Some SUPERCOP results

Overview

Will show signature graphs and KEM graphs covering AIMer, HAETAE, MQ-Sign, NCC-Sign, NTRU+, SMAUG-T, and selected baselines for comparison.

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See `bench.cr.yp.to` for more CPUs; quartiles; updates.

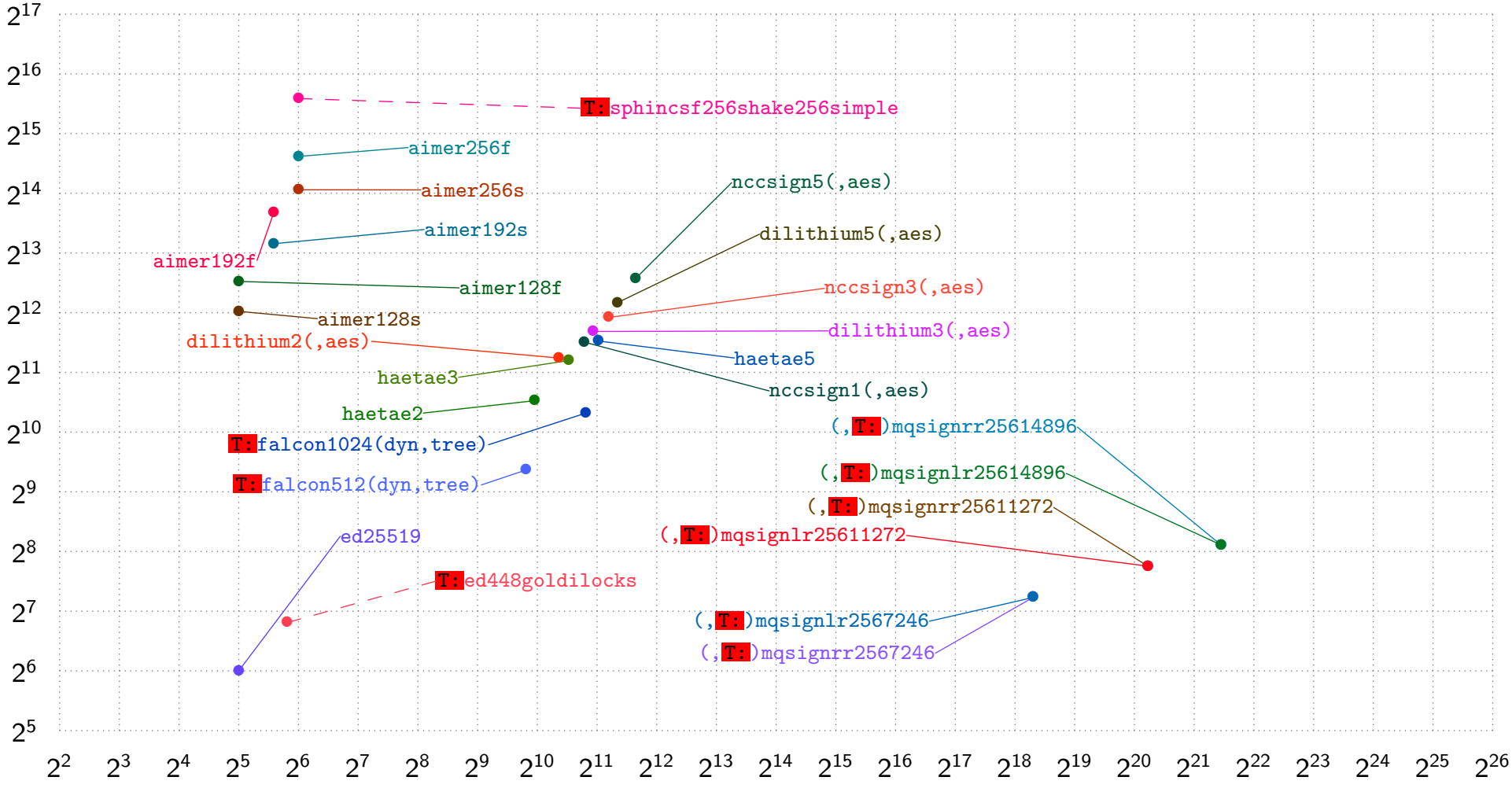
Signatures

amd64, titan0, crypto_sign, key size, signature size https://bench.cr.yp.to

Horizontal axis: Space (bytes) for a public key (crypto_sign_PUBLICKEYBYTES). 20241021

Vertical axis: Space overhead (bytes) for signing a long message (at most crypto_sign_BYTES).

"T:" means that the SUPERCOP database does not list constant time as a goal for this implementation.



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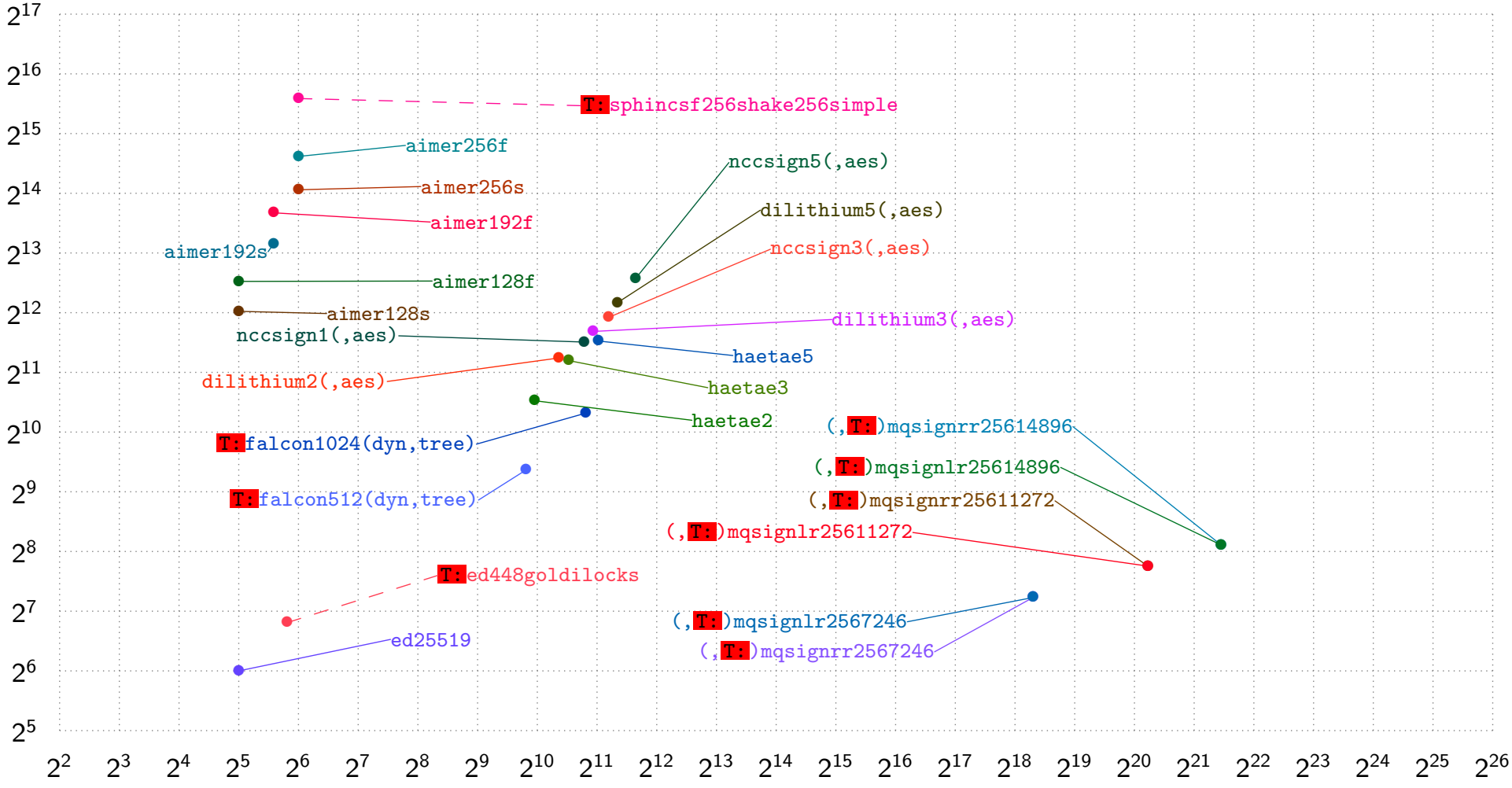

amd64, titan0, crypto_sign, keypair time, key size https://bench.cr.yp.to

Horizontal axis: Time (cycles) to generate a public key (crypto_sign_keypair). 20241021

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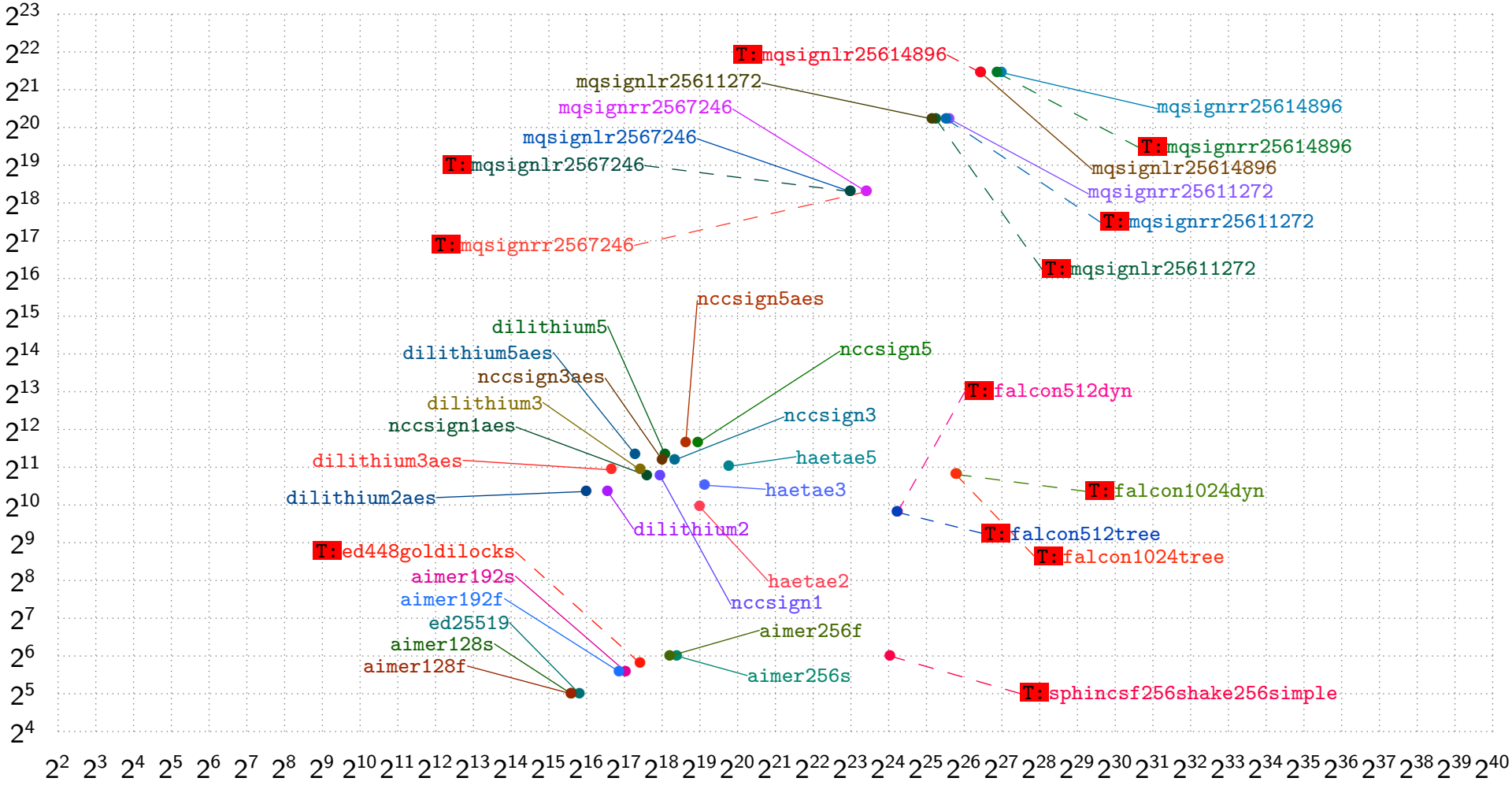

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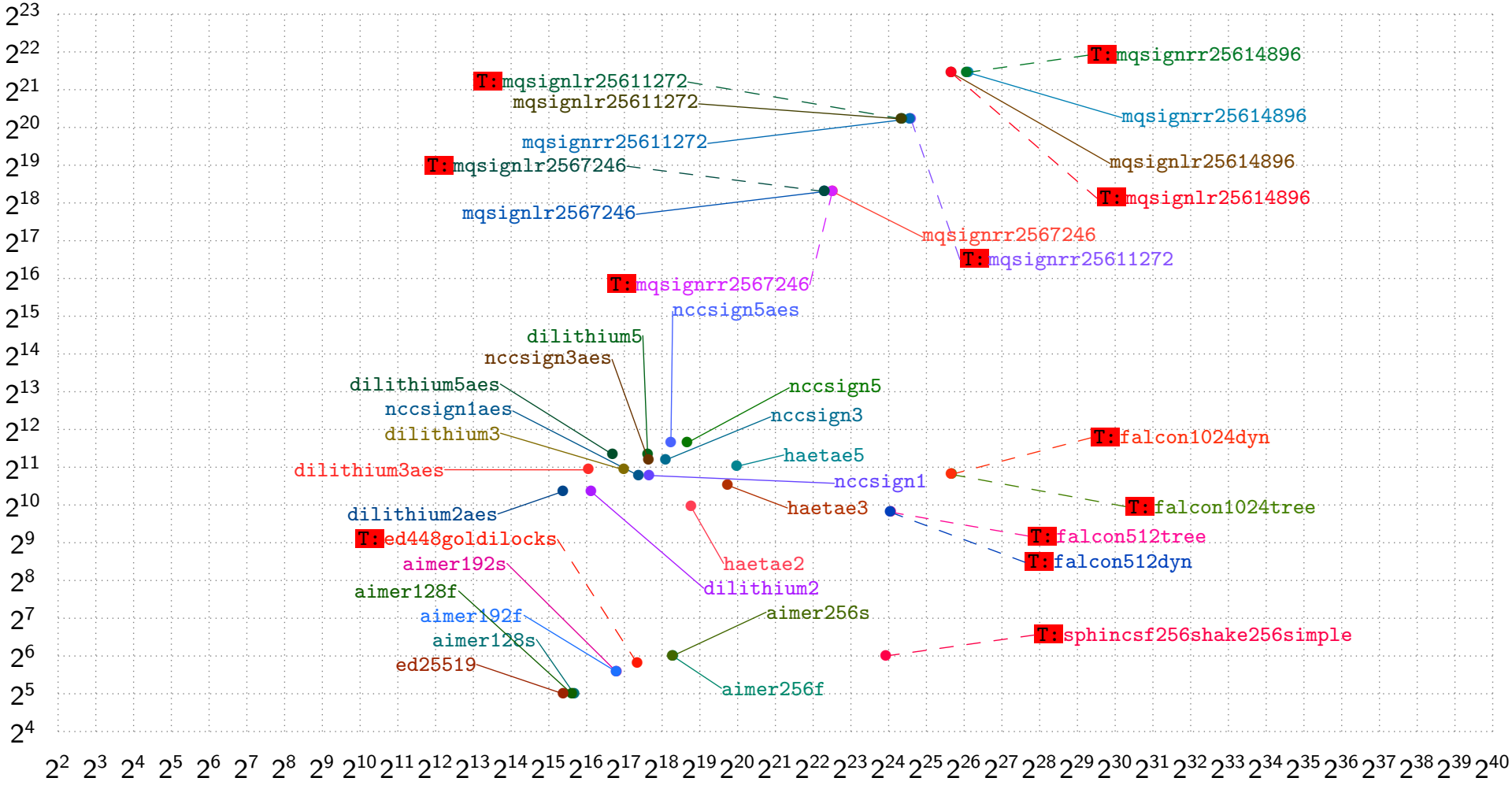

amd64, titan0, crypto_sign, sign time, signature size https://bench.cr.yp.to

Horizontal axis: Time (cycles) to generate a signed message given a message (crypto_sign). 20241021

Vertical axis: Space overhead (bytes) for signing a long message (at most crypto_sign_BYTES).

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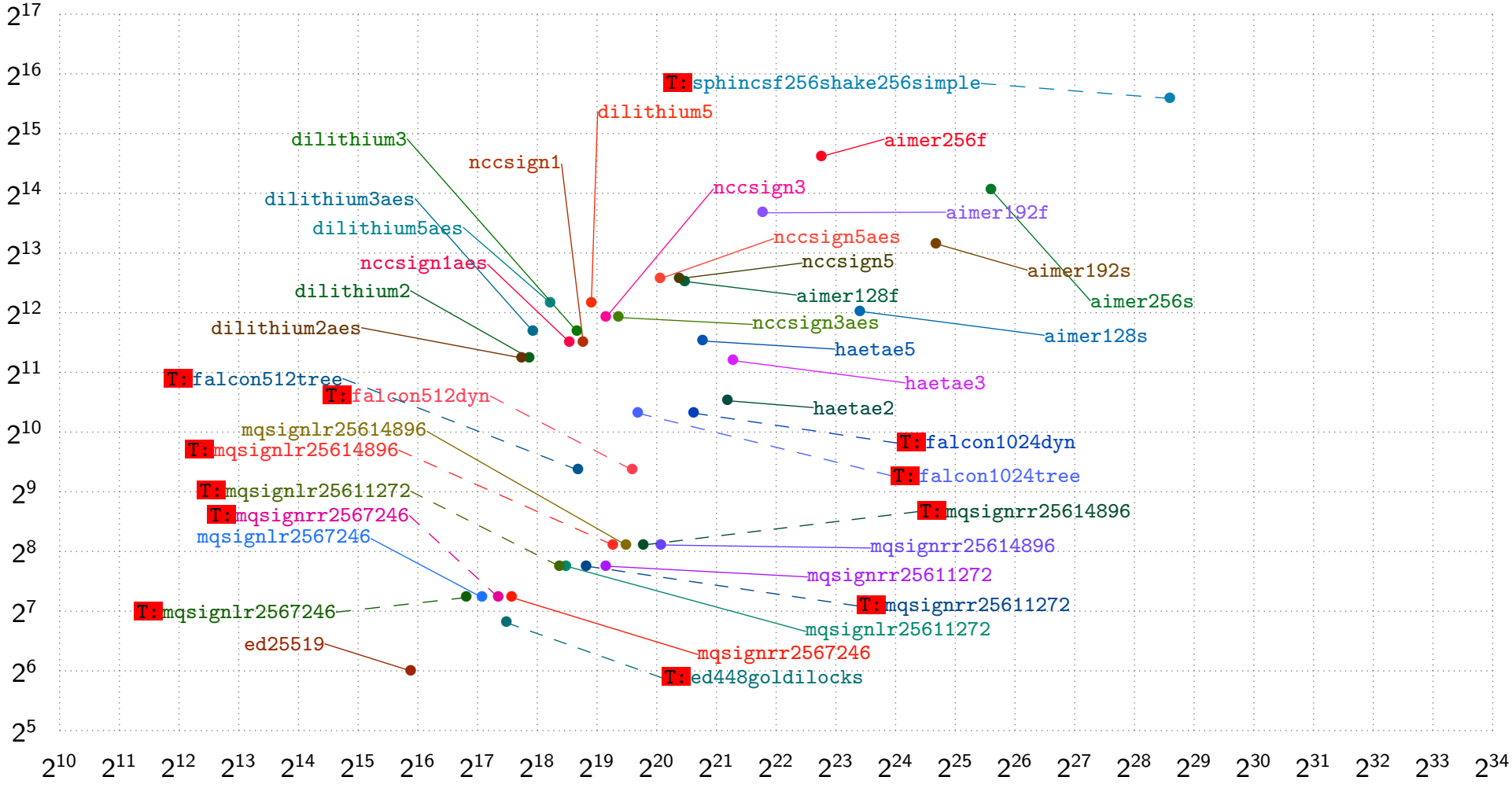

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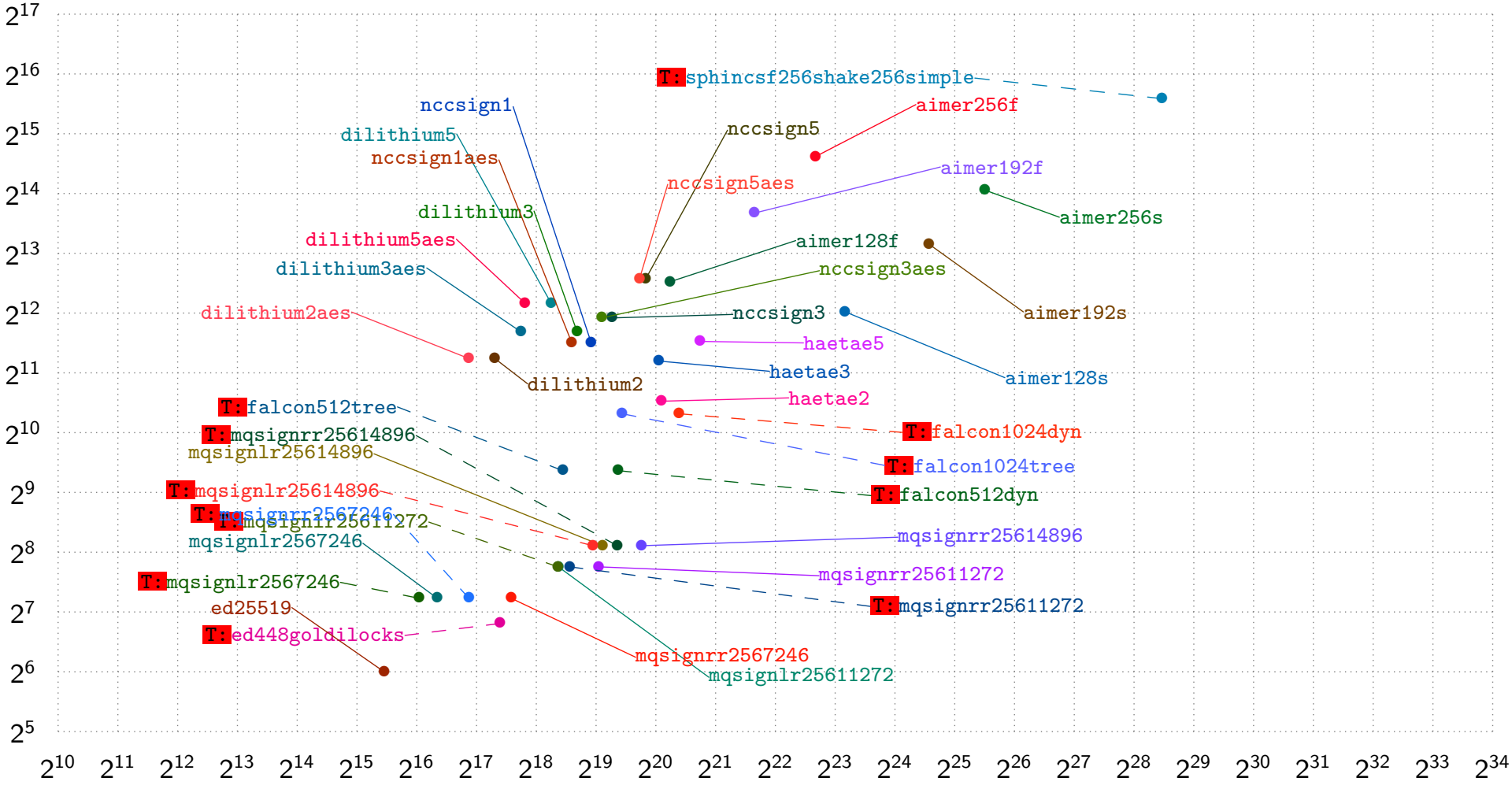

amd64, titan0, crypto_sign, open time, signature size https://bench.cr.yp.to

Horizontal axis: Time (cycles) to generate a message given a signed message (crypto_sign_open). 20241021

Vertical axis: Space overhead (bytes) for signing a long message (at most crypto_sign_BYTES).

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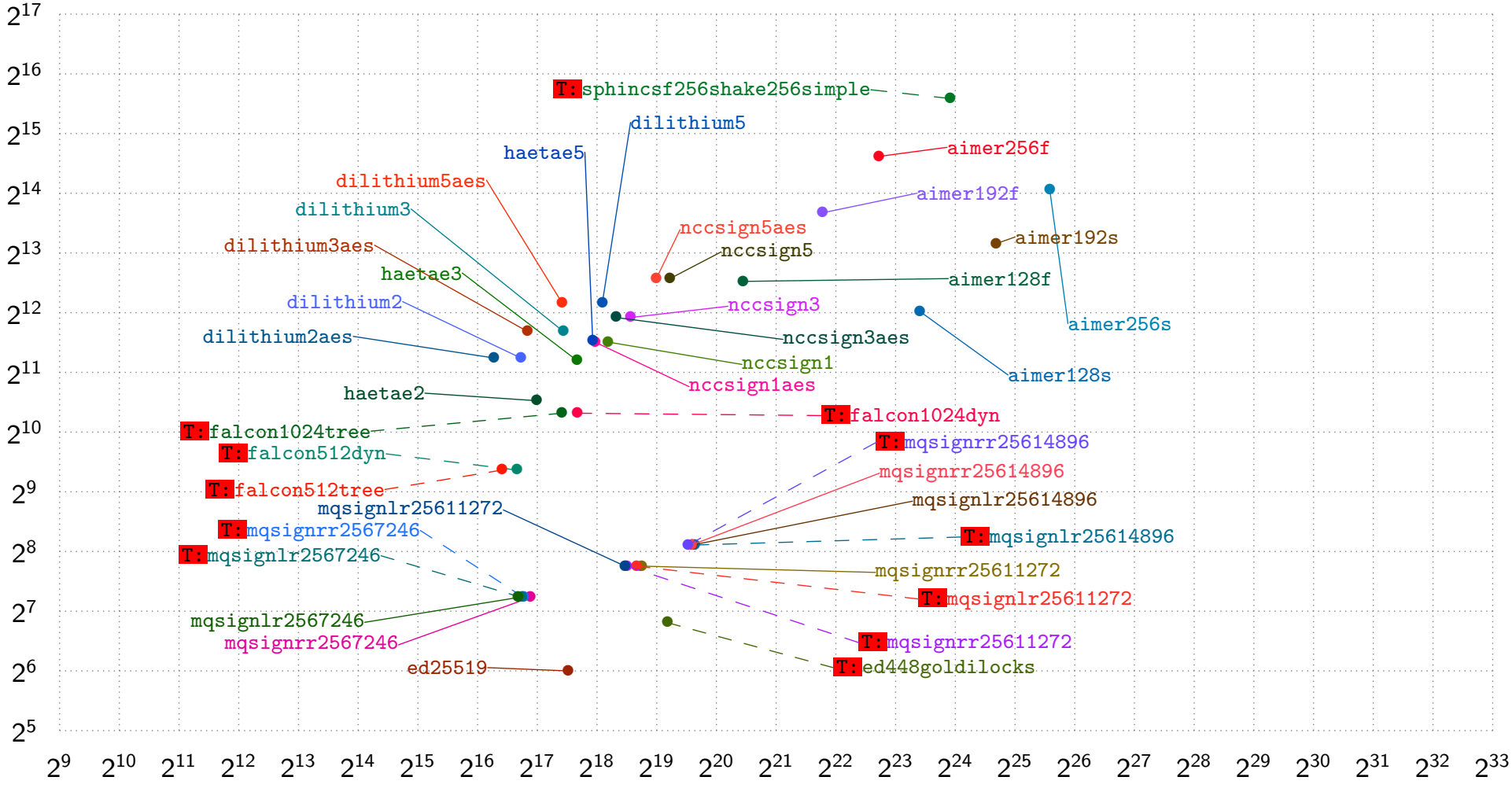

amd64, cezanne, crypto_sign, open time, signature size https://bench.cr.yp.to

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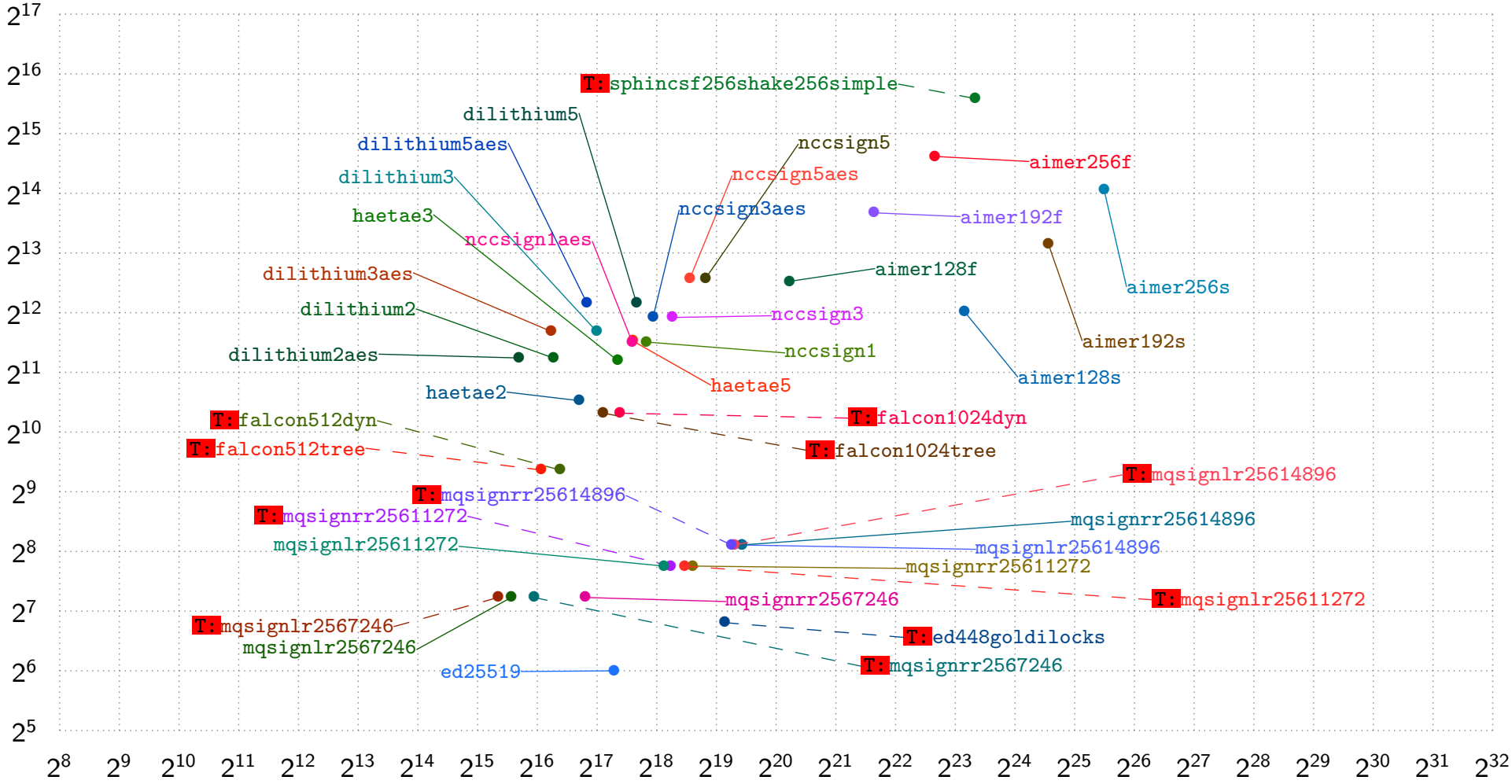

amd64, titan0, crypto_sign, open time, key size https://bench.cr.yp.to

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Vertical axis: Space (bytes) for a public key (crypto_sign_PUBLICKEYBYTES).

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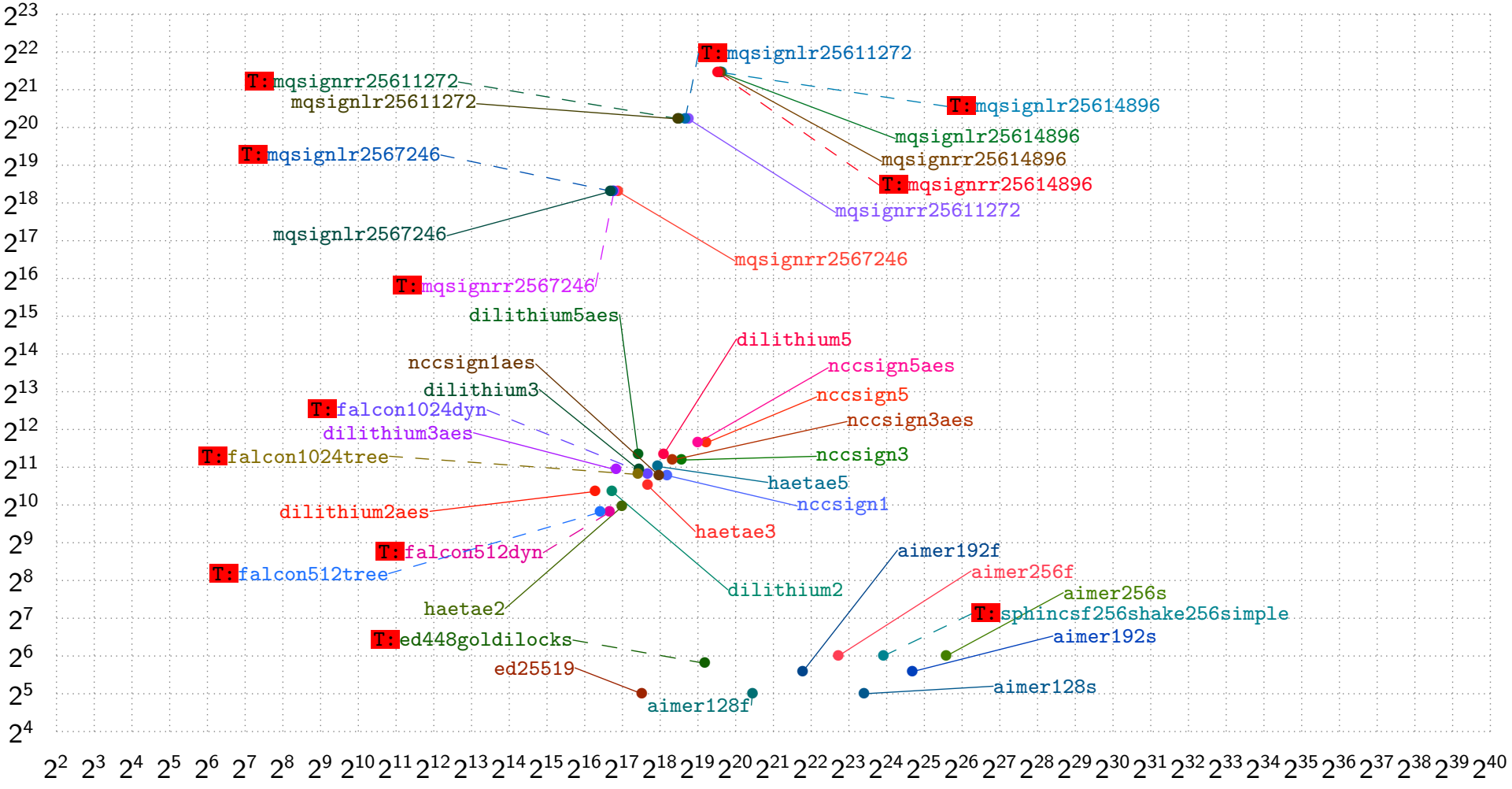

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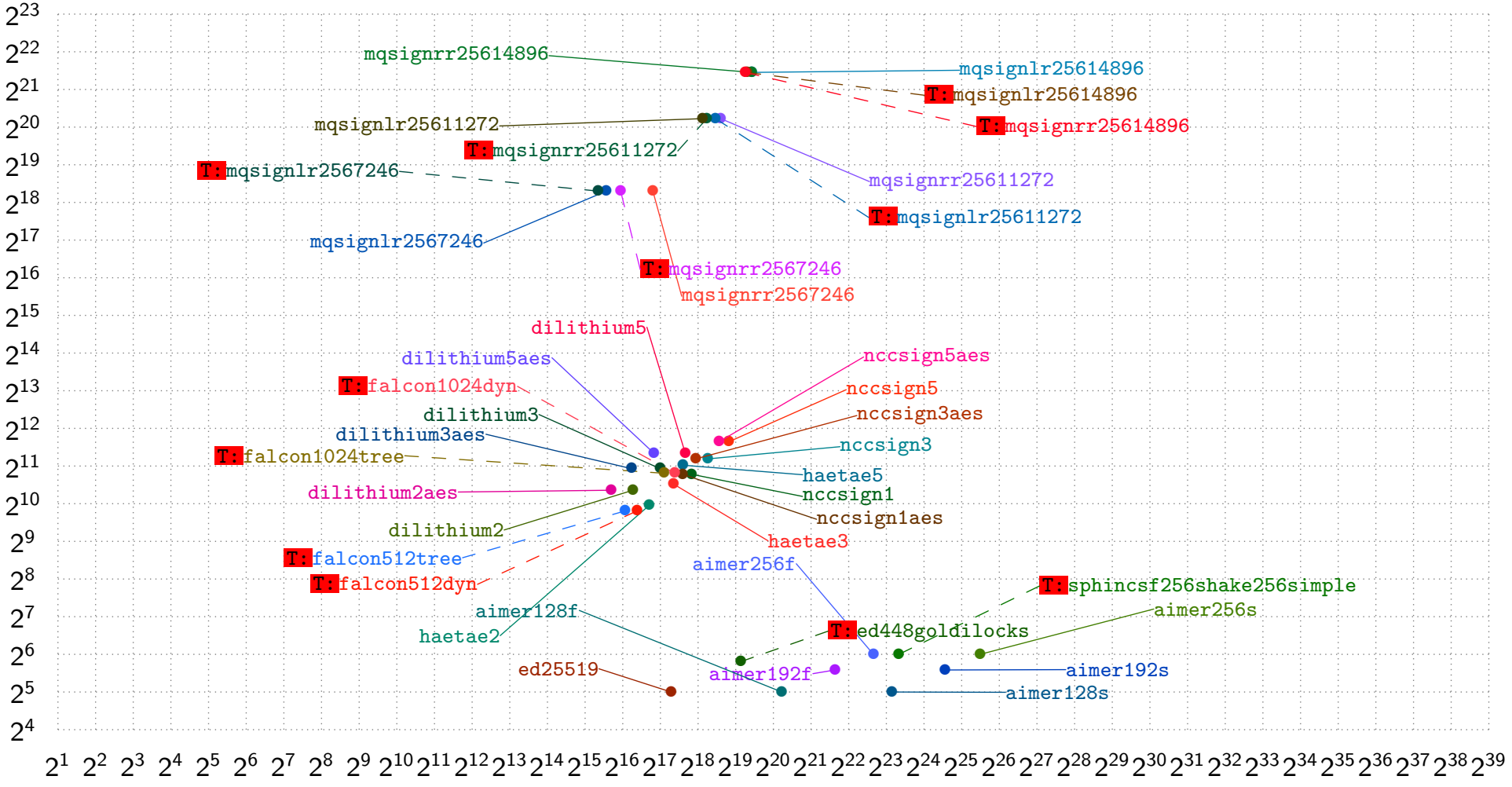


KEMs

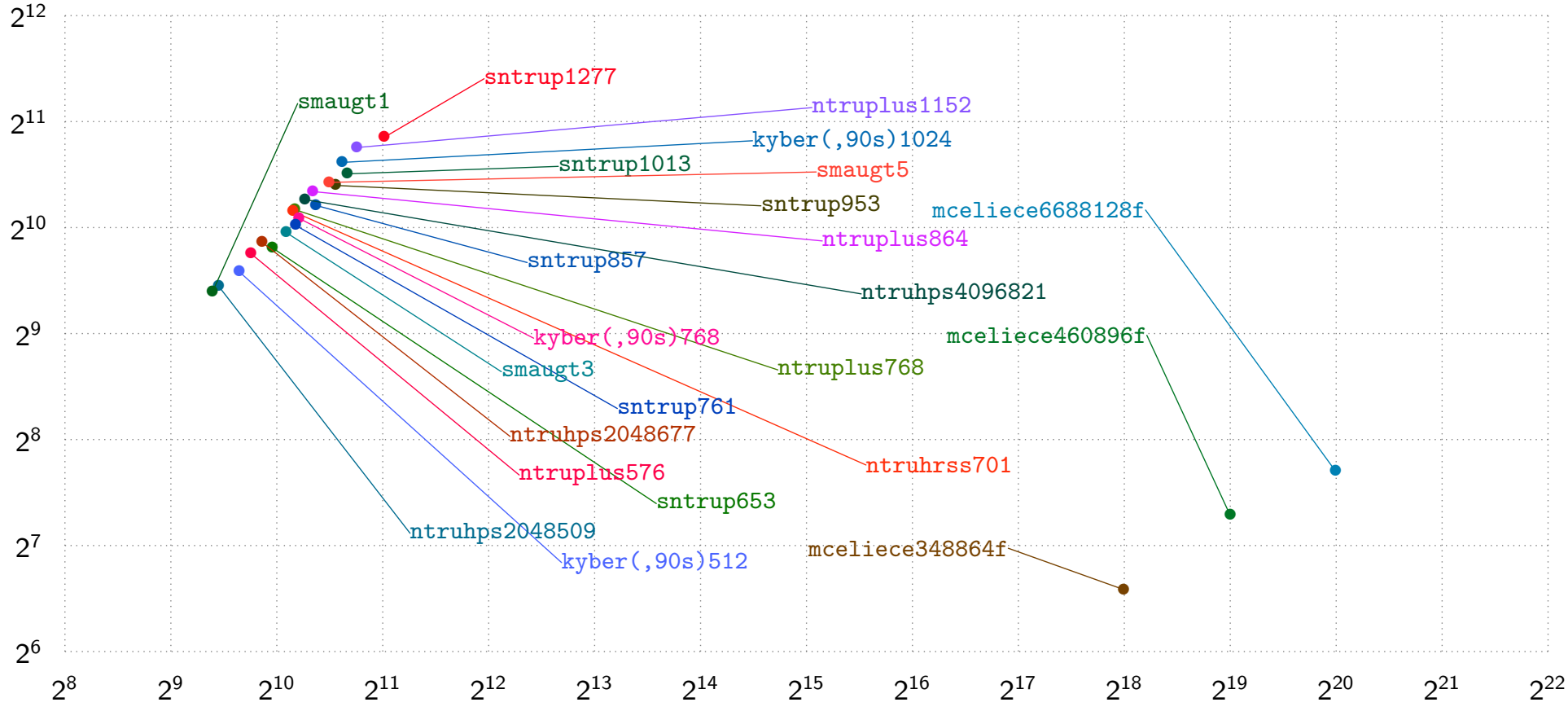
amd64, titan0, crypto_kem, key size, ciphertext size

https://bench.cr.yp.to

20241021

Horizontal axis: Space (bytes) for a public key (crypto_kem_PUBLICKEYBYTES).

Vertical axis: Space (bytes) for a ciphertext (crypto_kem_CIPHERTEXTBYTES).



amd64, cezanne, crypto_kem, key size, ciphertext size
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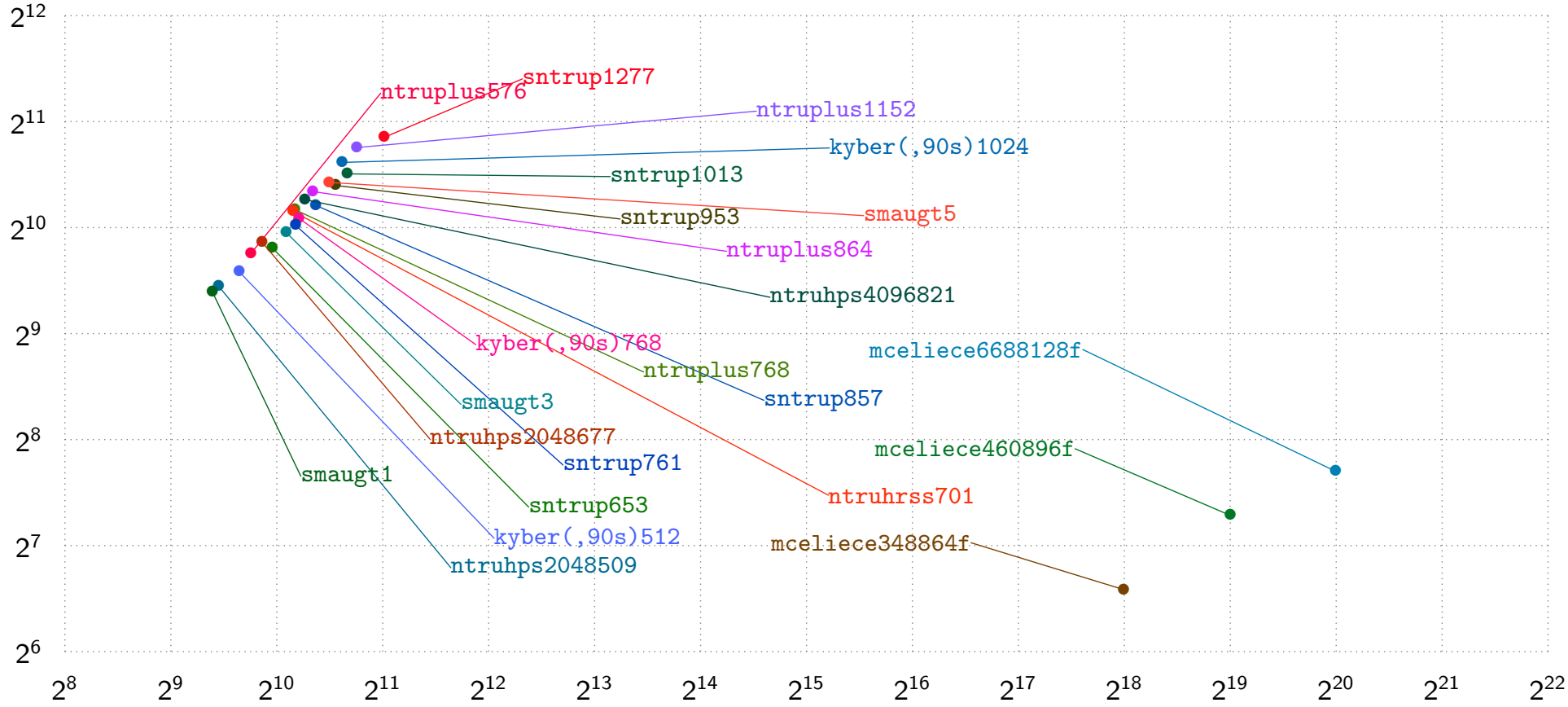
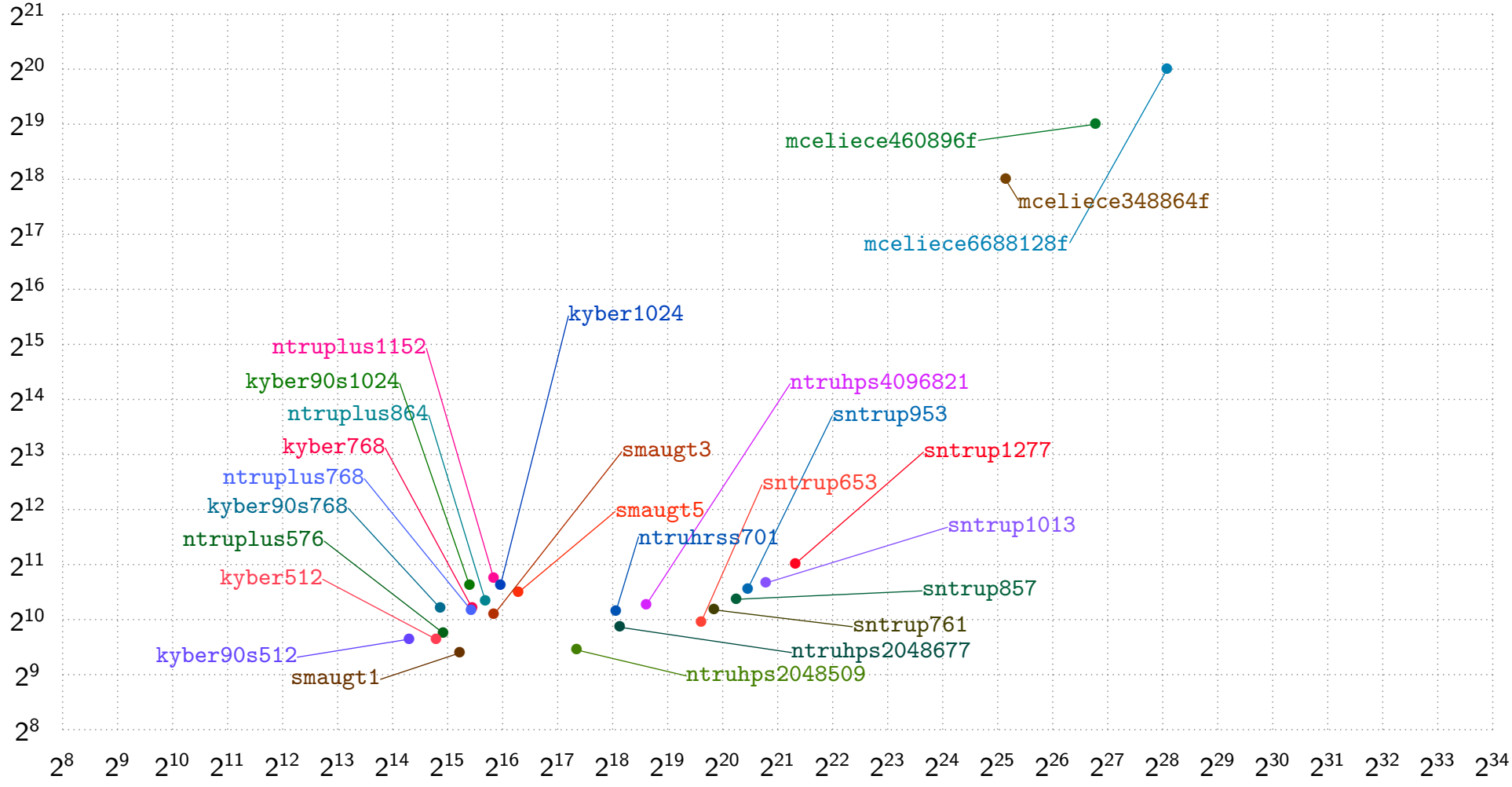
https://bench.cr.yp.to
20241021



amd64, titan0, crypto_kem, keypair time, key size https://bench.cr.yp.to
Horizontal axis: Time (cycles) to generate a public key (crypto_kem_keypair). 20241021
Vertical axis: Space (bytes) for a public key (crypto_kem_PUBLICKEYBYTES).



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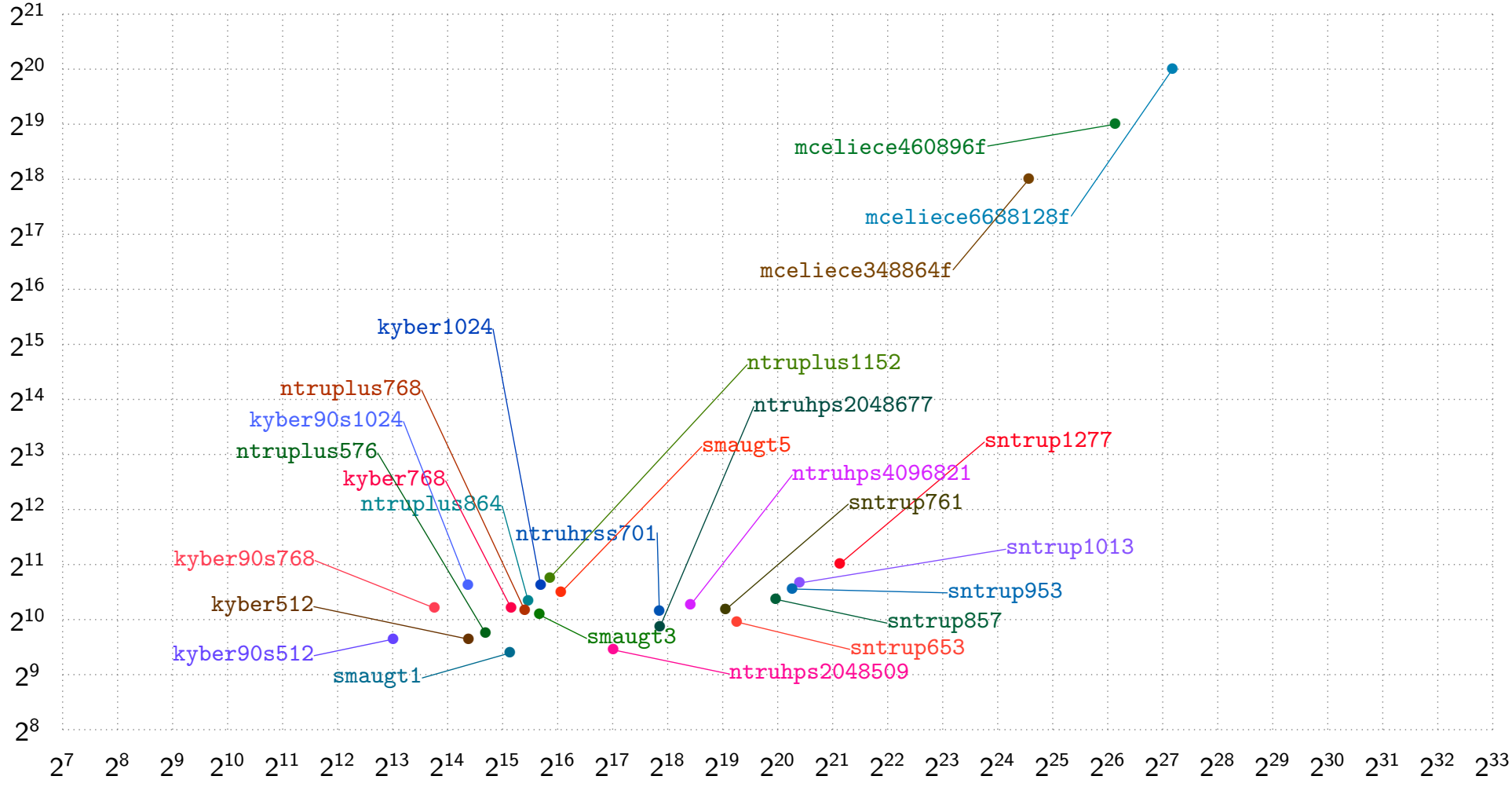
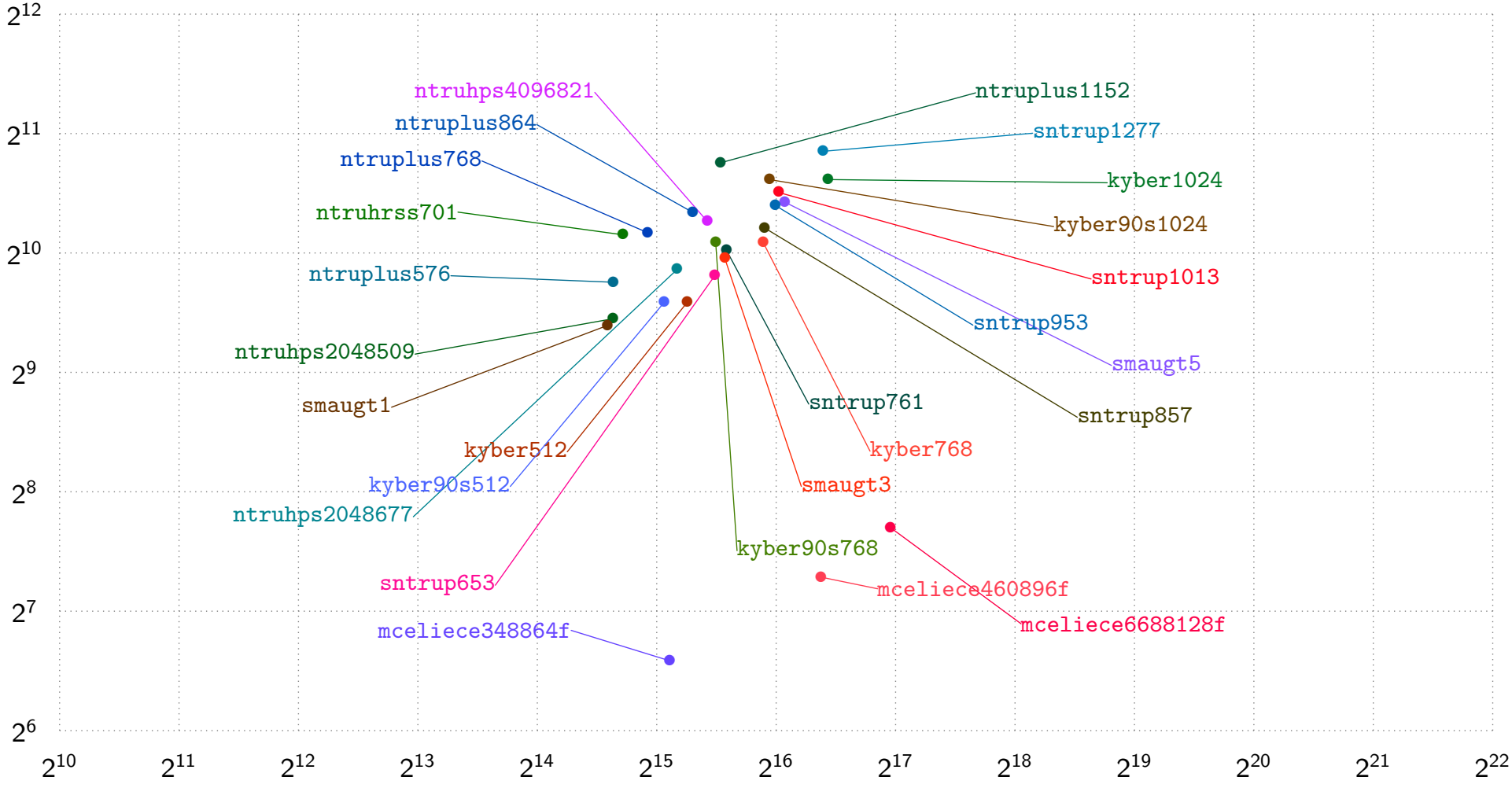


amd64, titan0, crypto_kem, enc time, ciphertext size https://bench.cr.yp.to
Horizontal axis: Time (cycles) to generate a ciphertext given a public key (crypto_kem_enc). 20241021
Vertical axis: Space (bytes) for a ciphertext (crypto_kem_CIPHERTEXTBYTES).



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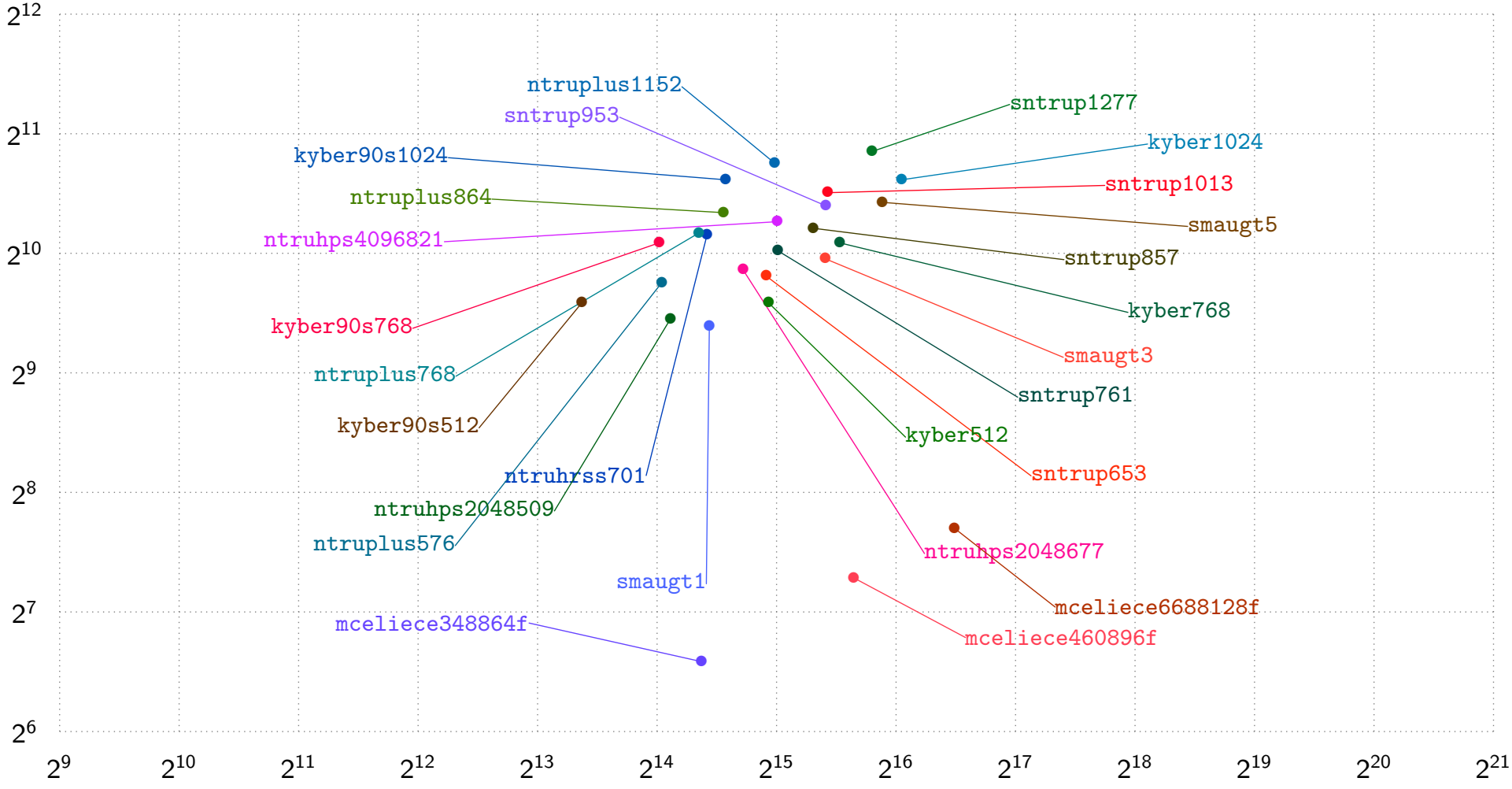
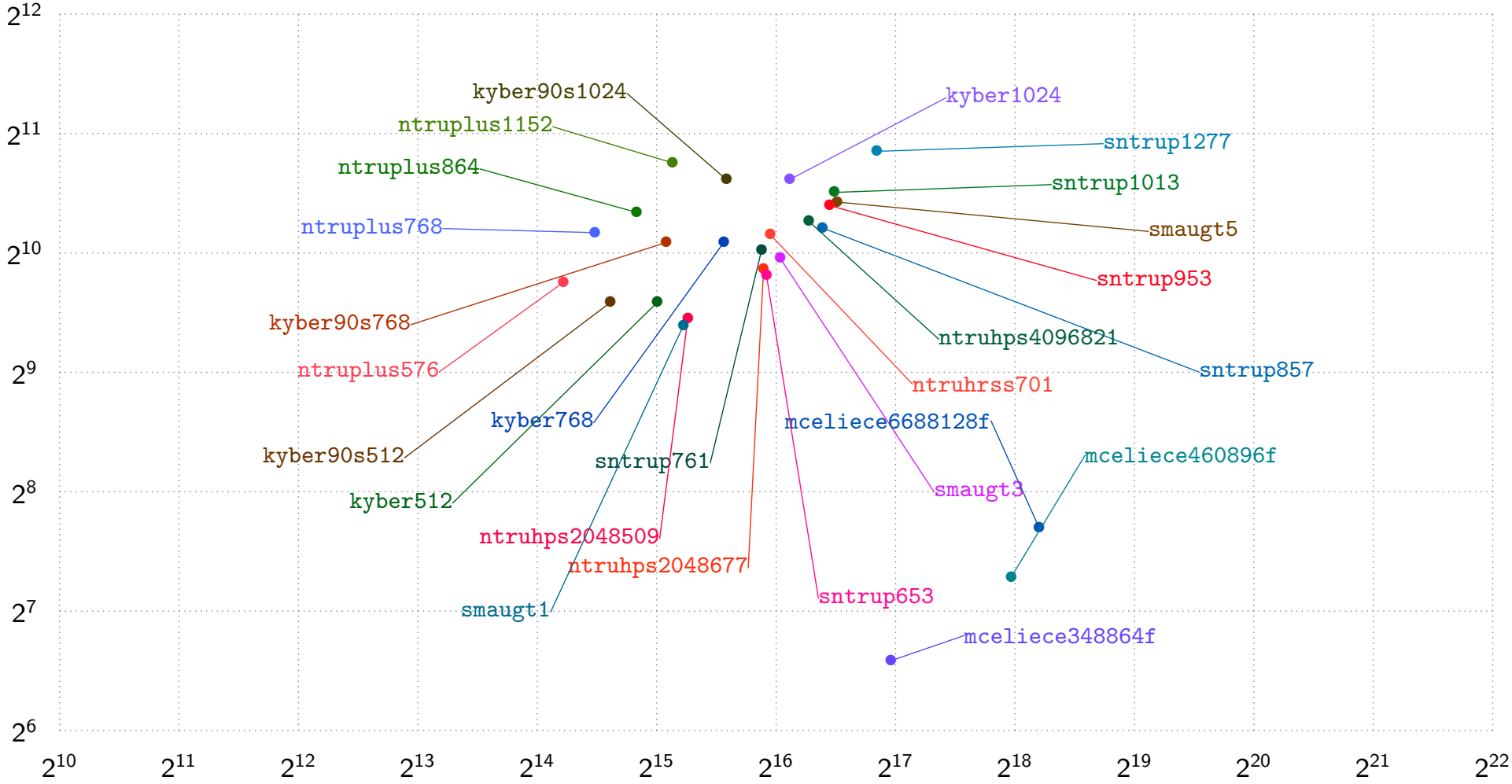


amd64, titan0, crypto_kem, dec time, ciphertext size https://bench.cr.yp.to
Horizontal axis: Time (cycles) to generate a session key given a ciphertext (crypto_kem_dec). 20241021
Vertical axis: Space (bytes) for a ciphertext (crypto_kem_CIPHERTEXTBYTES).



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