

Q&A: eta sub b

symmetry's Calla Cofield scored an exclusive interview with the particle...the ground state...the *artist* "eta sub b," who signs his name η_b . One month after eta sub b's stunning entrance into the public spotlight via the BaBar experiment (see story, p. 28), this in-depth interview reveals eta sub b's struggle to shine next to his brother Upsilon 1S; his upbeat attitude despite a life surrounded by static; and a look at just how well our reporters prepare for interviews.

Photos: Bradley Plummer



symmetry: So eta...can I call you eta?

η_b: Well, I wouldn't want to get confused with one of the other etas. The "sub b" is really the most unique part of my name.

s: I think you're the only eta people will be talking about for a while.

η_b: You flatter me.

s: Don't be flattered. Most people still have no idea who you are.

η_b: Getting back to your question...

s: You've been in hiding for 30 years. Why reveal yourself now?

η_b: I stayed out of the spotlight for personal reasons. There was a lot of noise surrounding me. I knew who I was supposed to be, but I had to sift through a lot of static to really find myself.

s: Now that you're out, the ladies want to know if you're still single.

η_b: Really?

s: No, not really.

η_b: Well, I'm a singlet.

s: Cute. So you're not dating anyone?

η_b: I don't think you understand...that means I have only one spin state. Other particles might be happy to give two, three spins. But I stick to my guns.

s: You know you're not getting any younger.

s: It's my permanent state. It's what defines me.

s: Afraid of long-term commitment? Sooo George Clooney. Where are you living?

η_b: The insides of stars, mostly.

s: That's gonna be a tough sell. What are you working on right now?

η_b: Well, at the moment, I'm focusing on my appearance in the big bang. That's really the core of my work, but maybe it's time I branch out, try something new.

s: I'm sorry, what exactly is it that you do?

η_b: Did you even research this interview?

s: What was I supposed to do? There's no Wikipedia entry about you yet.

η_b: Are you kidding me? There's an entry about Eliphalet Trask and there's not even one about me?!

s: Who the heck is Eliphalet Trask?

η_b: Just a completely un-noteworthy lieutenant governor of Massachusetts in the mid-1800s! What more do people want from me?! I've got mystery! I've got glamour! I could be crucial in understanding quantum chromodynamics!!

s: Take it easy.

η_b: Ugh...I'm sorry. Could you not write that I freaked out?

s: I am a professional journalist and I report the truth. Let's move on. Have you been hitting the gym a lot?

η_b: I'm a particle.

s: I guess people can't see you anyway.

η_b: It's the subatomic thing.

s: By the way, how long until you decay?

η_b: That's none of your business.

s: If you don't want to talk about it I can always go ask the theorists.

η_b: Look, I'm no charged pion...

s: Hey, who is?

η_b : But I'm around a lot longer than...well... some other particles...I mean, one times 10^{-25} seconds hardly seems worth the effort.

s: Woah! Mr. Big Talk over here!

η_b : Hey, I'm not judging anybody.

s: Let's get back to you coming out.

η_b : Um, could you say being detected instead?

s: I'm a professional journalist and I report the truth. To be totally honest, you weren't exactly trying to stay hidden, were you?

η_b : You're right; I was overshadowed. My brother Upsilon sub b 1S emitted a lot of photons—photons very similar to mine. It was hard for people to see the light I was giving off next to his.

s: Of your four Upsilon brothers he's the one most like you.

η_b : In reality we're not that much alike. I know we've got similar energy values, but we're as different as eta sub c and Upsilon sub c.

s: Or John and Paul.

η_b : The particles?

s: No, the Beatles. Here's how I see it: Upsilon 1S is like Paul. He's got three states: Beatles, Wings, and Heather Mills. You're like John. Just one state.

η_b : Actually, I think people would argue that John Lennon had some really distinct phases.

s: Hey, if I spin you backwards does it say "Paul is dead"?

η_b : No, you still get zero.

s: That blows my mind, man.

η_b : Look, Upsilon might be a higher energy state than me, but in the end we're all high energy, right? We're all subatomic particles.

s: Actually, I'd like to talk about your particle status.

η_b : I was told that would not be discussed here.

s: You aren't technically a new particle.

η_b : I don't have to explain my art to you.

s: This is physics.

η_b : What are you? A shrink?!

s: I minored in psychology.

η_b : Really? Well...I have wanted to get this off my chest. See, I'm not a new particle. I'm just an energy state in a family of particles that has already made a name for itself. I'm the smallest one in my family in an already absurdly small realm!

s: Wait, maybe it was cosmetology...

η_b : I stayed hidden for 30 years trying to, you know, build the suspense. But outside of particle physics no one seems to care.

s: No, it was comp lit. But hey, you're right. Most people don't care.

η_b : I really don't like you.

s: I'm a professional psychologist and I report the truth. By the way, did you know they're still in the process of confirming that it was you they found in their detector? And if it's not you, what else could it be but the particle known as Higgs boson?! And people care about her! Ironic, huh?

η_b : Do you think I could run with "might be Higgs" for a while?

s: No. But you should think about getting a clever nickname.

η_b : I was thinking of "The Disco Particle."

s: Yes! I'd read that book.



