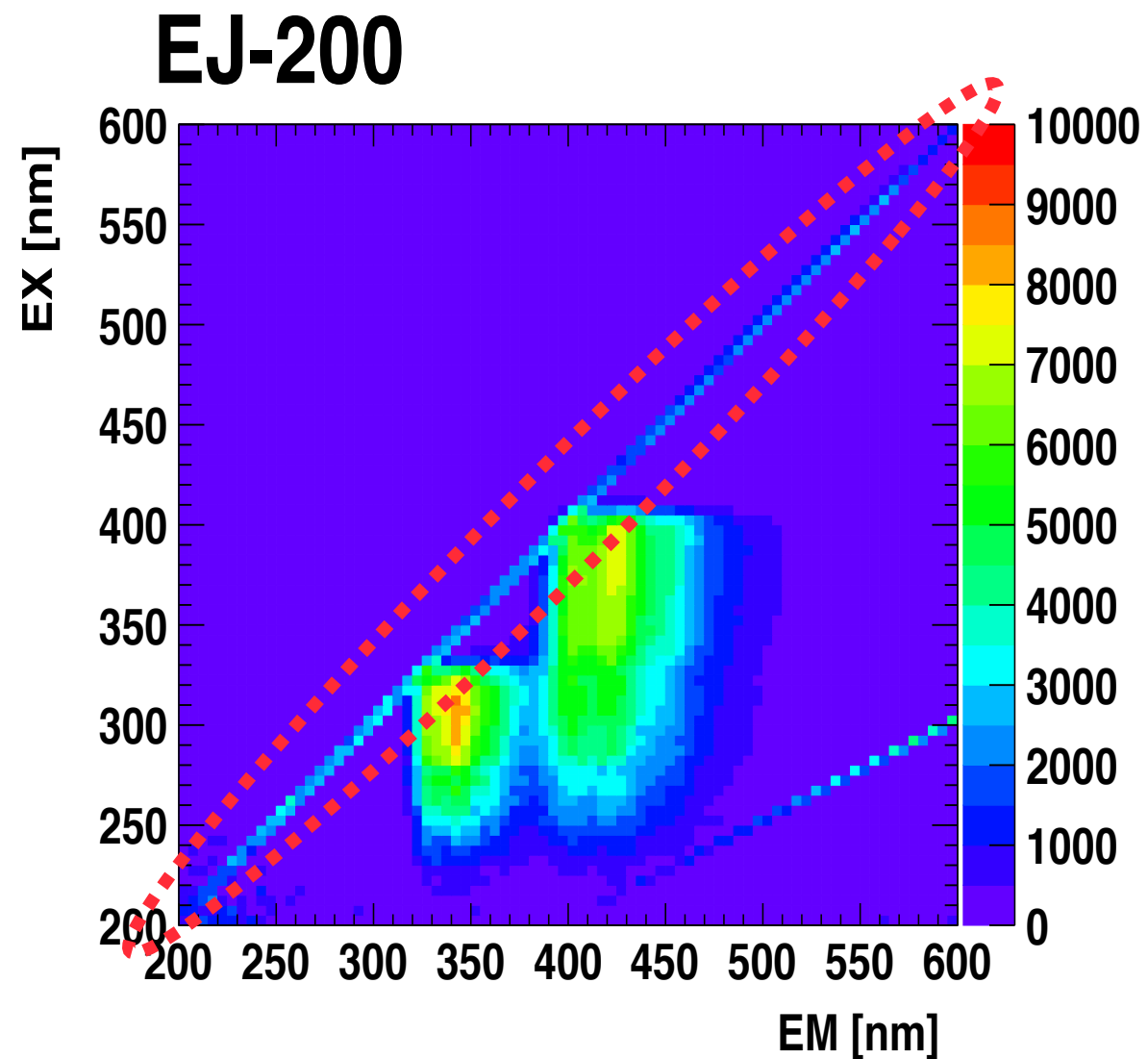


Hanul meeting

**ELJEN Scintillator
Emission & Absorption spectra**

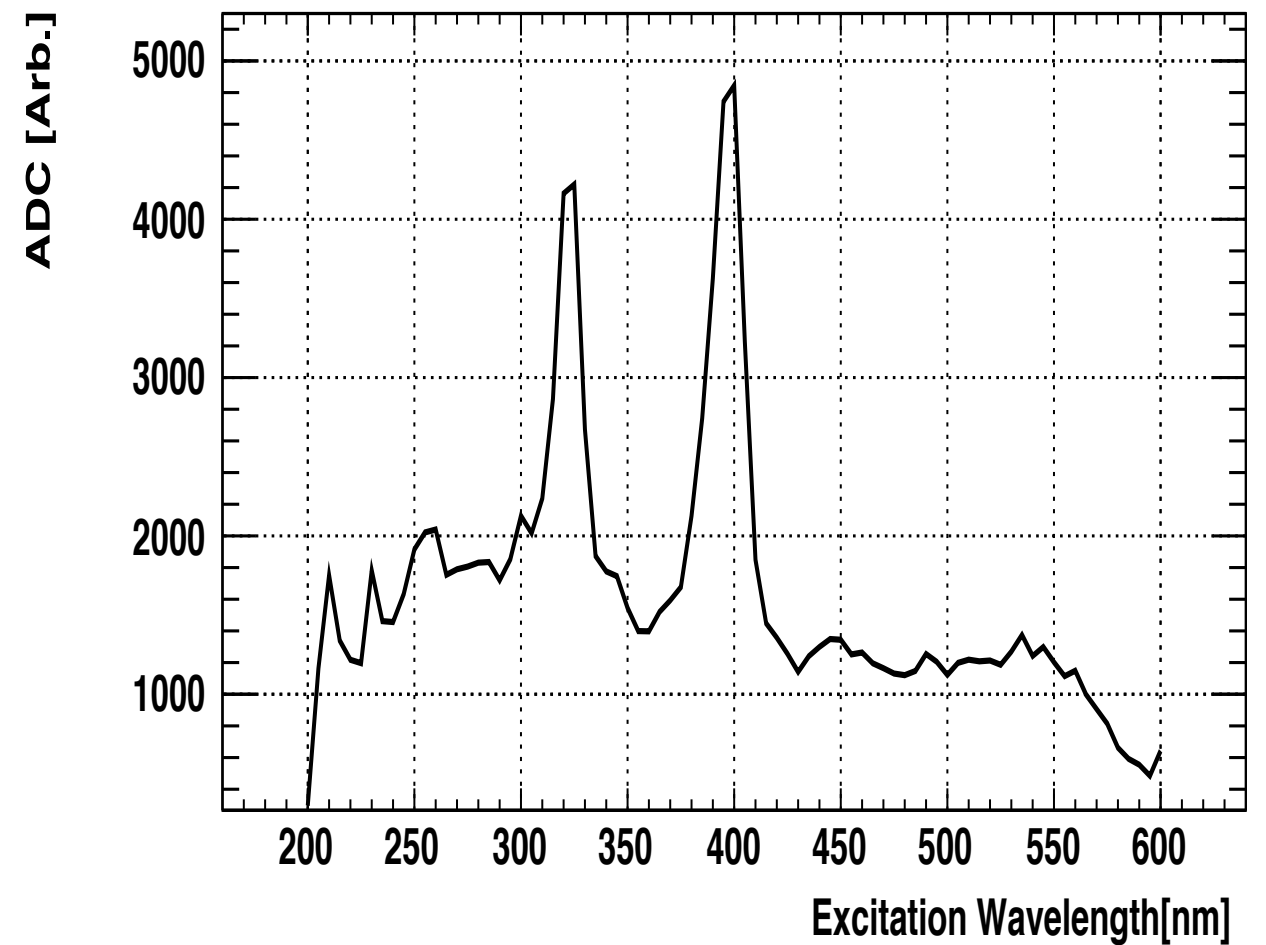
**Korea Univ.
Wooseung Jung**

BACKGROUND STUDY

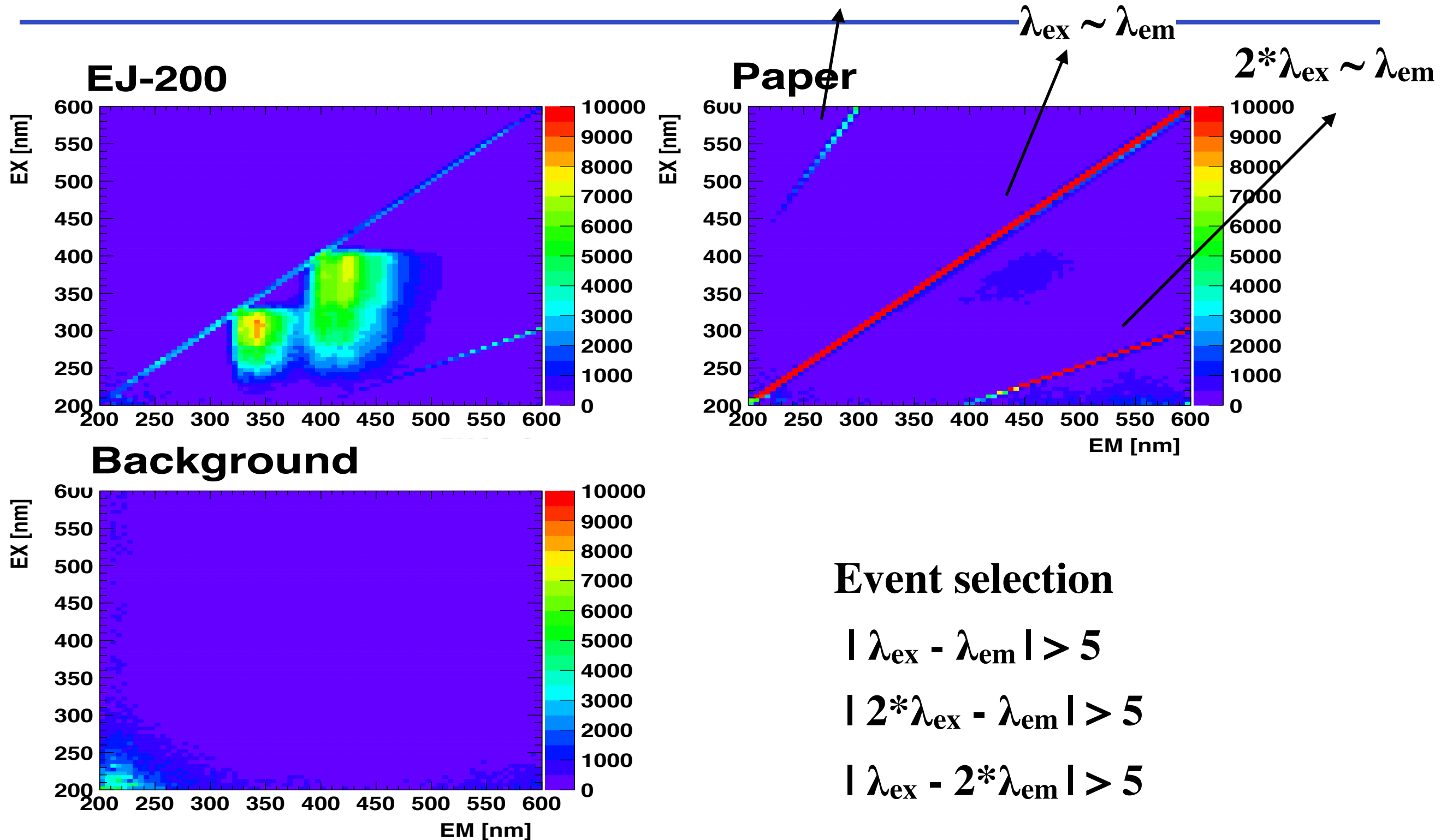


$$|\lambda_{\text{ex}} - \lambda_{\text{em}}| \leq 5$$

Reflection component

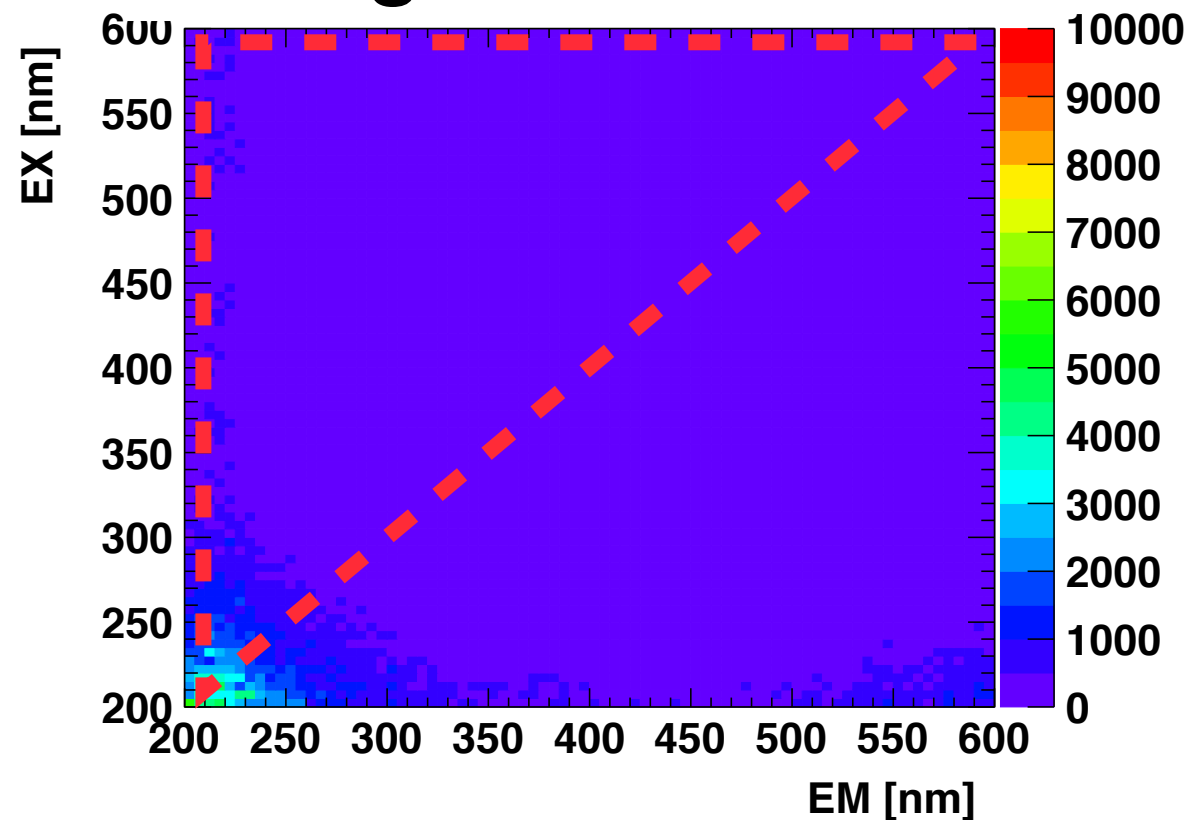


BACKGROUND STUDY $\lambda_{\text{ex}} \sim 2 * \lambda_{\text{em}}$

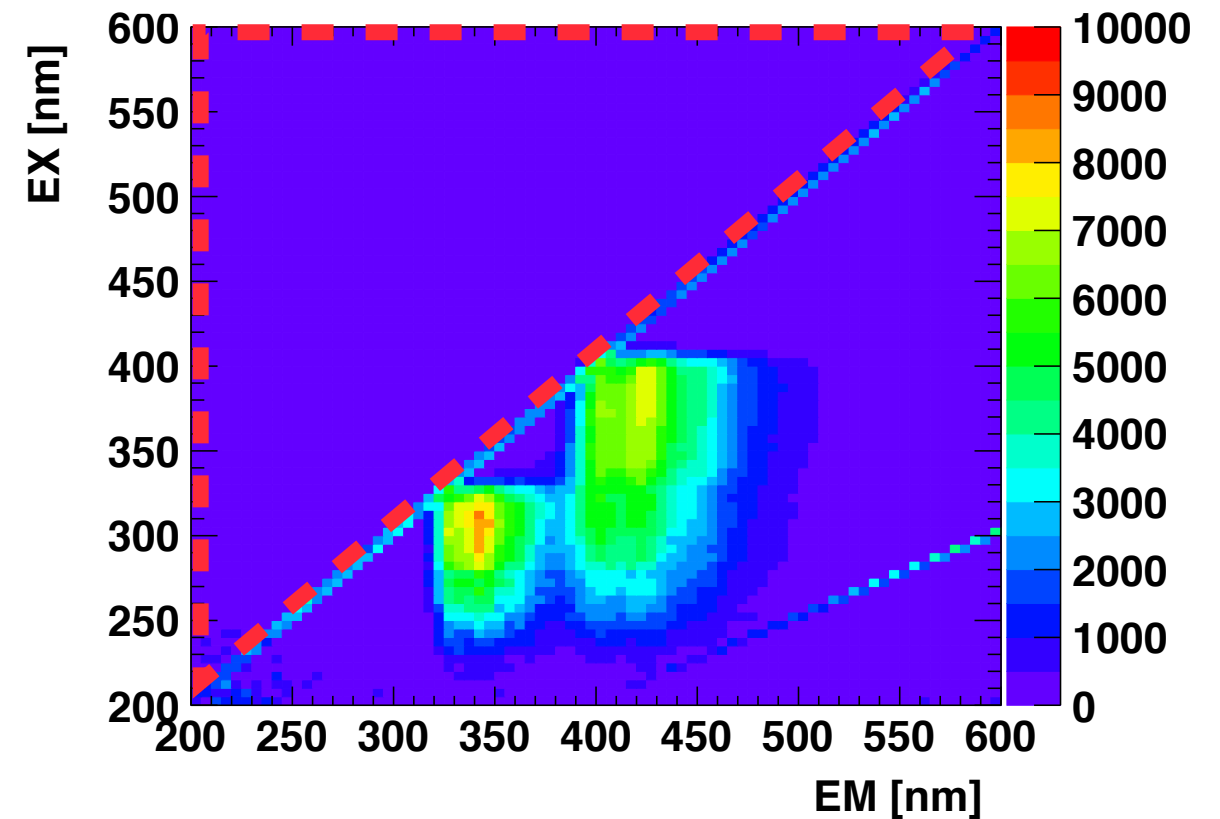


BACKGROUND NORMALIZATION

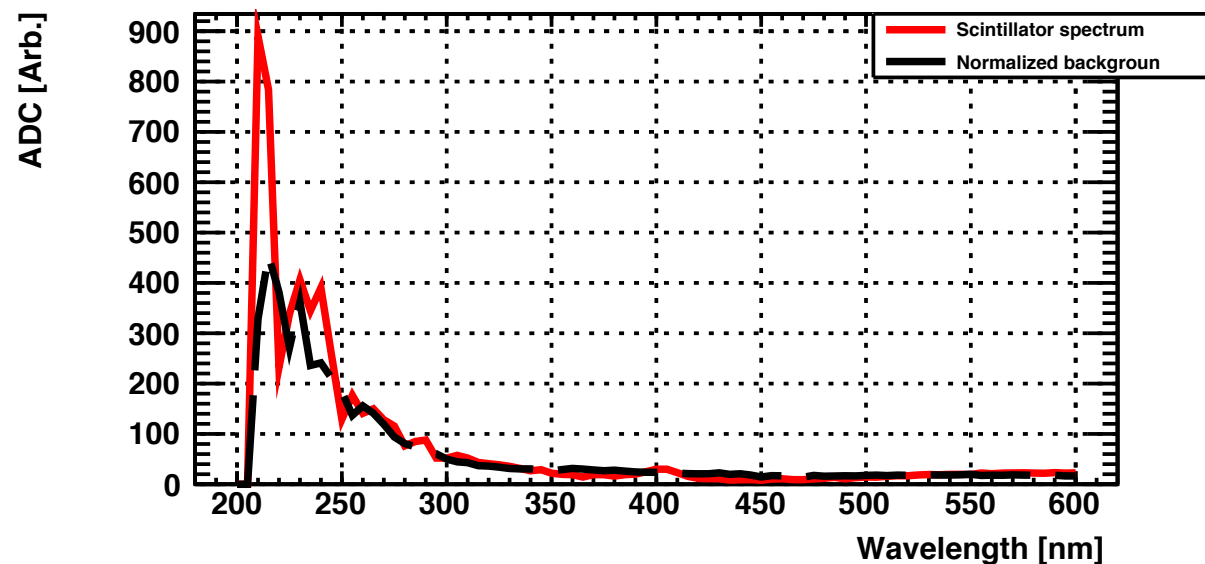
Background



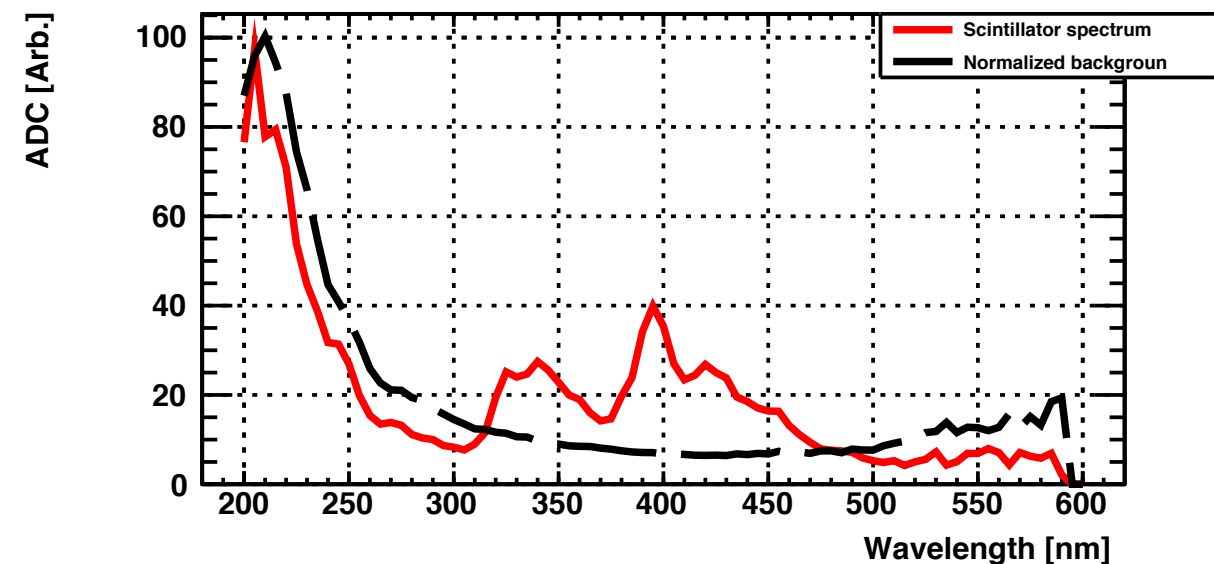
EJ-200



Excitation Background

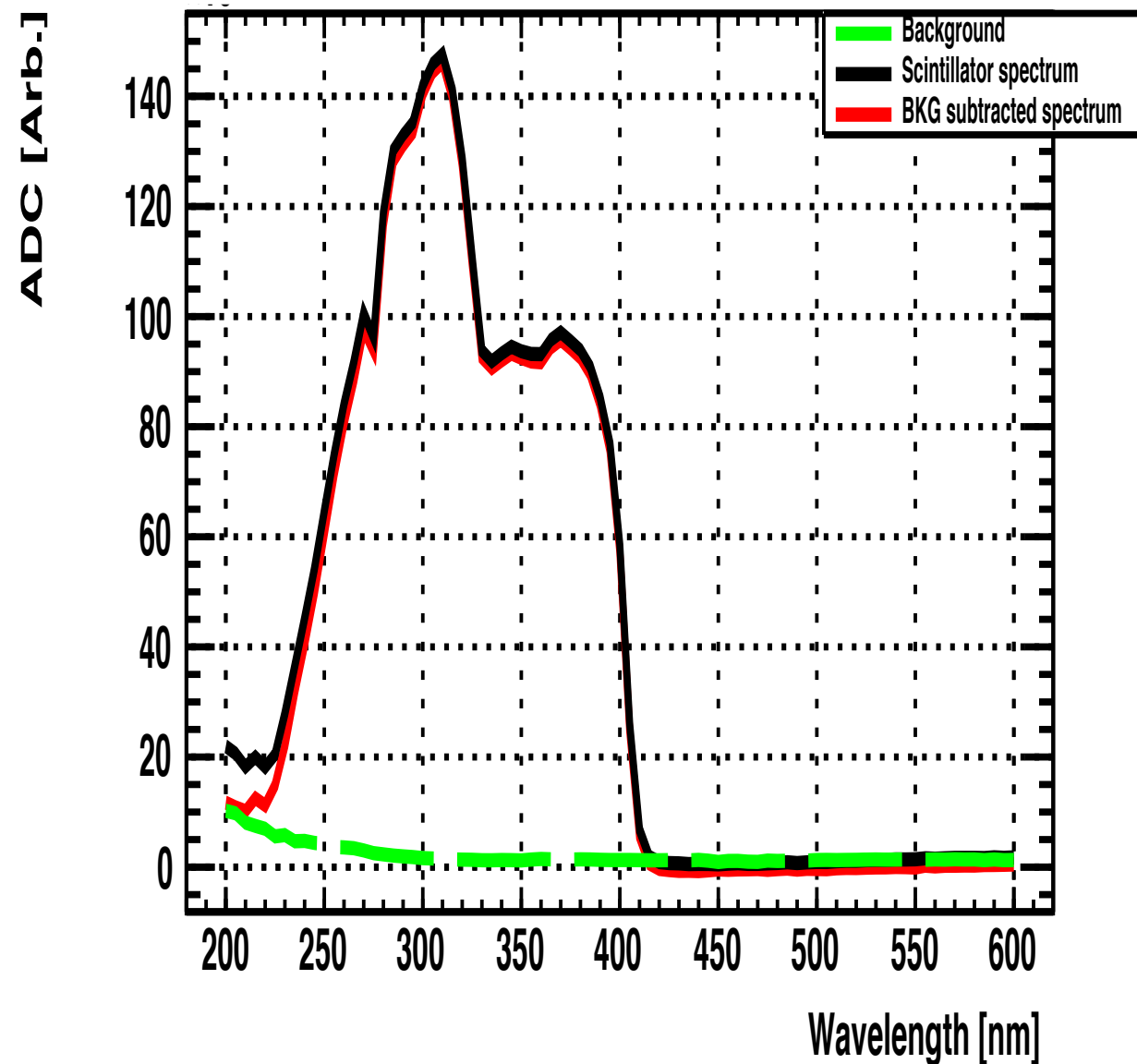


Emission Background

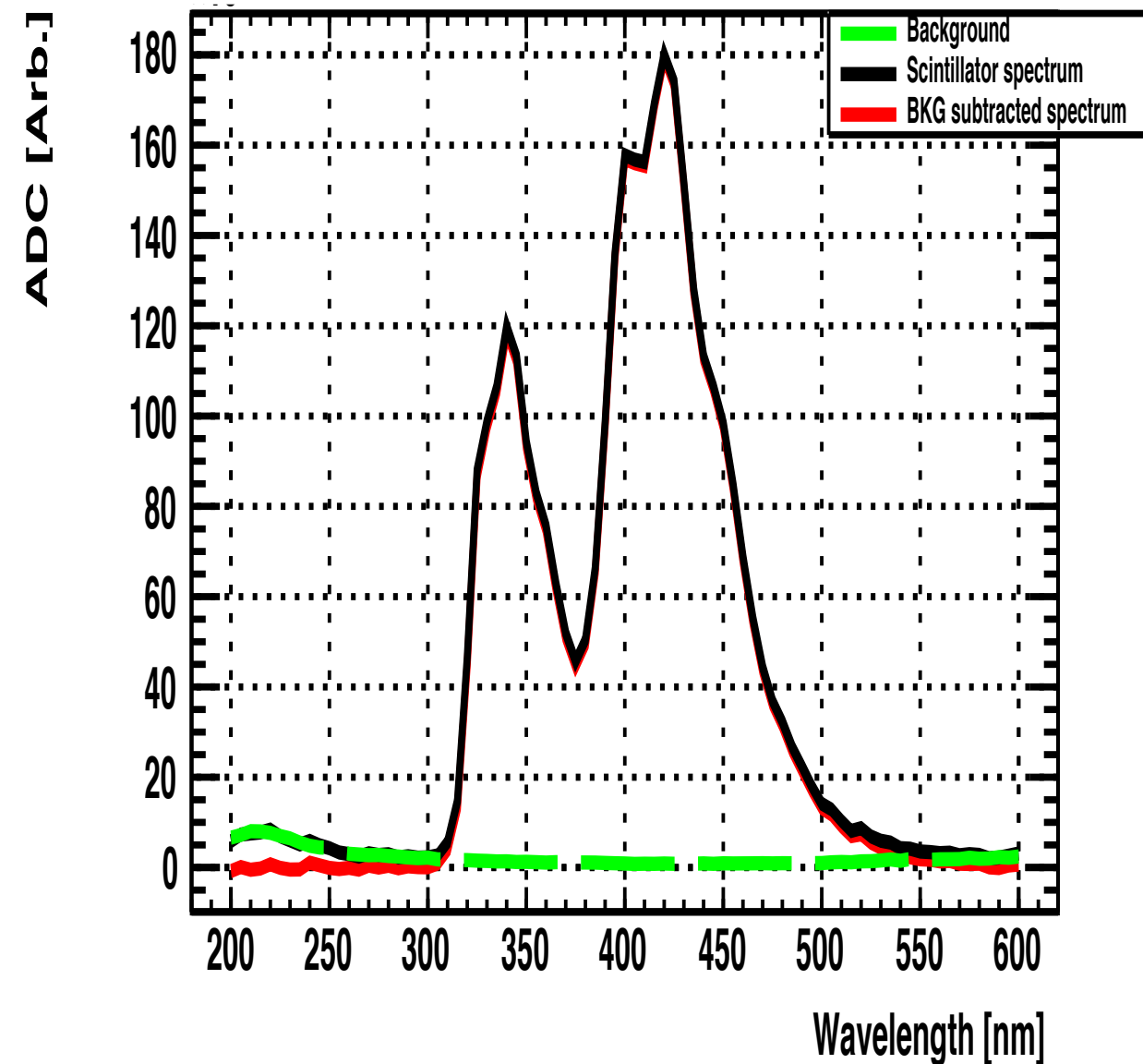


BKG SUBTRACTION

Absorption spectrum

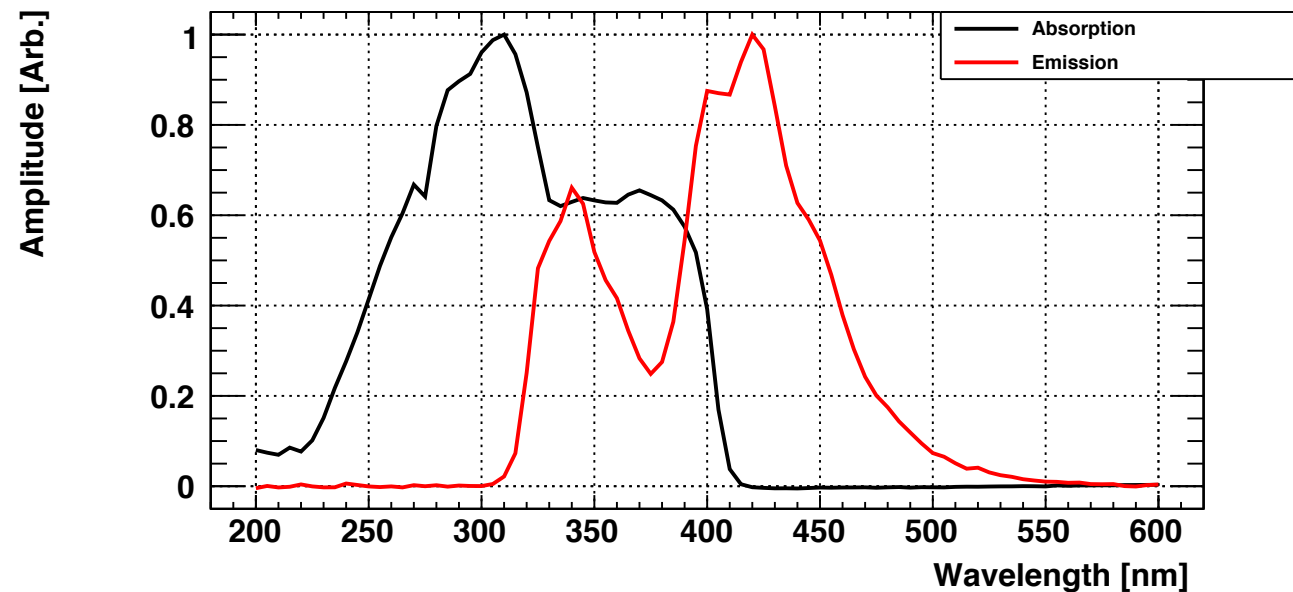


Emission spectrum



EMISSION & ABSORPTION SPECTRUM

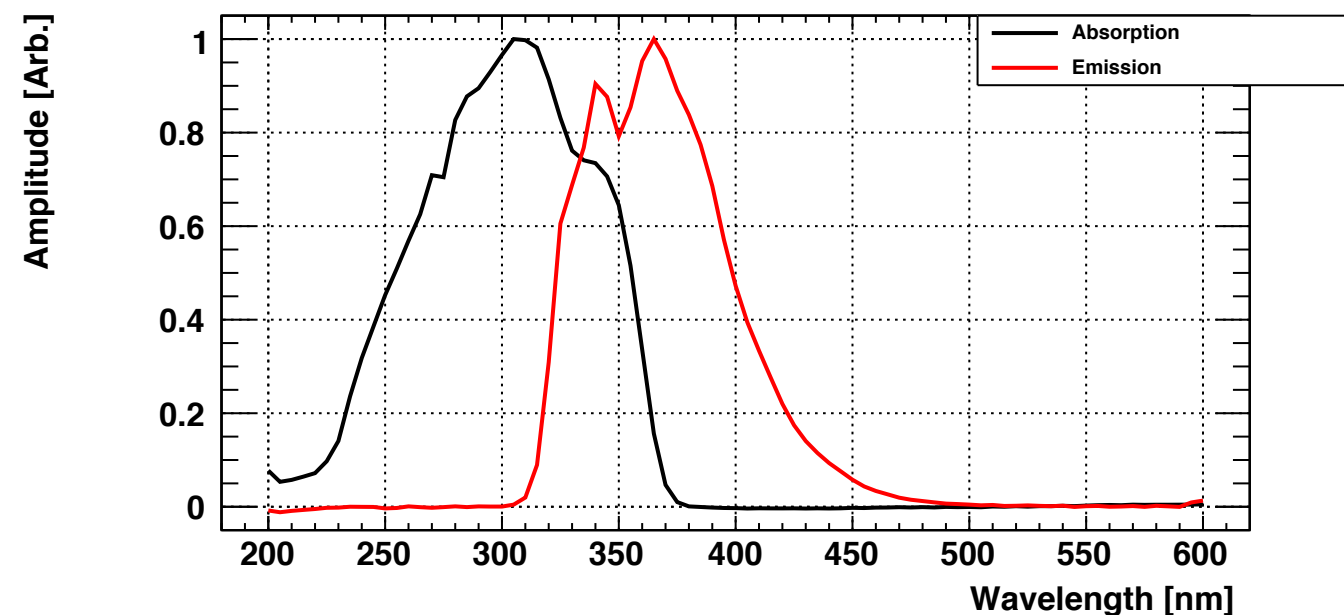
Emission & Absorption spectrum



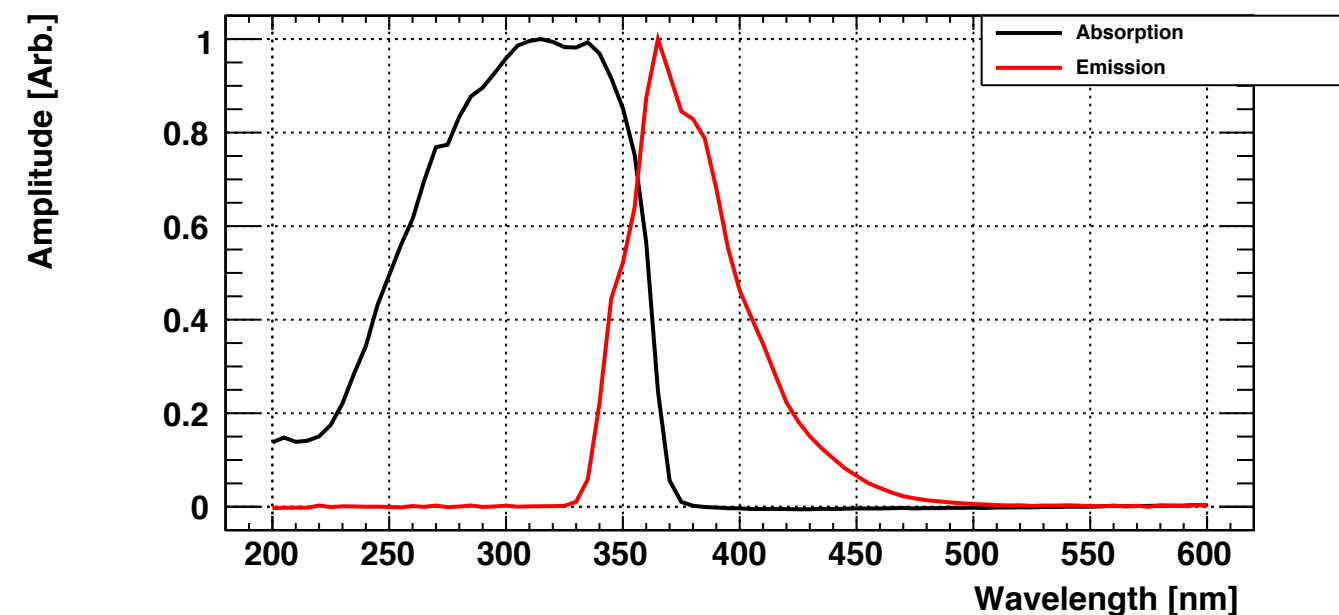
EJ-230

EJ-232

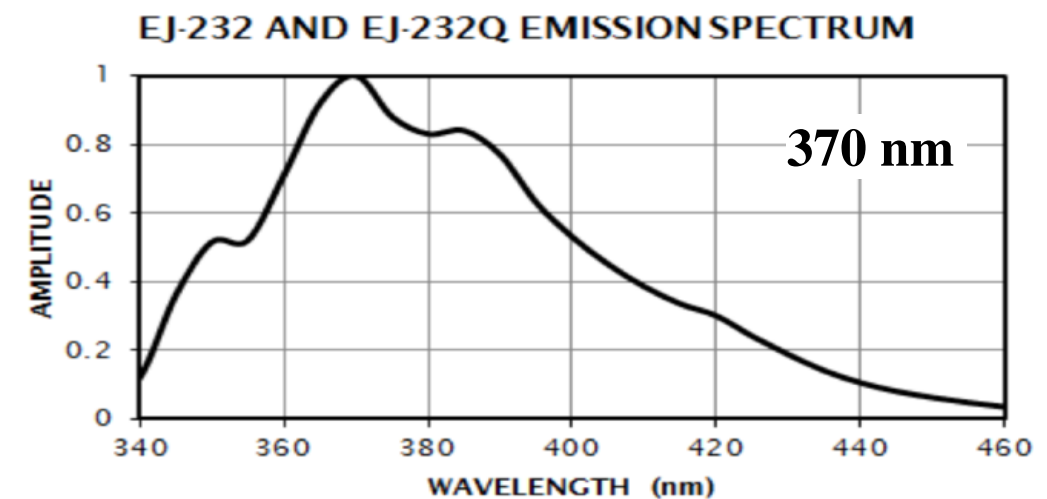
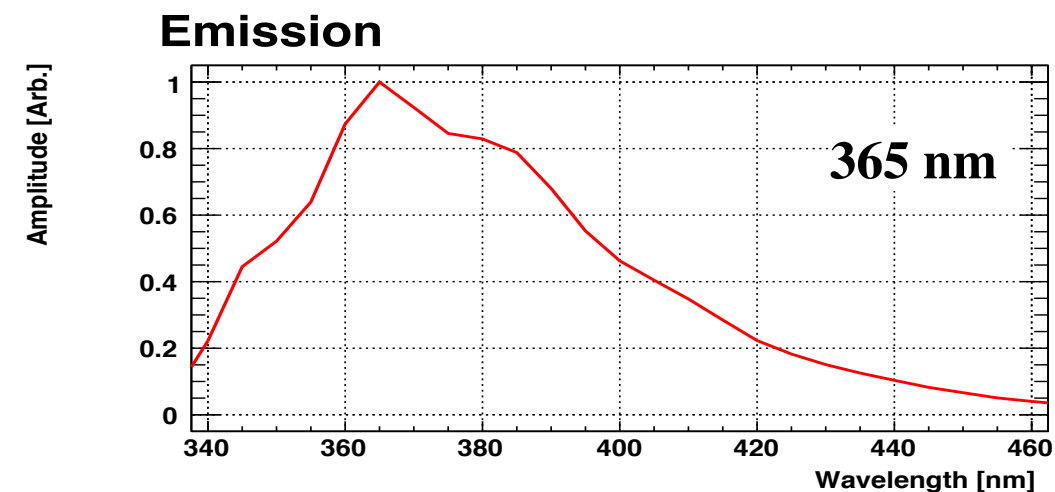
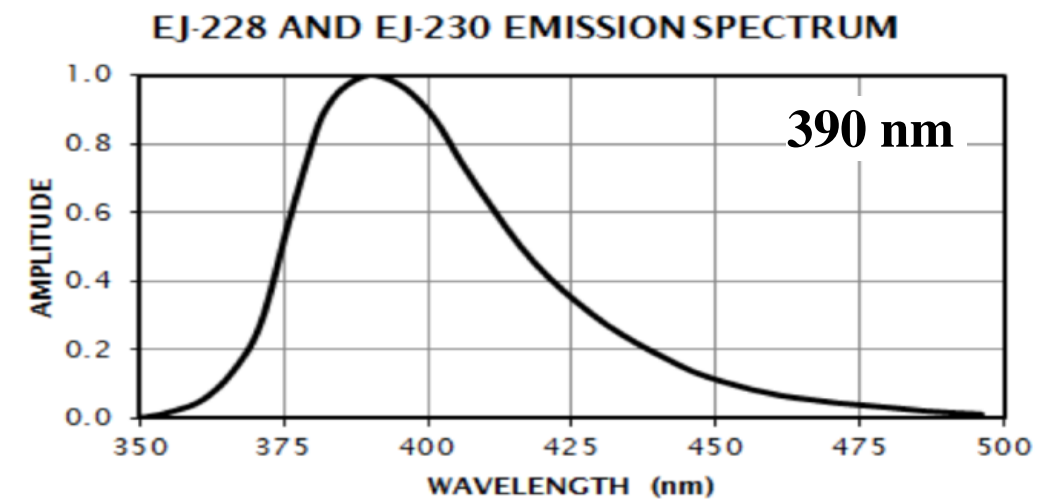
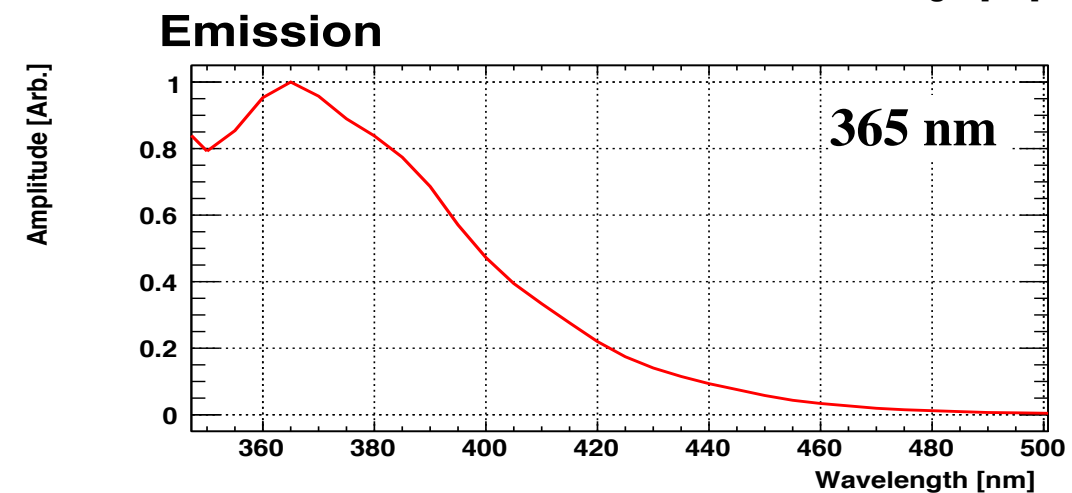
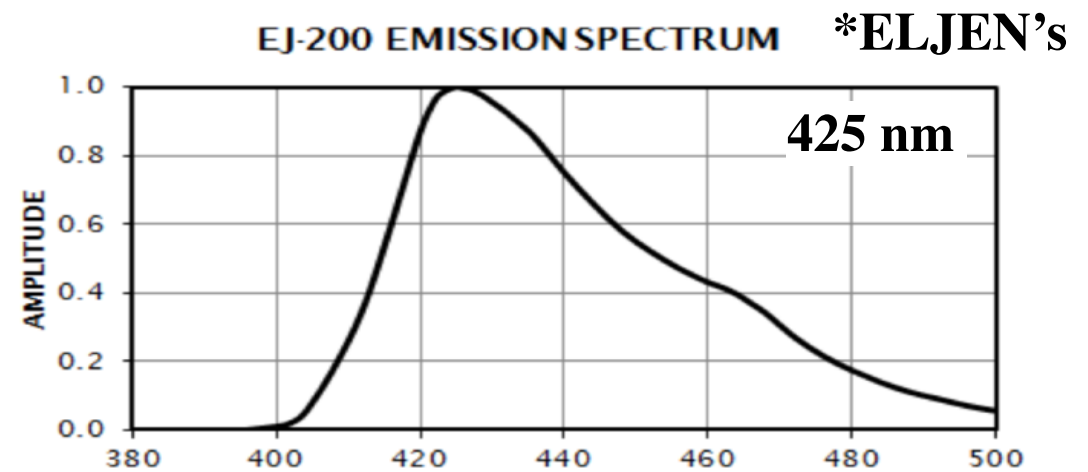
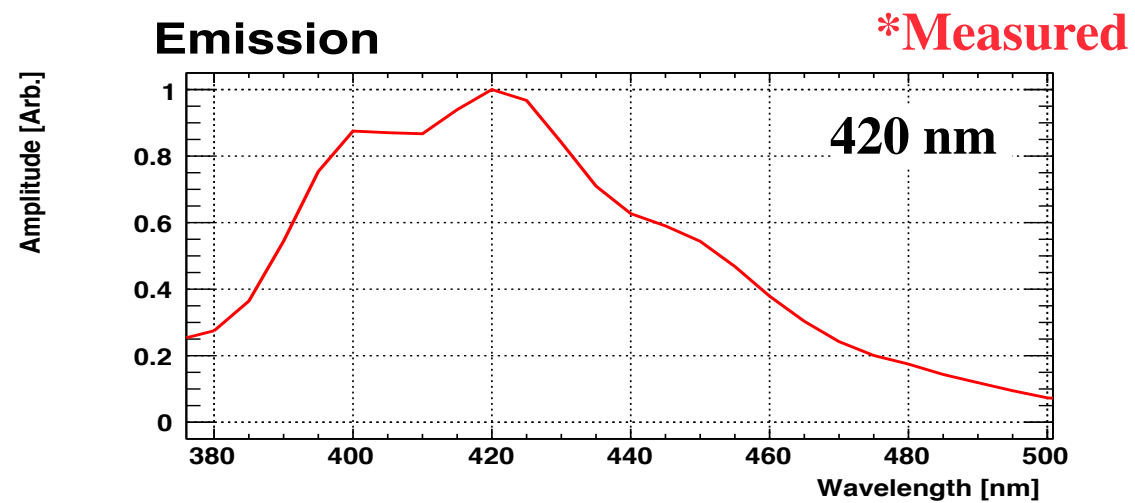
Emission & Absorption spectrum



Emission & Absorption spectrum



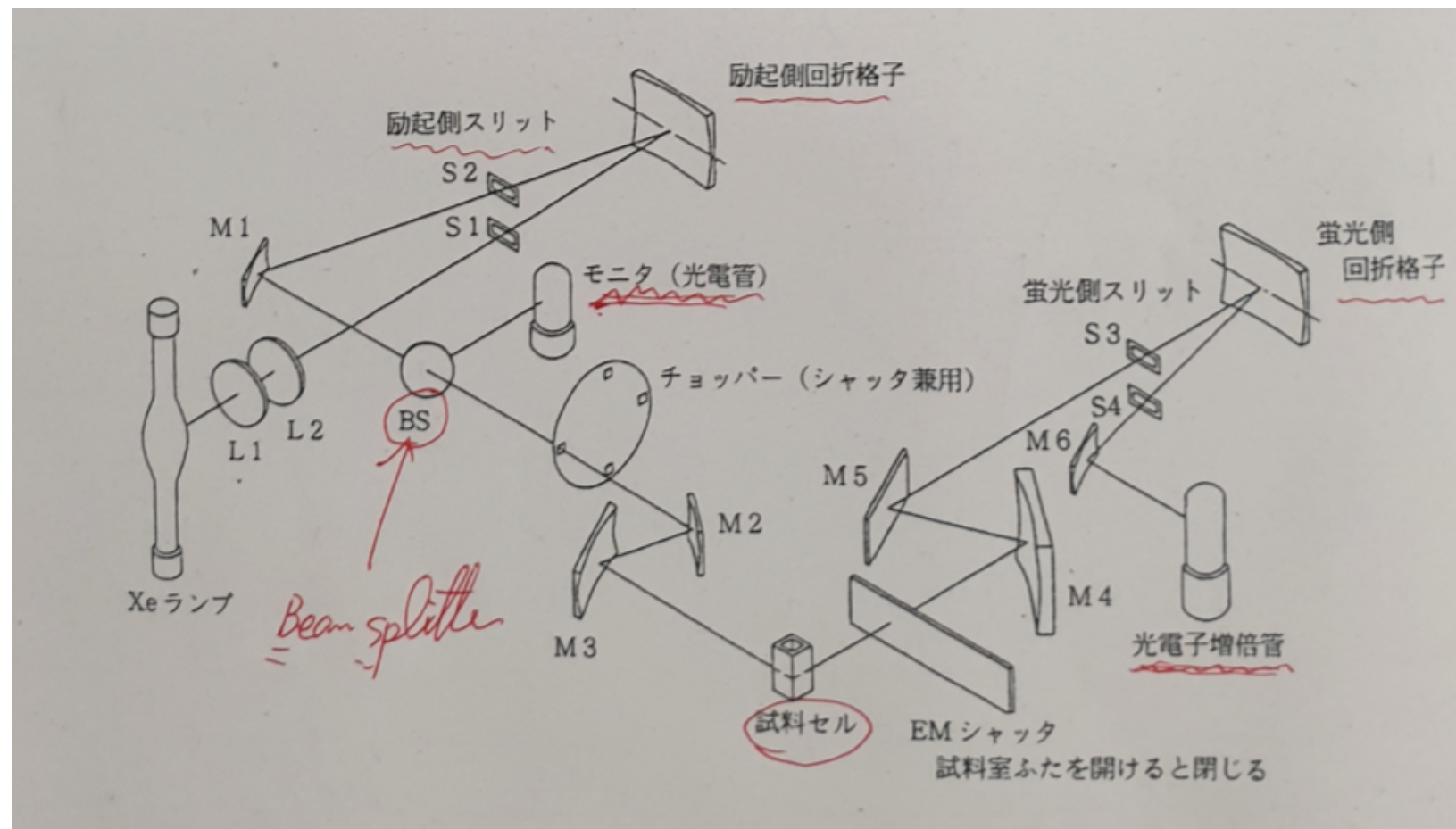
EMISSION SPECTRUM : MEASURED VS DATA SHEET



BACKUP

TEST MACHINE

Hitachi F-4500 Fluorescence Spectrophotometer

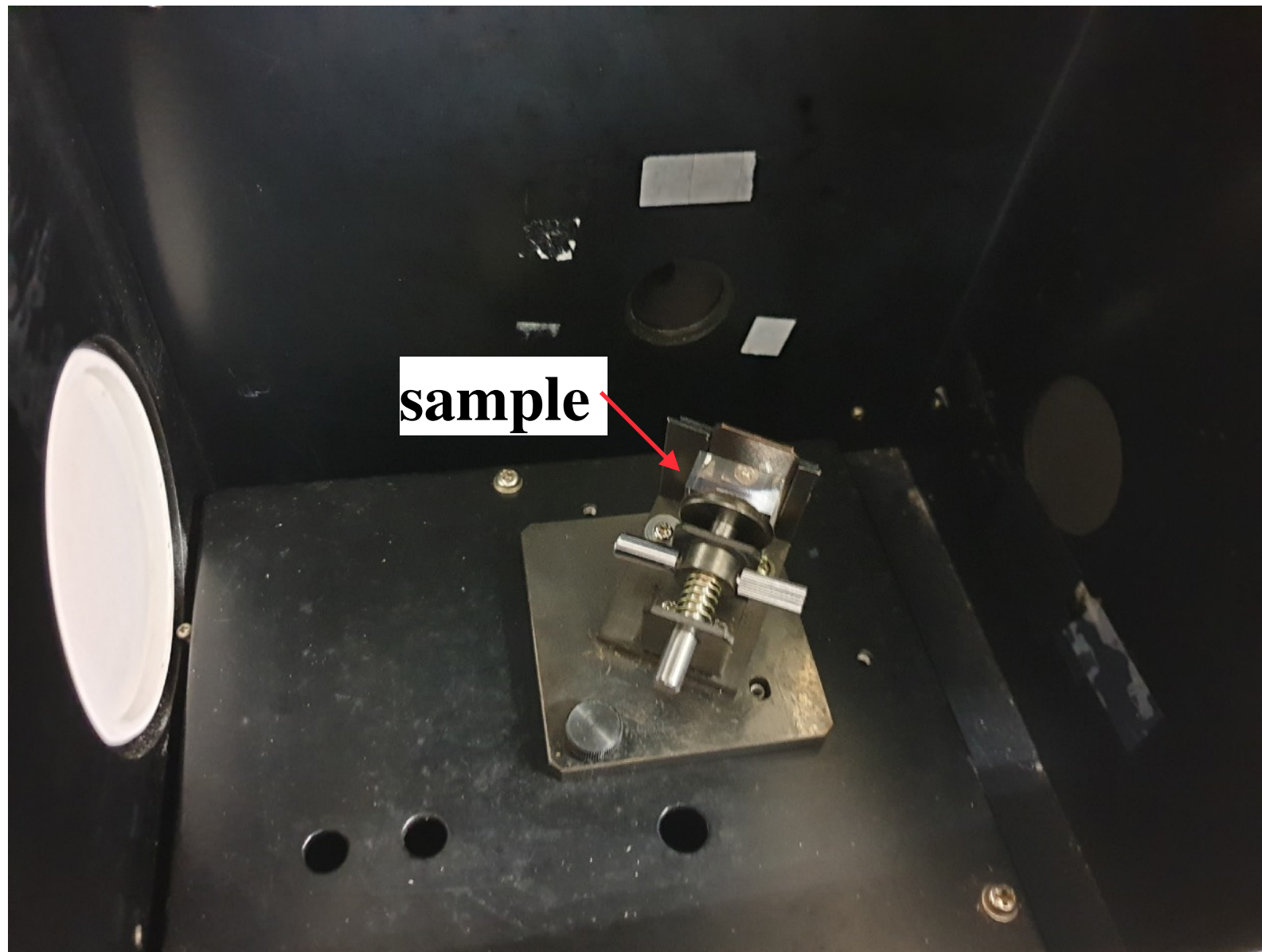


Dynamic range

**Spectrum wavelength :
200 to 600 nm(every 5 nm)**

TEST SETUP

Hitachi F-4500 Fluorescence Spectrophotometer



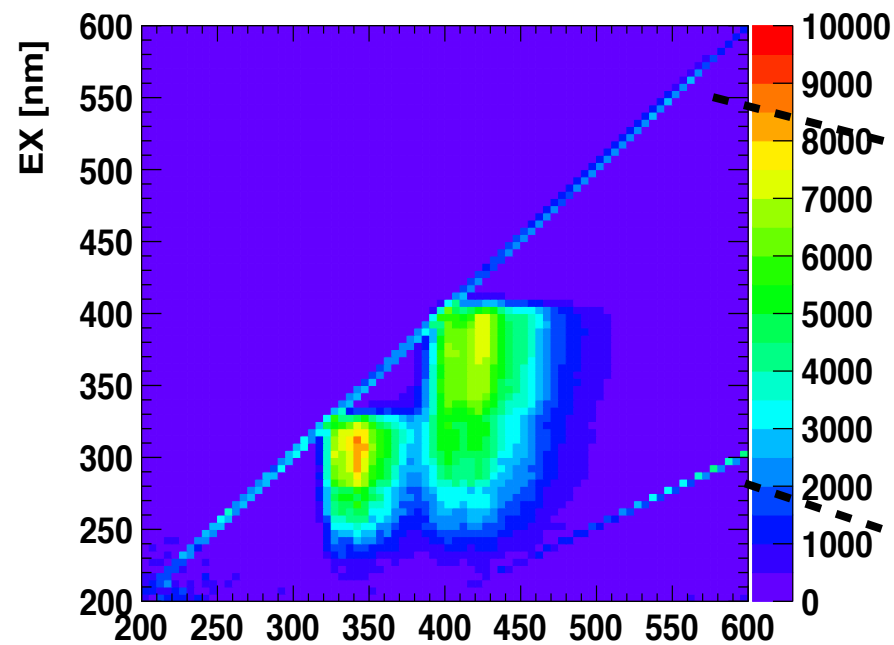
sample :

**EJ-200, EJ-230, EJ-232
cubes (2 x 2 x 1 cm)**

DATA

emission light Intencity / monitor light intencity

EJ-200



$\Rightarrow \lambda_{ex} \sim \lambda_{em} : \text{Reflection}$

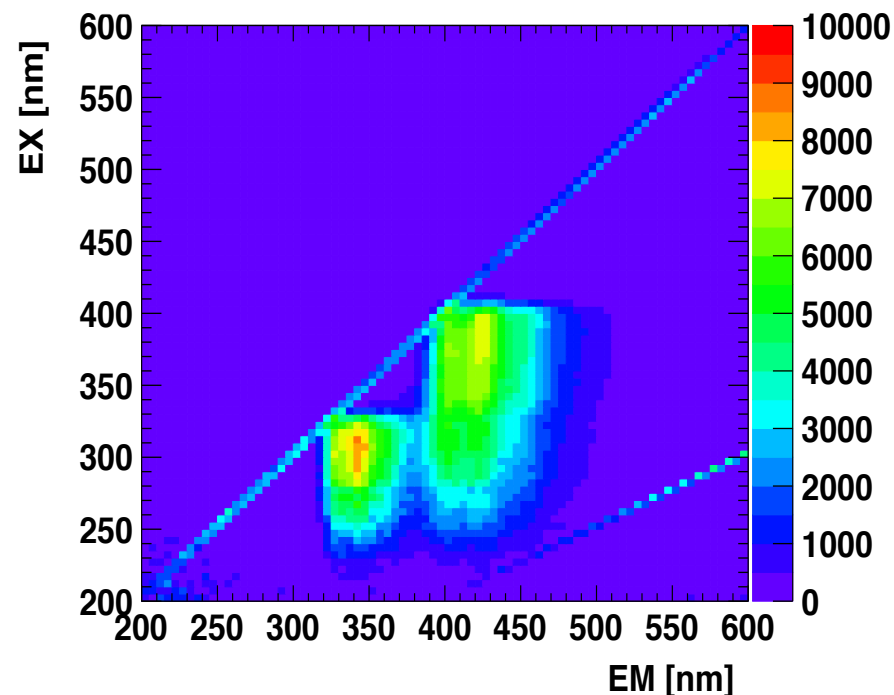
$\Rightarrow \lambda_{ex} \sim 2 * \lambda_{em} : ??$

Excitation [nm]

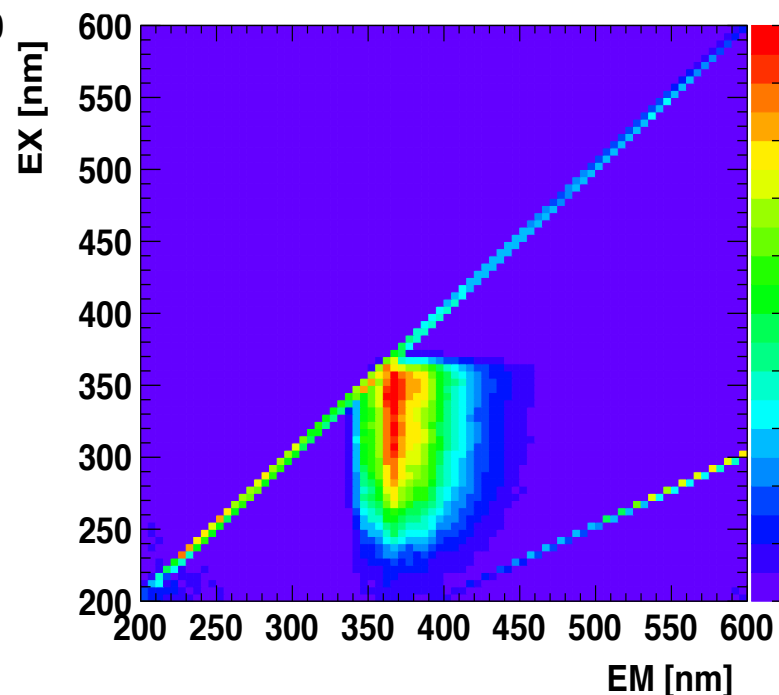
デ-タリスト	200	205	210	215
200	838.4	1298	890	605.7
205	51.27	1326	1439	962.4
210	1791	865	1780	1752
215	1025	953.7	2036	1814
220	1136	1150	985.2	450.5
225	1193	1553	110.2	241.3
230	968.9	881.2	631.1	137.2
235	1119	201	401.5	157
240	638.5	276.2	603.3	1116
245	187.2	768	596.1	371.4

Emission [nm]

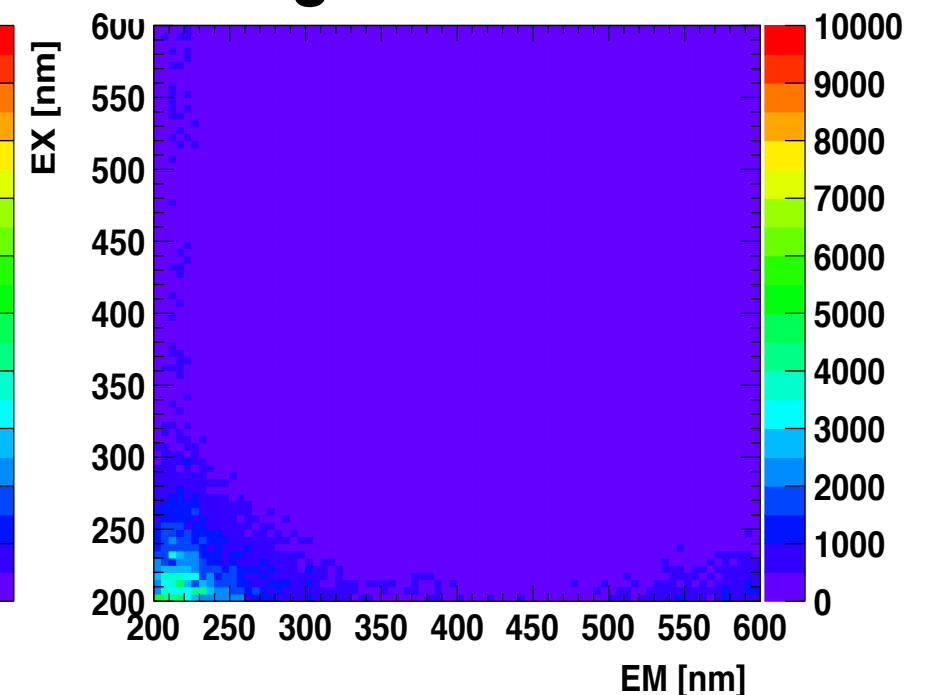
EJ-230



EJ-232

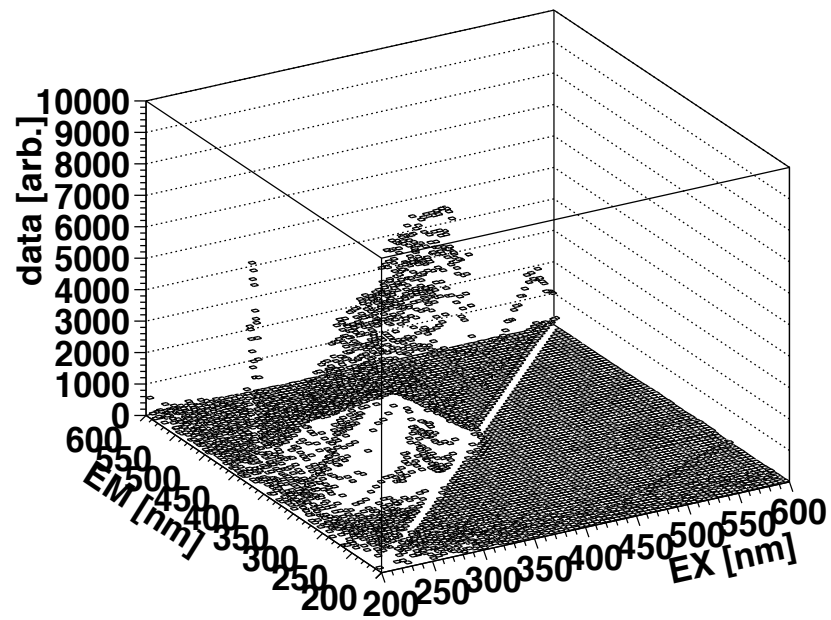


Background

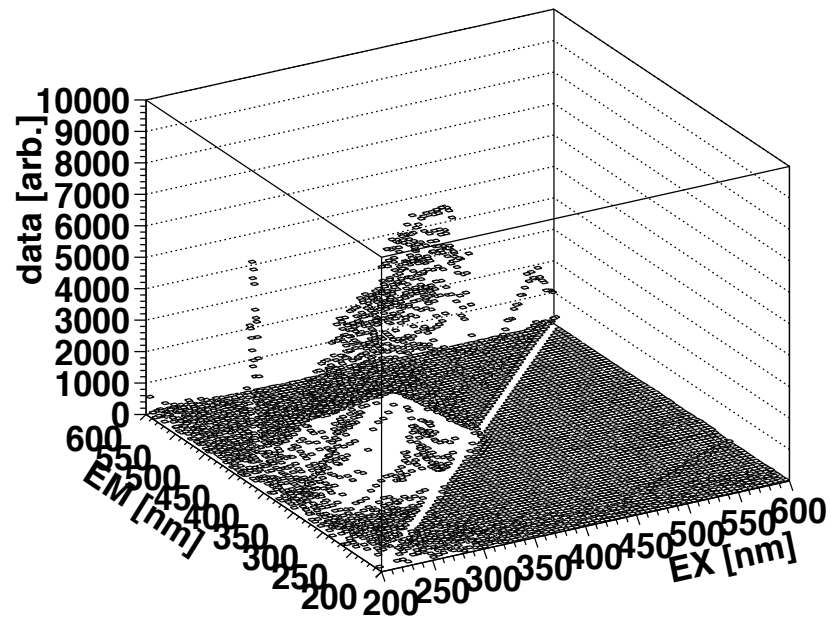


DATA

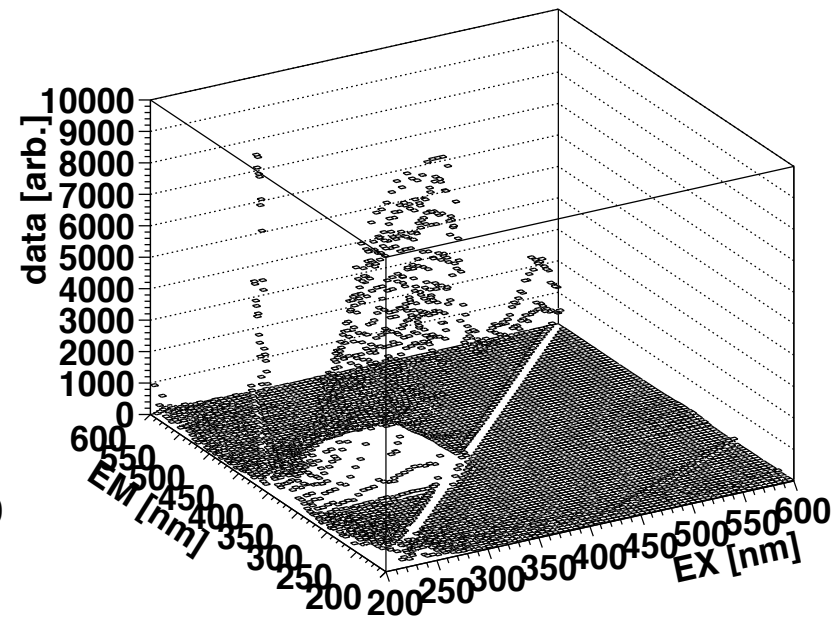
ej200



ej230



ej232



Background

