 485. 486. 487. 488. 489. 490. 491. 492. 493. 494. 495. 496. 497. 498. 499. 500. 501. 502. 503. 504. 505. 506. 507. 508. 509. 510. 511. 512. 513. 514. 515. 516. 517. 518. 519. 520. 521. 522. 523. 524. 525. 526. 527. 528. 529. 530. 531. 532. 533. 534. 535. 536. 537. 538. 539. 540. 541. 542. 543. 544. 545. 546. 547. 548. 549. 550. 551. 552. 553. 554. 555. 556. 557. 558. 559. 560. 561. 562. 563. 564. 565. 566. 567. 568. 569. 570. 571. 572. 573. 574. 575. 576. 577. 578. 579. 580. 581. 582. 583. 584. 585. 586. 587. 588. 589. 590. 591. 592. 593. 594. 595. 596. 597. 598. 599. 600. 601. 602. 603. 604. 605. 606. 607. 608. 609. 610. 611. 612. 613. 614. 615. 616. 617. 618. 619. 620. 621. 622. 623. 624. 625. 626. 627. 628. 629. 630. 631. 632. 633. 634. 635. 636. 637. 638. 639. 640. 641. 642. 643. 644. 645. 646. 647. 648. 649. 650. 651. 652. 653. 654. 655. 656. 657. 658. 659. 660. 661. 662. 663. 664. 665. 666. 667. 668. 669. 670. 671. 672. 673. 674. 675. 676. 677. 678. 679. 680. 681. 682. 683. 684. 685. 686. 687. 688. 689. 690. 691. 692. 693. 694. 695. 696. 697. 698. 699. 700. 701. 702. 703. 704. 705. 706. 707. 708. 709. 710. 711. 712. 713. 714. 715. 716. 717. 718. 719. 720. 721. 722. 723. 724. 725. 726. 727. 728. 729. 730. 731. 732. 733. 734. 735. 736. 737. 738. 739. 740. 741. 742. 743. 744. 745. 746. 747. 748. 749. 750. 751. 752. 753. 754. 755. 756. 757. 758. 759. 760. 761. 762. 763. 764. 765. 766. 767. 768. 769. 770. 771. 772. 773. 774. 775. 776. 777. 778. 779. 780. 781. 782. 783. 784. 785. 786. 787. 788. 789. 790. 791. 792. 793. 794. 795. 796. 797. 798. 799. 800. 801. 802. 803. 804. 805. 806. 807. 808. 809. 810. 811. 812. 813. 814. 815. 816. 817. 818. 819. 820. 821. 822. 823. 824. 825. 826. 827. 828. 829. 830. 831. 832. 833. 834. 835. 836. 837. 838. 839. 840.

✗. ✗ ✗ ✗ ✗ ✗ ✗ ✗

XXXXXXXXXXXXXXXXXX, C XXXXXXXXXXXX XXXXXXX XXXXXXXXXXXXX-XX XXXXX XXXX
XXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXX XXXXX XXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXX XXXXXXXXXXXXXXX XXXXXXX: XXXXXX XXXXX, XX XXXXX, XXXXXXX
XXXXXXXX, XXXXXXXXXXXXXXX XXXXXXX, XXXXXXX) XXX P XXXXXXXXXXX XXXXXXXXXXXXX-
XX XXXXX XX XXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXX XXXXXXXXXXXXXXX
XXXXX XXXXXXXXXXX XXXXXXX XXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXX

XXX XXXXX XXXXXXXXXXXXXXXXXXX XXXXXXX XXXXX, XXXX XXXX XXXXXXX XXXXXXXXXXX XXXXX XX,
XXX XXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXX XXXXX XXXXXXXXXXX XXXXXXXXXXX X XXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXX XXXXXXX XXXXXXX XXXX XX XXXXXXXXXXXXXXX XXXXXXXXXXXXXXX XXXXXXX XXXXXXX XXXXX
XXXX, XXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXX XXXXX, XXXXX XXXXXXXXXXXXXXXXXXX XXXXXXX XXXX
XXXXX XX XXXXXXXXXXX XXXX XXXX XXXXXXX XXXXXXX — XXX “XXXXXXXX” XX XXXXXXXXXXXXXXX
XXXXXXXXX XXXXX XXXXXXX XXXXXXXXXXXXXXXXXXX

XXXXXXXXXXXX LHCb XXXXXXXXXXXXXXXXXXX XXXXX XXXX XX XX XXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXX XXXXXXX XXXXXXXXXXX XXXXX, XXXXX XXXXX XXXXXXXXXXX XXXX XXXXXXX
XXXXXXXXXX X XXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXX

XX XX XX XX XX . XX .

XXXXX XX XX XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX

XXXXXX XXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXX XXXX XXXX


XXXXXXXXXXXXXXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX

LHCb XXXXXXX Λ_b^0 XXXXXXXXXXXXXXXXXXX (XXXX-XXXXXXXXXXXXXXXX XXXXXXXXXXXXXXX)
XXXXXXXXXXXXXXXX-XXXXXXXXXXXX XXXXXXXXXXX-XX XXXXXXX XXXX-XX XXXX XXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXX XXXXXXX XXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXX XXXXXXX XXXX, XXXXXXXXXXX XXXXXXXXXXX
XXXXXXXXXXXX XXXXXXX XXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXX XXXXXXXXXXX XXXXXXX XXXXXXXXXXX XXXXXXX
XXXXXXXXXXXX XXXXXXXXXXX XXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXX

XXXXXXXXXX XXXXXXX XXXXXXXXXXXXXXXXXXX XXXXXXX XXXXXXXXXXXXXXX XXXX XXXXXXXXXXXXXXX XXXX
XXXXXXXXXX:

CERN XXXXXXX XXXXXXX (XXXXXXXXXXXX LHCb XXXXXXX): “CERN-
LHCb XXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXX XXXXXXX XXXXXXX XXXXXXX
XXXXXXXXX XXXXXXXXXXX XXXXXXXXXXX XXXXXXX” XXXX XXXX XX
XXXXXXXXXXXXXXXX XXXXXXX XXXXXXXXXXX XXXXXXX “XXXXXXXXXXXX XXXXXXXXXXX XXXXXXXXXXX XXXXXXX
XXXXXXXX-XXXXXXXX XXXXXXXXXXXXXXXXXXX XXXXXXX”

XX XXXXXXXXXXXXXXX XXXXXXX XXXXXXX, XXXXXXXXXXXXXXXXXXX XXXXXXX XXXXXXXXXXX XXXXXXX XXXXXXX
XXXXXXXXXX XXXXXXXXXXXXXXX XXXX XXXXXXXXXXX XX “XXXX” XXXXX XXXXXXXXXXXXXXXXXXX XXXXXXX XXXXXXX
XXXXXXXX XXXX XXXXXXXXXXX XXXXXXX XXXXXXXXXXXXXXXXXXX XXXXXXXXXXX XXXXXXX XXXXXXX



Physics World (IOP): “CERN- $LHCb$ $B^0 \rightarrow \pi^0 \mu^+ \mu^-$ CP violation measurement”

The $B^0 \rightarrow \pi^0 \mu^+ \mu^-$ decay is a rare process, and the CP violation measurement is a key test of the Standard Model.

Science News (Society for Science & the Public): “CERN’s $LHCb$ experiment finds evidence for CP violation in $B^0 \rightarrow \pi^0 \mu^+ \mu^-$ decays”

The CP violation measurement is a key test of the Standard Model, and the $B^0 \rightarrow \pi^0 \mu^+ \mu^-$ decay is a rare process.

The $B^0 \rightarrow \pi^0 \mu^+ \mu^-$ decay is a rare process, and the CP violation measurement is a key test of the Standard Model. The CP violation measurement is a key test of the Standard Model, and the $B^0 \rightarrow \pi^0 \mu^+ \mu^-$ decay is a rare process.

The $B^0 \rightarrow \pi^0 \mu^+ \mu^-$ decay is a rare process, and the CP violation measurement is a key test of the Standard Model. The CP violation measurement is a key test of the Standard Model, and the $B^0 \rightarrow \pi^0 \mu^+ \mu^-$ decay is a rare process.

The $B^0 \rightarrow \pi^0 \mu^+ \mu^-$ decay is a rare process, and the CP violation measurement is a key test of the Standard Model. The CP violation measurement is a key test of the Standard Model, and the $B^0 \rightarrow \pi^0 \mu^+ \mu^-$ decay is a rare process.

by $\mu^+ \mu^-$ $B^0 \rightarrow \pi^0 \mu^+ \mu^-$

$B^0 \rightarrow \pi^0 \mu^+ \mu^-$: “ $B^0 \rightarrow \pi^0 \mu^+ \mu^-$ CP violation measurement”

$B^0 \rightarrow \pi^0 \mu^+ \mu^-$ CP violation measurement

The $B^0 \rightarrow \pi^0 \mu^+ \mu^-$ decay is a rare process, and the CP violation measurement is a key test of the Standard Model. The CP violation measurement is a key test of the Standard Model, and the $B^0 \rightarrow \pi^0 \mu^+ \mu^-$ decay is a rare process.

[illegible]

► **XXXXXXXXXX XXXXXXXX XXXXXXXX:**

$$\boxed{}\boxed{}\boxed{}\boxed{}\boxed{}\boxed{}\boxed{} + 1 \rightarrow \boxed{}\boxed{}\boxed{}\boxed{}\boxed{}\boxed{} + \boxed{}\boxed{}\boxed{}\boxed{}\boxed{}\boxed{} + 1$$

XXXXXXXXXX XXXXXXXX XXXXXXXX XXXXXXXX XXXXXXXX XXXXXXXX XXXXXXXX XXXXXXXX
XXXXXXXXXXXX “XXXXXXXX XX”, XX XX – XXXXXX XXX “XXXXXXXXXXXX
XXXXXXXXXX XXXXX” XXXX, XXXXX XXXXXXXXXXXX XXXXXXXX XXXXXXXX
XXXX

[illegible]

X**X****X****X****X****X** **X****X****X****X****X****X****X** **X****X****X****X****X****X****X** **X** **X****X****X****X****X****X****X****X**:**X****X****X****X****X****X****X****X****X****X****X****X****X****X****X****X****X**

X**X****X****X****X****X****X****X** **X****X****X****X****X****X** **X****X****X****X****X** **X****X****X****X****X****X****X****X****X****X****X****X** **X****X****X****X** **X****X****X****X****X****X****X** **X****X****X****X****X****X****X****X**

X**X****X****X**:**X****X****X****X****X****X****X** **X****X** **X****X****X****X****X****X****X** **X****X****X****X** **X****X****X****X****X****X****X** **X****X****X****X****X****X****X****X****X****X****X****X****X****X**

X**X****X** **X****X****X****X****X****X****X****X****X** **X****X****X****X** **X****X****X****X****X****X****X****X**

[illegible][illegible]

X X X X X X X . X .

XXXXXXXXXX "XXXXXXXXXX" XXXXX XXXXXXXX

XXXXXXXXXXXXXXXXXXXX

XXXXXXXXXX XXXXXXXX XXXXXXXXX XXXXXXXXX, XXXX CERN- X LHCb XXXXXXXXX, XXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXX XXX- XXXXXXXX (XXXX ‘XXXXXXXXXXXX XXXXX’ XXXXXXX XXXXXXXXXX XXX XXX) XXXX XXXXXXXX XXXXXXXXXXXXXXXX XXXXXXX XXX XXXX XXXXXXXXXXXXXXXX XXXX XXXXXXXXXXXXXXXX “XXXXXXXXXXXX XXXXXXX” XXXX—XXXXXXXXXXXXX XXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXX

XXXXXXXXXXXXX XXXXXXX XXXXXXXXXX “XX” XXXXXXXXXXXXXXXX XXXXXXXXXX XXXXXXXX ‘XXXXXXXX’ XX XXXXXXX XXX—XXXXXXXXXXXX XXXXXXXXXX XXXX XXX XXXXXXX XXXXXXX XXXX XXXX XXXXXXX XXXXXXX XXXXXXX, XXXXXXXXXX-XXXXXXXXXXXX XXXXXXX XXXXXXX XXXXXXXXXXXXXXX XXXX, XXXX XX XXXXXXX XXXXXXX XXXXXXXXXXXXXXX XXXXXXX XXXXXXX XXX “XXXXXXXX XXXXXXX” XXXXXXXXXXXXXXX XXXXXXXXXX-XX XXXXXXX, XXXXXXX XXXXXXX XXXXXXXXXX: XXXXXXXXXX XXXXXXXX XXXXXXXXXX-XX XXXXXXX-XX XXXX XXXXXXXXXX XXXX XXXXXXXXXX

XXXX XXXXXXXXXX XXXXXXX XXXXXXX XXXXXXX XXXX

(2025) XXX XXXXXXXXXXXXXXX XXXXXXX XXXXXXXXXXXXXXX (LHC) ‘XXXXXXXX’ XXXXXXX XXXXXXX

□□□: □□□□□□□□ □□□□□□□□

XXXXXXXXXX XXXXXXXXXXXXXXXX XXXXX XXXXXXX XXXX XXXX XXXXXXXXXXXXXXX XXXXXXXXXXXXXXX (CMS X ATLAS, XXXXXXX XXXXX) XXXXXXX XXX XXX XXXXXXX XXXXXXXXXX (XXXXXXXX-XXX) “XXXXXXXXXXXX XXXXXXX” XXXXXXX XXXXX XXXXX XXXXXXXXXXXXXXX XXXXXXXXXXXXXXX XXXX XX XX “XXXXXXXX” XXXXXXXXXXXXXXX XXXX, XXX XXXXX XXXXXXXXXXXXXXX XXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXX XXXXXXXXXXXXXXX XXXXXXX “XXXXXXXX” XXXX XXXX XXXXXXXXXXXXXXX XXXXXXX—XX XXXXXXXXXX XXXXXXXXXXXXXXX XXXXXXX XXXX XXXXXXXXXXXXXXX XXXXX XXXXXXX “XXXXXXXX”—XX XXXX XXXXXXX XXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXX, XXX XX XXXXXXX XXXX XXXXXXXXXX XXXXXXXXXXXXXXX XXXXXXXXXX

XXX XXXXXXXXXX XXXX-XX XXXXXXXXXXXXXXX XXXXXXXXXXXXXXX XXXXXXXX LHCb XXXXXXXXXX XXXXXXX XXXX XXX XXXXXXXXXXXXXXX XXXXXXXX X XXXXXXXXXX- XXXXXXX XXX XXXXXXX XXXXXXXXXXXXXXX XXXX (XXXXXX XXXX) XXX XXXXX CP XXXXXXX XXXXXXX XXXXX XXX “XXXXXXXXXXXX XXXXXXX” XXXXXXX XXXXXXX XXXX XXX XXXXXXXXXXXXXXX XXXXXXX XXXXXXXXXX ‘XXXXXXXXXXXX’ XXXXXXX XXXXXXXXXXXXXXX XXXXXXX

XXXXXXXXXXXXX XXXXXXXX X XXXXXXXXXX-XXXXXXXXXXXX XXXXX XXXXXXX XXXXXXX XXXXXXX XXXX XXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXX XXXXXXX XXXXXXXXXXXXXXX XXXXXXX XXX XXXXXXX XXX XXXXXXXXXXXXXXX XXXX XXXXXXXXXXXXXXX XXXXXXX XXXXXXX XXXXXXX XXXXXXX XXXXXXX XXXXXXX

× ×× ×× ×× × .

× × × × × × ×

The headlines celebrating “*CP Violation in Baryons*” are misleading and commit a double category error. They conflate a continuous, dynamic structure formation and maintenance process with a static object, and they treat a transient state of a disrupted proton as an independent “*exotic particle*”.

××××××× ×××××××××× ××× ×××× ××× ×××, ××× ×××-×××××××× ××××××
×××××××× ×××× ×××××××××× ××××××××× ××××××××××××× ×××××××××××××××
×× ×××××××××××××××××× ×××××××× ××× ×××××××××××—×× ××××××
××××××××××××××××××

××××× ×××××××××× ×××××××× ×××××, LHCb ×××× ×× ××××××××××× ×××××
×× ××××× ××××××××××××××××× ×××××××× ×××××—×× ××××× ×××××× ×××××××
××: ××××××× × ××××××××××××××××××× ×××××××× ×××××× ×××××××× ××××××××× ××××,
×× ×××××× ××××××× ‘×××××××-××××× ×××××××× ×××××××××××’ ×××××
××××××××××× ×××××××× ××××××××××××× ××××××× ×××× ××××××××××

××××××× ××××××××××××× ×××××××× ×××—××××× ××××××××× ×× ××××××××××××
××××××××××××××-×× ××××××××××× ×××××× ×××××× ××××××××××× ‘××××××
××××××’ ××××××× ××××××××××—×××× ×××××××××××××××××××××× (××××××) ×××××
×××××××××× CP ×××××× ×××××××× ×××× ×××× ××××××××××

