Moëloite $Pb_6Sb_6S_{14}(S)_3$

Crystal Data: Orthorhombic. *Point Group*: 222. As very thin needles elongated along [010] and as plumose aggregates to 5 mm.

Physical Properties: *Cleavage*: n.d. *Fracture*: n.d. *Tenacity*: Flexible. Hardness = n.d. D(meas.) = n.d. D(calc.) = 5.86

Optical Properties: [Opaque.] *Color*: Grayish black to brownish red, white in reflected light. *Streak*: Brown. *Luster*: Metallic.
Optical Class: *Anisotropism*: moderate, colorless.
R_1-R_2: (470) 40.0-37.8 $(26.6\text{-}24.2)_{oil}$, (546) 38.8-36.5 $(24.9\text{-}22.8)_{oil}$, (589) 38.6-36.7 $(23.4\text{-}21.4)_{oil}$, (650) 36.5-34.7 $(21.2\text{-}20.1)_{oil}$

Cell Data: *Space Group*: $P2_122_1$. a = 15.328(3) b = 4.0400(8) c = 23.054(5) Z = 2

X-ray Powder Pattern: Ceragiola marble quarry, near Seravezza, Tuscany, Italy.
3.427 (100), 3.047 (85), 2.017 (80), 2.779 (70), 2.844 (58), 3.724 (55), 1.733 (50

Chemistry:

	(1)
Pb	49.94
Sb	29.47
S	21.76
Total	101.17

(1) Ceragiola marble quarry, Tuscany, Italy; average electron microprobe analysis; corresponding to $Pb_{6.04}Sb_{6.06}S_{17}$.

Occurrence: A hydrothermal mineral associated with metamorphism, in small cavities in marble.

Association: Sulfur, pyrite, enargite.

Distribution: From the Ceragiola marble quarry, near Seravezza, Tuscany, Italy.

Name: Honors Dr. Yves *Moëlo* (Nantes, France), specialist in sulfosalt mineralogy, who first synthesized this compound.

Type Material: Museum of Natural History, Pisa, Italy.

References: (1) Orlandi, P., A. Meerschaut, P. Palvadeau, and S. Merlino (2002) Lead-antimony sulfosalts from Tuscany (Italy). V. Definition and crystal structure of moëloite, $Pb_6Sb_6S_{14}(S_3)$, a new mineral from the Ceragiola marble quarry. Eur. J. Mineral., 14, , 599-606.