

A Spectroscopic Study of Three Issues Cataloged as Blue Colour Errors

Introduction


The goal of this exhibit is to show the role various spectroscopies can play in the identification of philatelic varieties, in this case colour errors. Catalogues that note colour errors are the primary source for most stamp collectors and are of significant importance for philatelists. Often colour errors sell for a significant premium over the normal shade. This exhibit will show the unequivocal value of spectroscopic instruments in either confirming or correcting these listings. An objective method for identifying colour errors can prevent the overpaying for stamps that have been misrepresented.

In this exhibit, three types of spectroscopy are used for a late 1800's and an early 1900's colour error stamp. An additional method is used for a mid 1900's stamp. **For each spectroscopy, it is not important to understand the science behind the graphs but to look for similarities or differences when comparing spectra of the error and the normal stamp.**

Exhibit Plan


- Double pages are used throughout the exhibit.
- Pages 1-2: Introduction, stamps studied, spectroscopy principles.
- Pages 2-4: United States Columbian 1¢, 4¢ Blue and 4c colour error.
- Pages 5-6: **Original Research** on the Newfoundland Trail of the Caribou 15¢ Blue.
- Pages 7-8: **Original Research** on the United Nations First Airmail 15¢ Blue: Introduction and sampling of the two major shades and the less common shade (the error shade).
- Pages 9-10: UN First Airmail 15¢ Blue: X-Ray and FTIR spectra.
- Page 11-12: UN First Airmail 15¢ Blue: Reflectance and Emission spectra.
- Page 13-14: UN First Airmail 15¢ Blue: Certified copies and their spectra
- Page 15-16: UN First Airmail 15c Blue: The Error shade and its spectra.

Expert certified copies and the certificate text are surrounded by this frame colour:




Certificate dates, numbers and descriptions appear along side the copy.


Graph lines from stamps with Prussian blue Pigment are drawn with this colour




Graph lines from stamps with Ultra-marine blue Pigment are drawn with this colour



Graph lines from the error stamps are drawn with this colour



and the stamps are outlined as shown here.



The Stamp Issues



The United States issued 16 stamps to publicize the Chicago's 1893 World Columbian Exposition. The 1¢, 4¢ and 50¢ were in shades of blue. The only major error in the series occurred in the 4¢ that being an error in colour. The blue pigment for the 1¢ was used instead of the usual 4¢ blue pigment. Plates 17 (example above) and 18 are the source of the error.



The Newfoundland Trail of the Caribou was issued in 1919. Each of the 12 denominations commemorated battles Newfoundland troops participated. The Battle of Langemarck (16–18 August 1917) is honoured by the 15¢. Both the Scott and Gibbons Catalogues list a Prussian Blue shade at a significant premium (6x) over the common dark blue (Scott) or indigo shade (SG).



In 1951, the United Nations issued its first set of postal stamps, 11 regular and 4 airmail. The normal shade for the 15¢ airmail stamp is listed as 'blue' in the Scott catalogue and the error as Prussian Blue. The Gibbons and Michel catalogues also report a colour error for the 15¢ airmail. Although the Scott catalog lists the value of the normal shade just above its minimum, the colour error is nearly 100 times the normal shade. The exhibit will study this error in depth.

Spectroscopic Tools Illustrated with the two major pigments of this study

