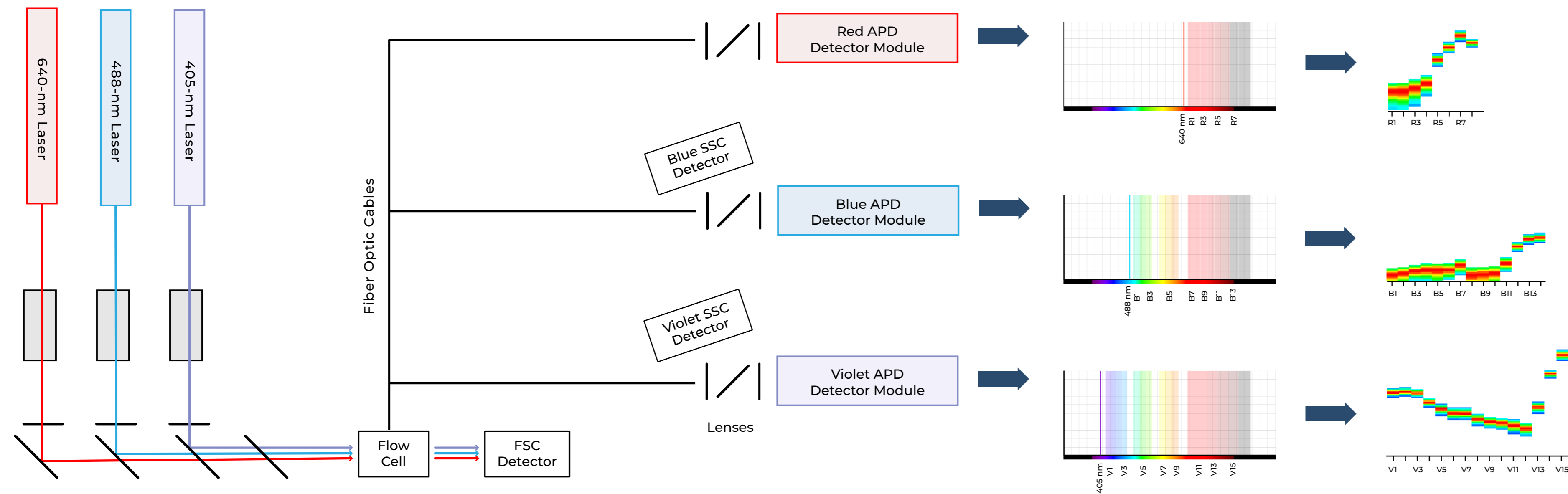
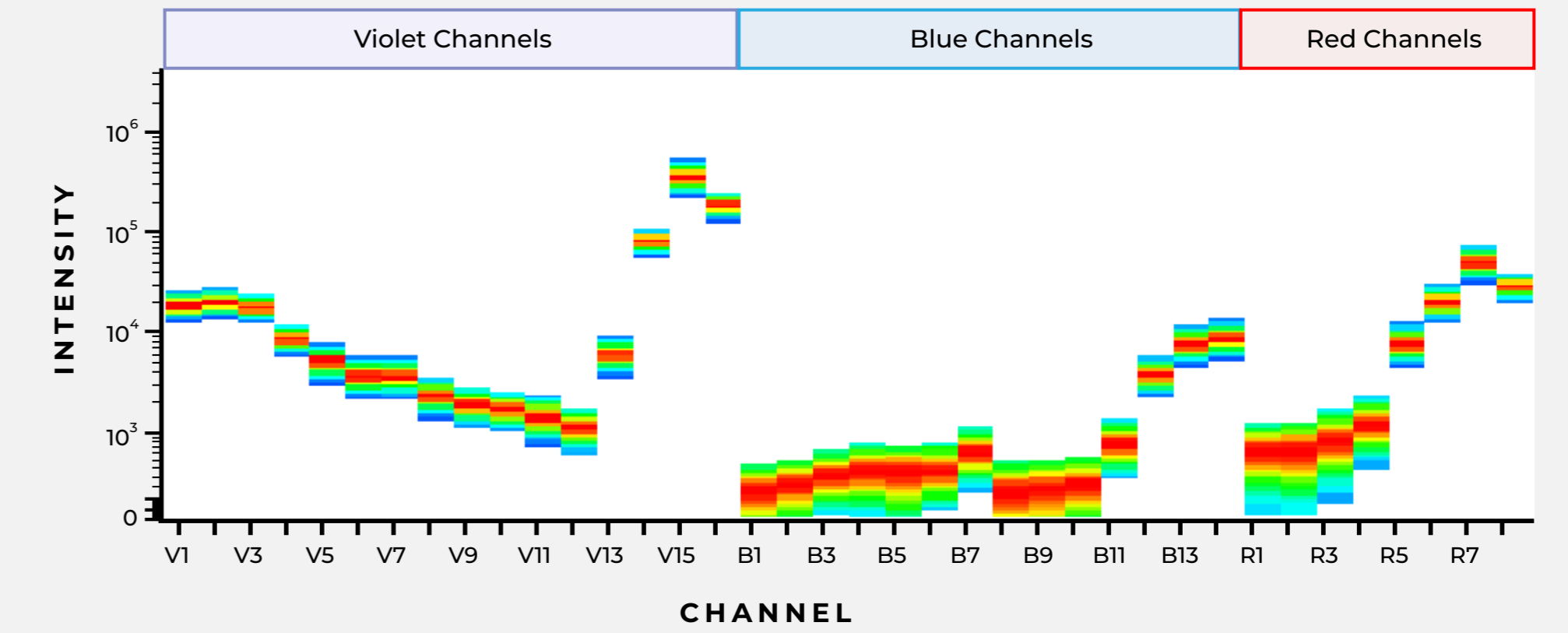


FULL SPECTRUM 3-LASER CYTOMETRY AT A GLANCE

3-Laser Optical Layout



Full Spectrum Signature of Brilliant Violet™ 785



Challenging Dye Combinations

The detection of some fluorochrome combinations by conventional flow cytometry presents a challenge due to high amounts of peak emission overlap (Figure 1). The Cytek® Aurora and Northern Lights systems address this challenge by using differences in **full emission spectrum** signatures across all lasers to clearly resolve these dye combinations, even when conjugated to markers co-expressed on the same cell.

Example: APC and Alexa Fluor 647

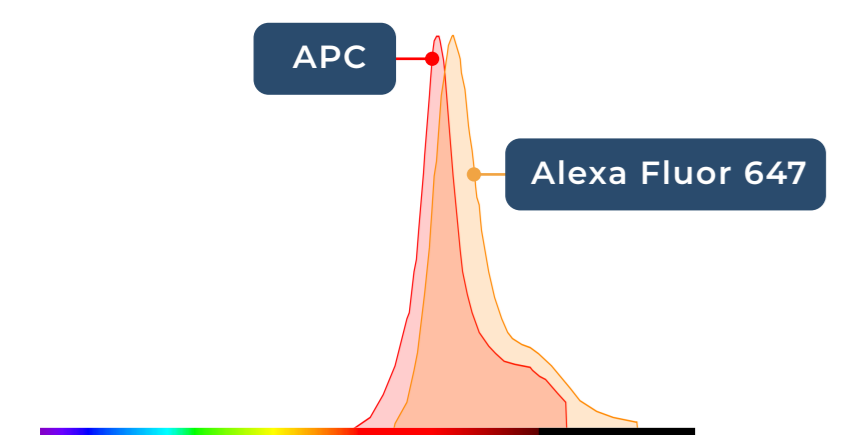


FIGURE 1: Spectrum plots from a conventional spectrum viewer show heavy overlap between APC and Alexa Fluor 647.

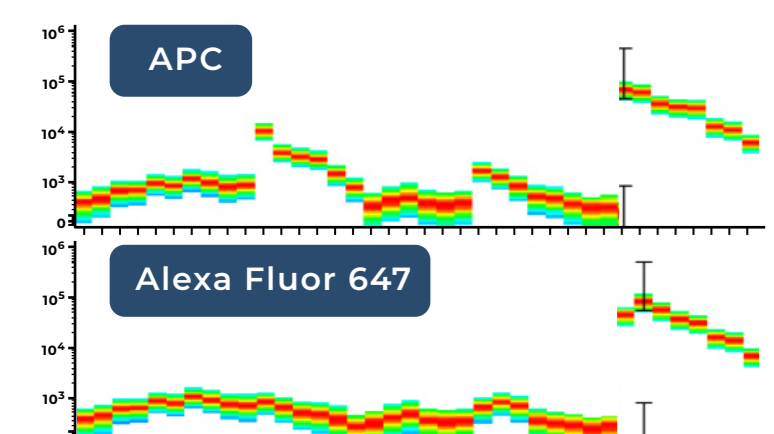


FIGURE 2: Full spectrum plots from a 3-laser Northern Lights show distinct signatures for APC and Alexa Fluor 647.

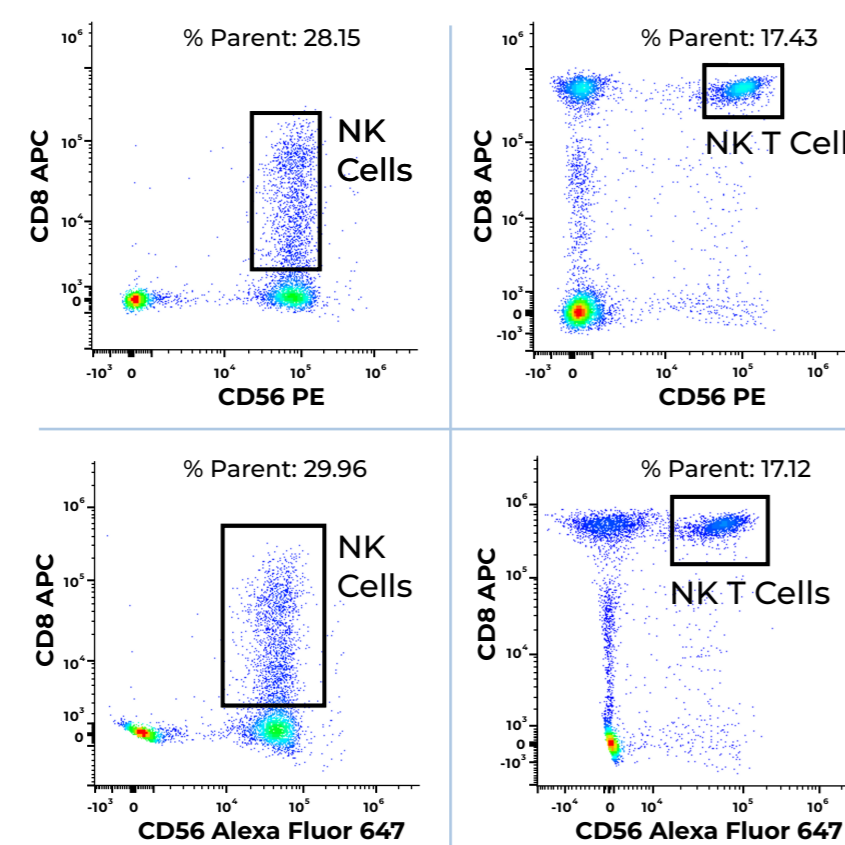
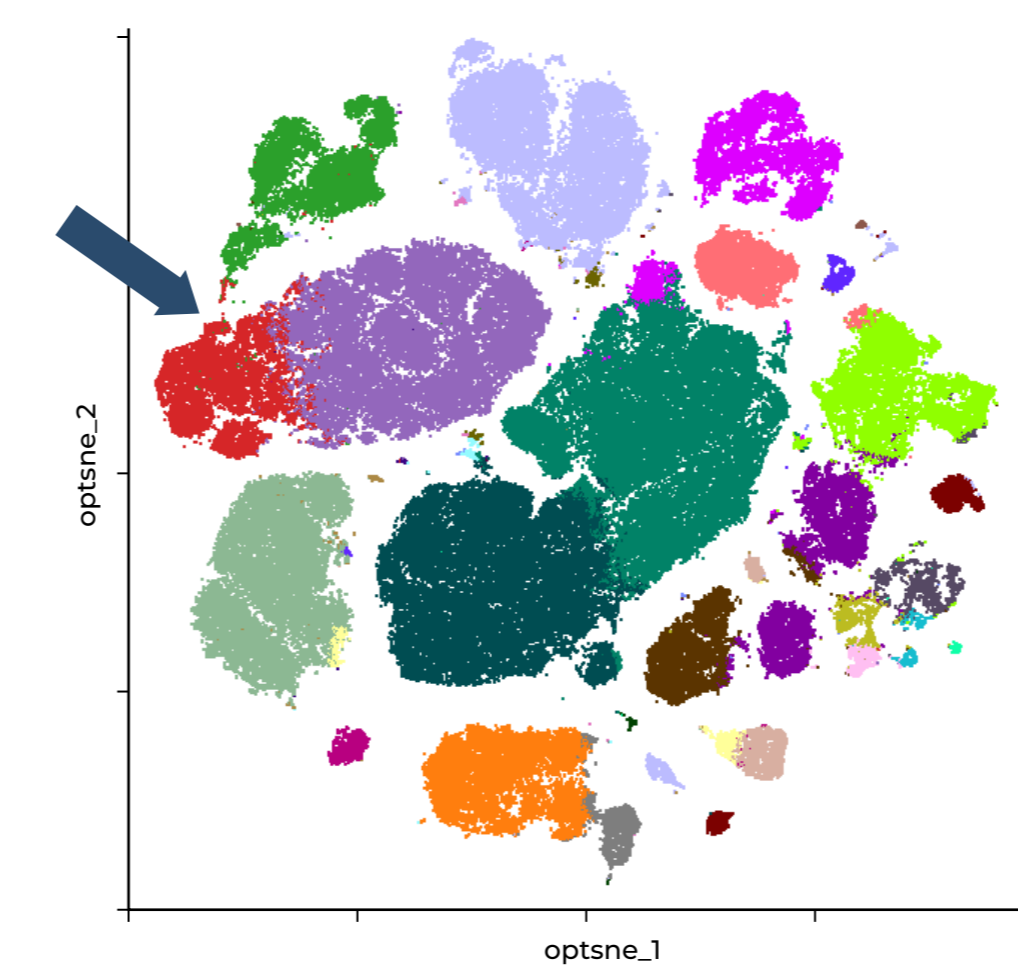


FIGURE 3: Whole blood from a healthy donor was stained, lysed, washed, and analyzed on a 3-laser Northern Lights system. Subsets of NK and NK T cells that co-express CD56 Alexa Fluor 647 and CD8 APC were easily identified. For comparison, blood from the same donor was stained with CD56 PE and CD8 APC and yielded similar percentages of NK and NK T cells, demonstrating that the use of these two highly overlapping dyes did not impact results.

Cytek 24-Color Human Immunophenotyping Panel: Results from 3 Human Whole Blood Donors Visualized using opt-SNE with FlowSOM Cluster Overlays and Marker Expression Heat Map Generated Using OMIQ Software

Approximate Emission Wavelength	Violet	Blue	Red
420	PD-1 Brilliant Violet™ 421		
450	CD123 Super Bright 436		
480	CD16 eFluor® 450		
500	CCR7 BD Horizon™ BV480	CD11c BD Horizon™ BB515	
520	CD14 Brilliant Violet™ 510	CD45RA Alexa Fluor® 488	
550	CD8 Brilliant Violet™ 570	CD3 Alexa Fluor® 532	
570	CD1c Brilliant Violet™ 605	IgD PE/ Dazzle™ 594	
600	CD1c Brilliant Violet™ 605		
660	CD56 Brilliant Violet™ 650	CD95 PE/Cy™5	CD27 APC
680		CD11b PerCP/Cy™5.5	CD57 eFluor® 660
700	CD19 Brilliant Violet™ 711	TCRγδ PerCP-eFluor® 710	CD127 BD Horizon™ APC-R700
750	CD4 Brilliant Violet™ 750		
780	CD28 Brilliant Violet™ 785	CD38 PE/Cy™7	HLA DR APC/ Fire™750

opt-SNE with FlowSOM Cluster Overlays, 3 Donors Concatenated



Learn more about OMIQ analysis software at omiq.ai

