

## THADDEUS BANACHIEWICZ

1882 - 1954



SCOTT #2565

March 25, 1983

Thaddeus Banachiewicz was born in Warsaw, Poland on February 13, 1882. [1]

Banachiewicz was an astronomer who made extensive use of mathematics, specifically, numerical calculus. He worked on astronomy, geodesy, geophysics, mathematics, and mechanics. He was junior assistant at the Warsaw Observatory in 1908 and 1909. He was assistant at the Engelhardt Observatory until 1915. He was then professor of astronomy at the University of Cracow and director of the Cracow Observatory. [1]

Banachiewicz was the founder and editor of the journal *Acta Astronomica*, *Ephemerides of Eclipsing Binaries*, and *Circulaire de l'Observatoire de Cracovie*. [1]

Among Banachiewicz's 240 published papers were the following mathematics related papers: [1]

- On a Particular Case of the Problem of n-Bodies*, 1906
- On the Movement of a Celestial Body with Variable Mass*, 1913
- On the Resolution of the Equation of Gauss in the Determination of a  
Planetary Orbit*, Petrograd, 1916
- Auxiliary Tables for the Resolution of the Equation of Gauss  
 $\sin(z - q) = m \sin^4 z$* , Paris, 1916
- On the Points of Inflection of Generalized Curves of Cassini*, 1921
- Calculation of Precession in Orthogonal Coordinates*, 1923
- On a Theorem of Legendre Relating to the Determination of Cometary Orbits*,  
1924
- On a Theorem of Poincaré Relative to Ocean Tides*, Cracow, 1927
- New Ways of Mathematical Astronomy*, 1927
- Determination of the Constants of the Position of an Orbit From Its Ecliptic  
Elements*, 1928
- Arithmetical Methods for the Correction of Orbits*, 1929
- Calculating Determinants with the Aid of Cracovians*, 1937
- Control of Operations With Cracovians*, 1938
- Method for the Numerical Resolution of Linear Equations*, 1938
- Principles of a New Technique for the Method of Least Squares*, 1938
- On the Rotations of a Space of 4-Dimensions*, 1938
- An Outline of the Cracovian Algorithm of the Method of Least Squares*, 1942
- On the Computation of Inverse Arrays*, 1948
- Improvement of a 9 Cosine Table of Least Squares and Cracovians*, 1948
- The Precision of a Provisional Orbit*, 1950
- On the General Least Squares Interpolation Formula*, 1950
- The Cracovian Calculus*, Warsaw, 1959

Thaddeus Banachiewicz died in Cracow, Poland on November 17, 1954. [1]

Banachiewicz's picture appears on the bister (dark brown) and brown 25.00 zloty Poland, Scott #2565 issued on March 25, 1983. [2]

NOTE: Cracovians are the same as matrices except for the rule of composition. A Cracovian product  $A B$  is the same as a matrix product  $A^T B$ . ( They are named for Cracow, Poland.) [3]

#### REFERENCES:

- [1] "Thaddeus Banachiewicz" biography by J. Witkowski in Dictionary of Scientific Biography, Volume 1, Charles Coulston Gillispie, Princeton University, Editor-in-Chief, Charles Scribner's Sons, New York, 1980, pages 428 -430.
- [2] 2005 Standard Postage Stamp Catalogue, Vol. 5 (P - SL), James E. Kloetzel, Editor, Scott Publishing Co., Sidney OH, 2004, page 318.
- [3] International Dictionary of Applied Mathematics, W. F. Freiberger, Editor-in-Chief, D. Van Nostrand Company, Inc., Princeton, New Jersey, 1960, page 189.

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