From: Moody, Dustin (Fed)
To: Perlner, Ray A. (Fed)
Subject: SIDH quantum security
Date: Wednesday, June 28, 2017 6:10:07 PM

The relevant argument comes from:

https://eprint.iacr.org/2011/506.pdf

TOWARDS QUANTUM-RESISTANT CRYPTOSYSTEMS FROM SUPERSINGULAR ...

eprint.iacr.org

TOWARDS QUANTUM-RESISTANT CRYPTOSYSTEMS FROM SUPERSINGULAR ELLIPTIC CURVE ISOGENIES LUCA DE FEO, DAVID JAO, AND JER OME PL^ UT^ Abstract. We present new candidates ...

Section 5.1, paragraph 3 (and paragraph 2).
It does seem all they do is make a general call to the claw algorithm to get the O(p^1/6).

Dustin