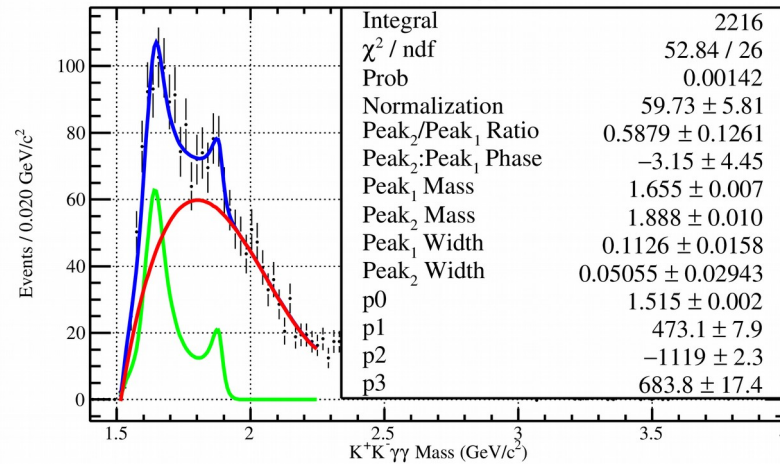


PhiEta Invariant Mass Study

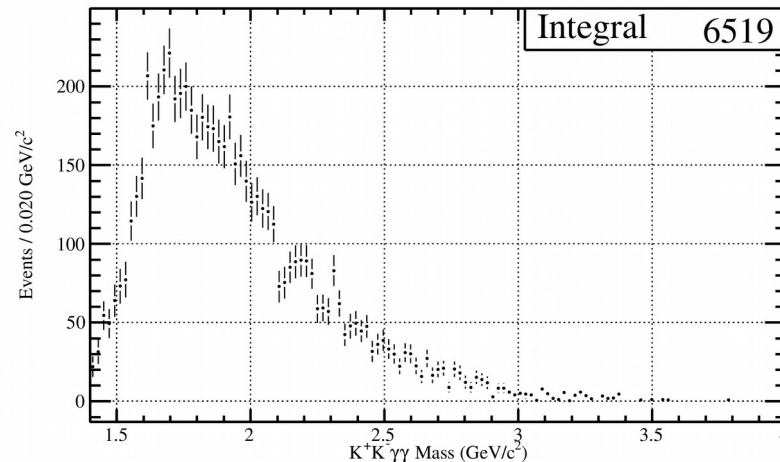
- I look at the significance of different fits for PhiEta Invariant Mass (again)
- Box Cut Study of PhiEta Backgrounds
- Go over 6 week schedule

Fit with 2 BW's

$K^+K^- \gamma\gamma$ Mass : $Q_{\phi\eta}$ Weighted

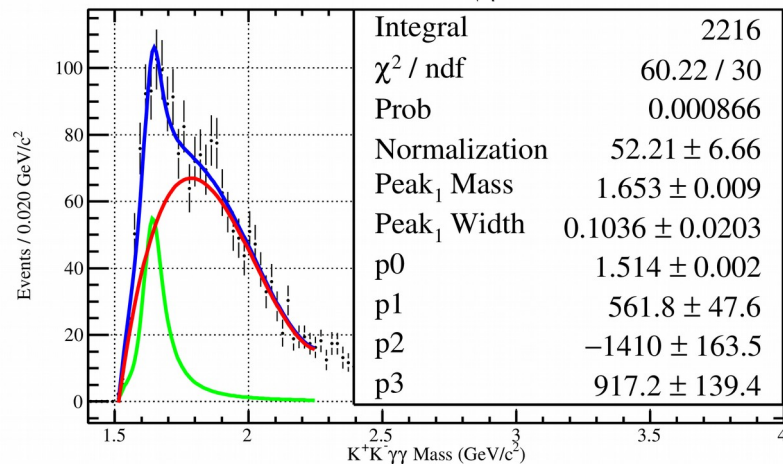


$K^+K^- \gamma\gamma$ Mass : $1 - Q_{\phi\eta}$ Weighted

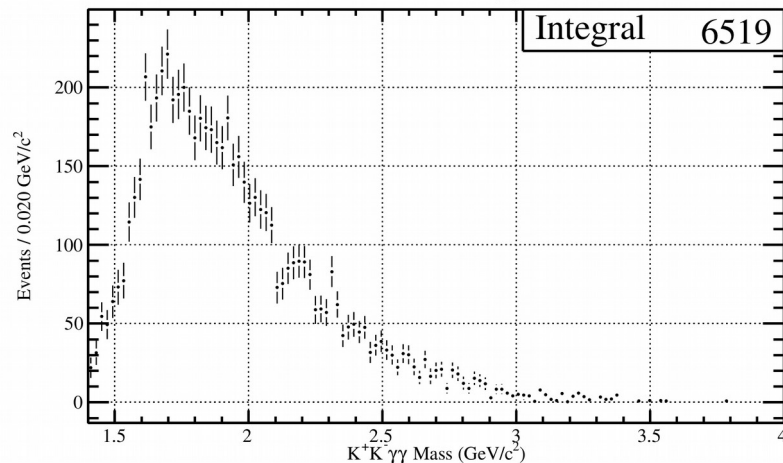


Fit with 1 BW @ 1680

$K^+K^- \gamma\gamma$ Mass : $Q_{\phi\eta}$ Weighted

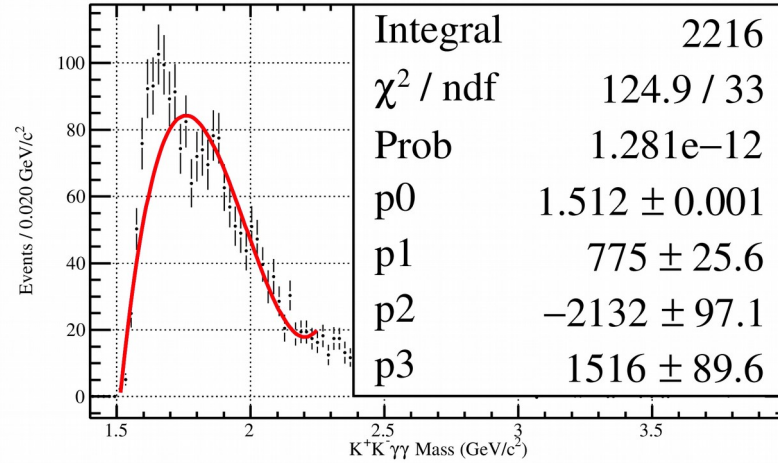


$K^+K^- \gamma\gamma$ Mass : $1 - Q_{\phi\eta}$ Weighted

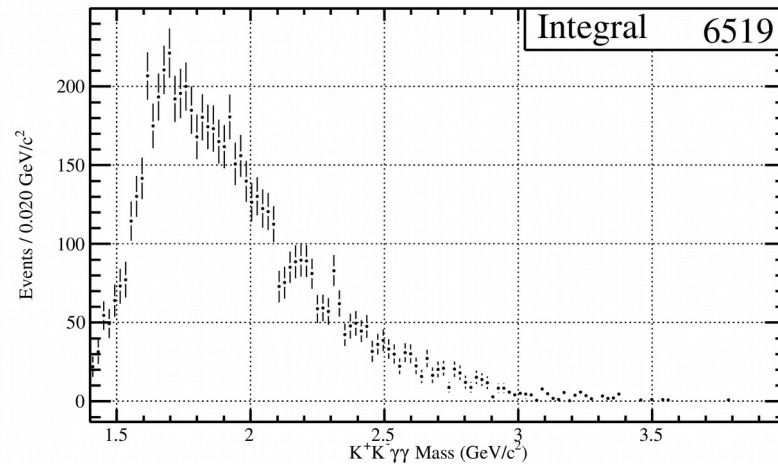


Fit with 0 BW

$K^+K^- \gamma\gamma$ Mass : $Q_{\phi\eta}$ Weighted

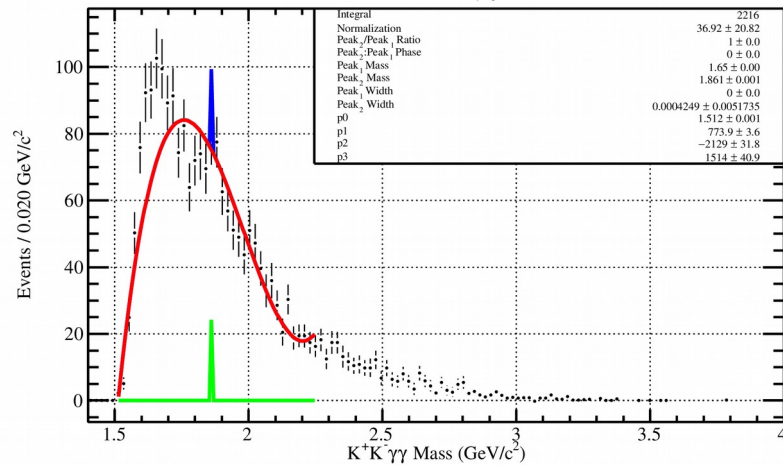


$K^+K^- \gamma\gamma$ Mass : $1 - Q_{\phi\eta}$ Weighted

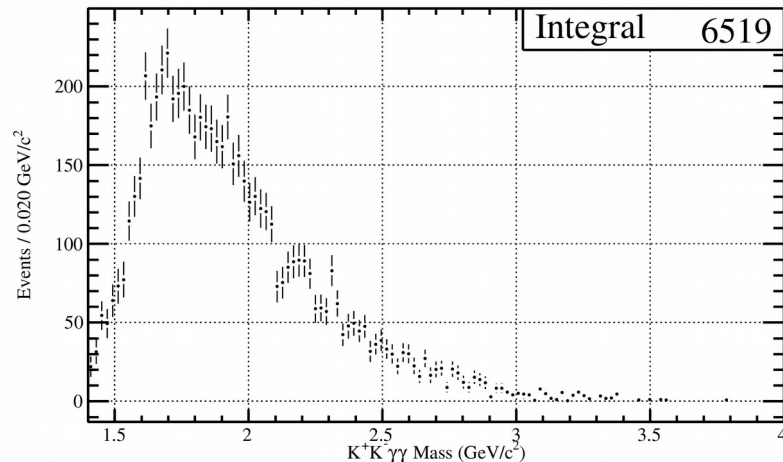


Attempted Fit for peak @ 1850

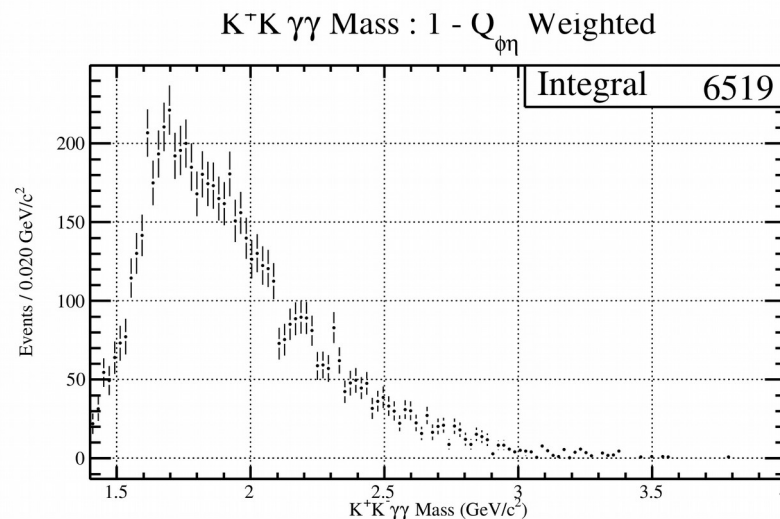
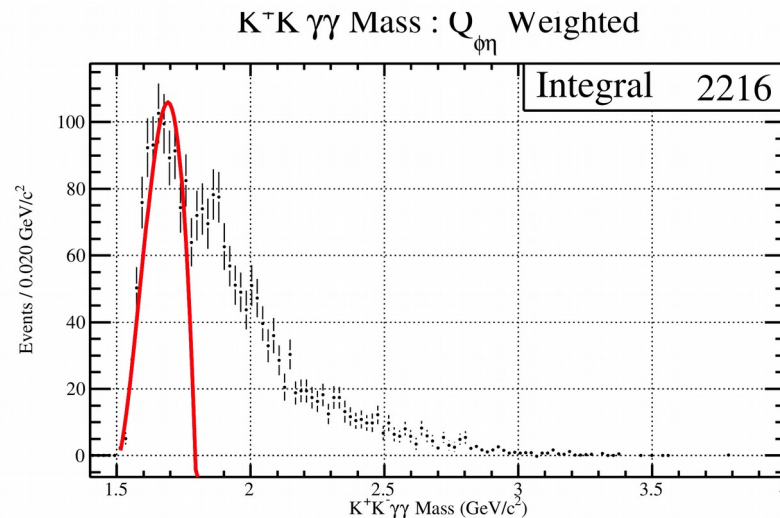
$K^+K^- \gamma\gamma$ Mass : $Q_{\phi\eta}$ Weighted



$K^+K^- \gamma\gamma$ Mass : $1 - Q_{\phi\eta}$ Weighted



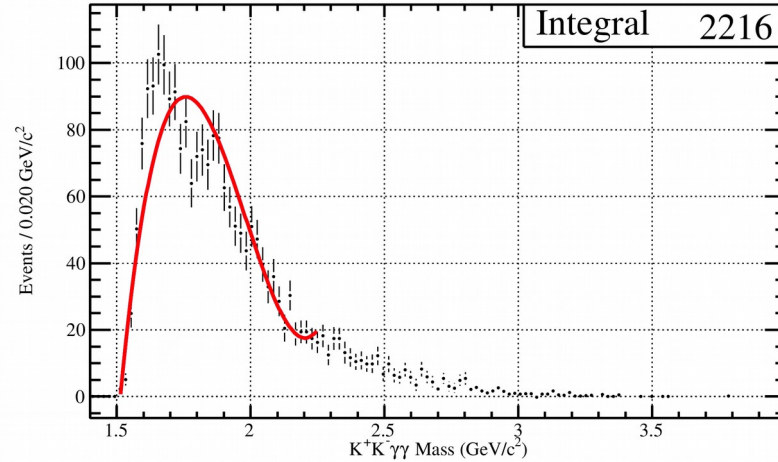
Polynomial Fit between 1.5-1.8



*The 2nd order term is too Narrow to describe the first Peak and the rest of the Invariant mass plot, even With the addition of a 3rd Order term

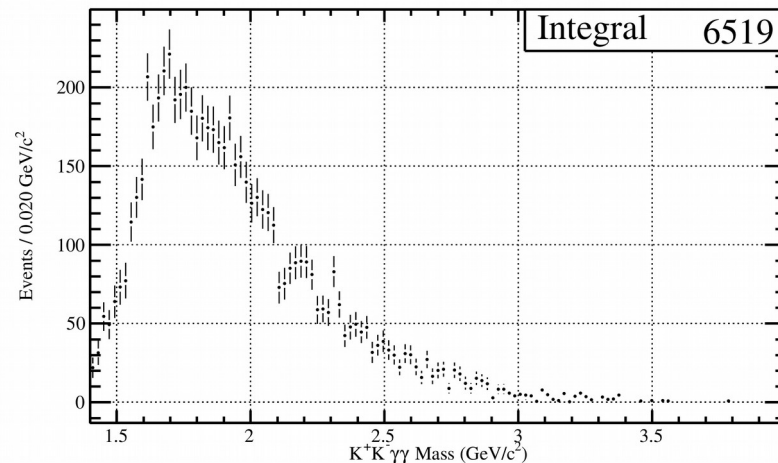
Polynomial Fit ignoring 1.8-1.95

$K^+K^- \gamma\gamma$ Mass : $Q_{\phi\eta}$ Weighted



*If the fit is expected to Converge, it needs a 4th Order term

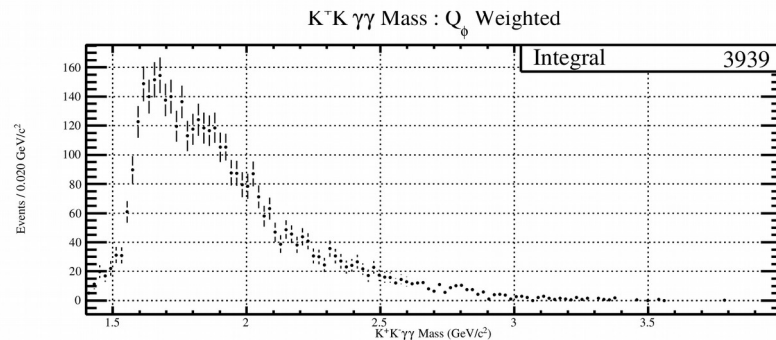
$K^+K^- \gamma\gamma$ Mass : $1 - Q_{\phi\eta}$ Weighted



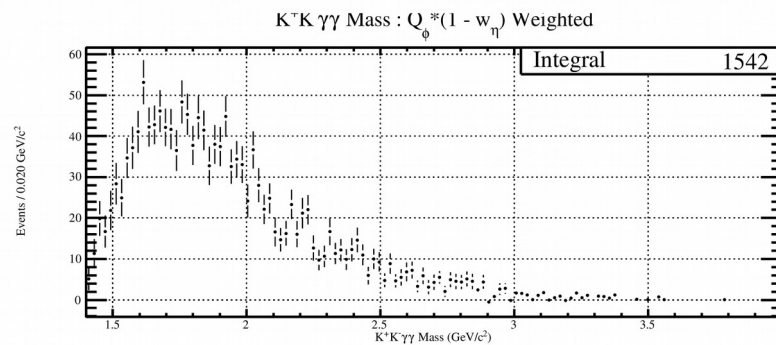
* Why is structure seen in Qval PhiEta Background?

Qvalue Phi, Eta Weighted

Phi gg +
Phi Eta

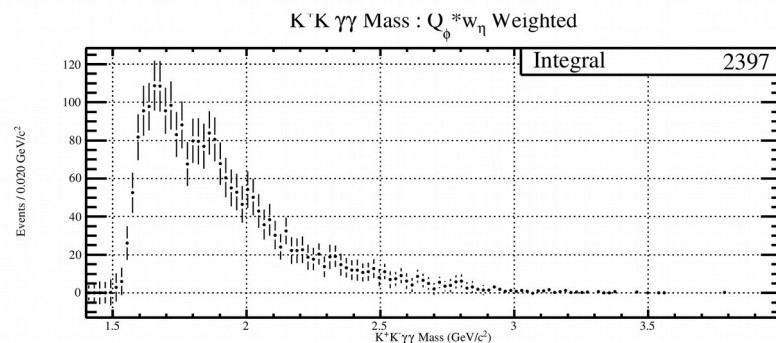


Phi gg



* No structure seen in
Background

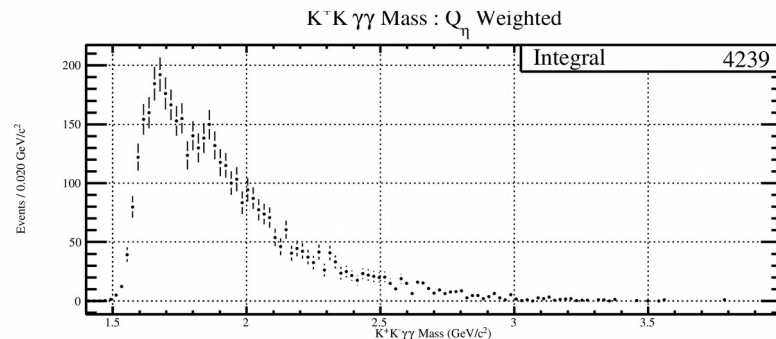
Phi Eta



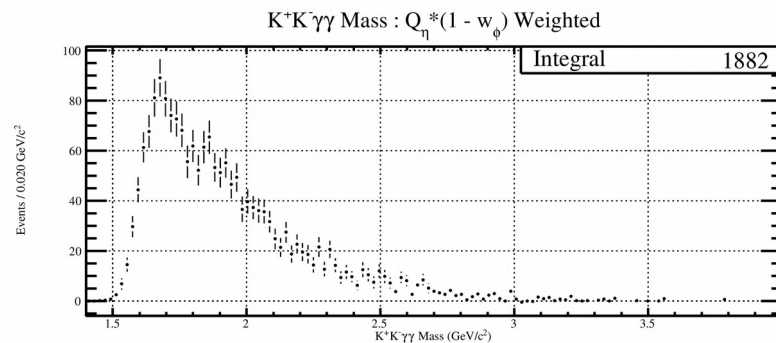
*1680 Seen, 1850 weak

Qvalue Eta, Phi Weighted

Eta KK +
Phi Eta

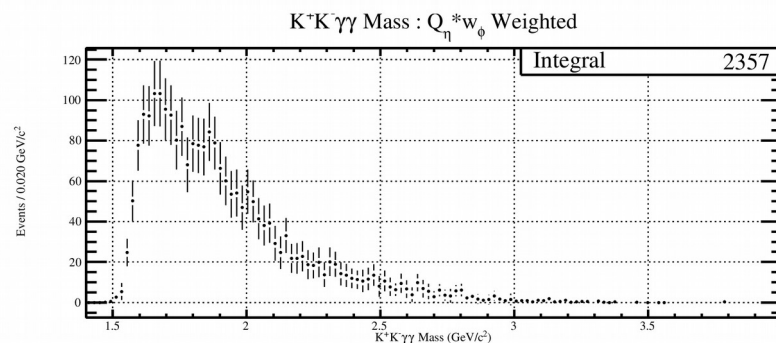


Eta KK



* 1680 structure seen in
Eta KK Background, maybe
1850 as well

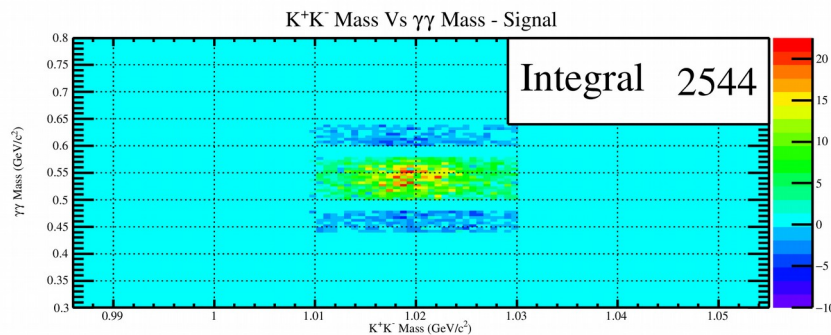
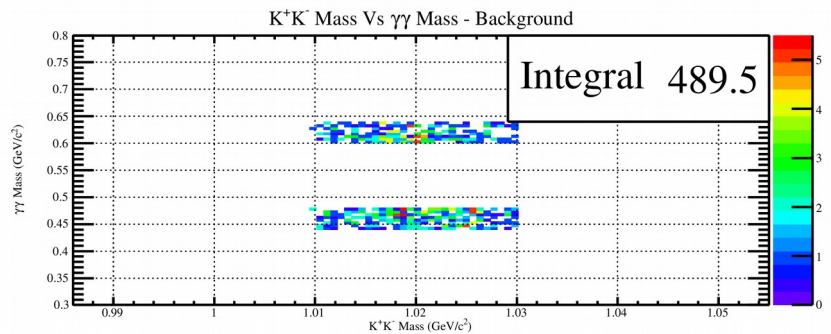
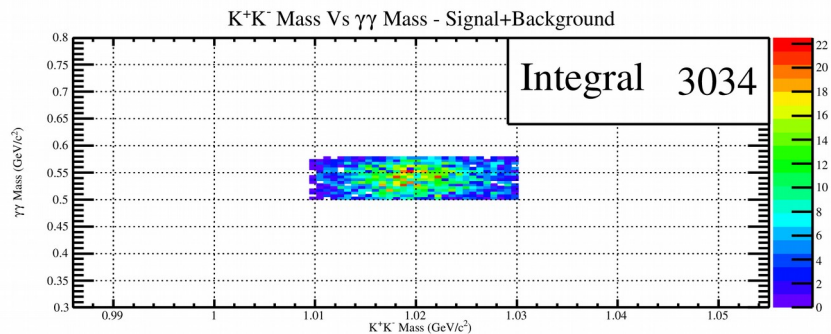
Phi Eta



*1680 Seen, 1850 weak

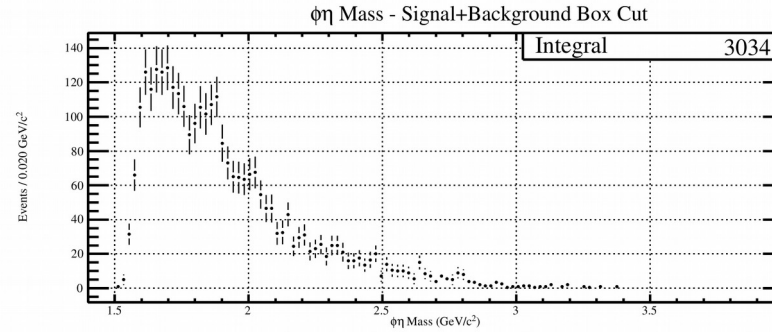
Box Cut Study: Select Phi, gg sidebands

* There are no
Weights used in
These events



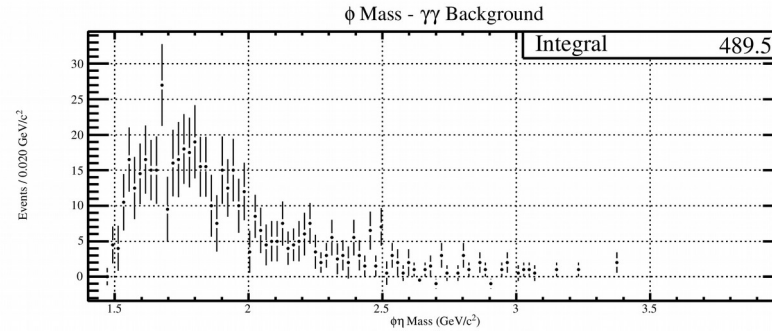
Box Cut Study: Select Phi, gg sidebands

Phi gg +
PhiEta



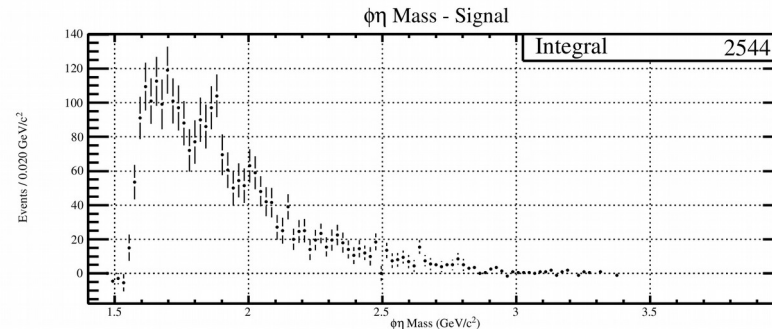
* There are no
Weights used in
These events

Phi gg



* No structure seen in
 gg Background

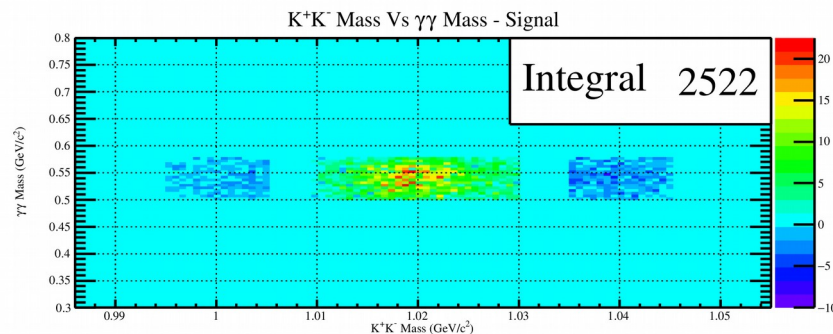
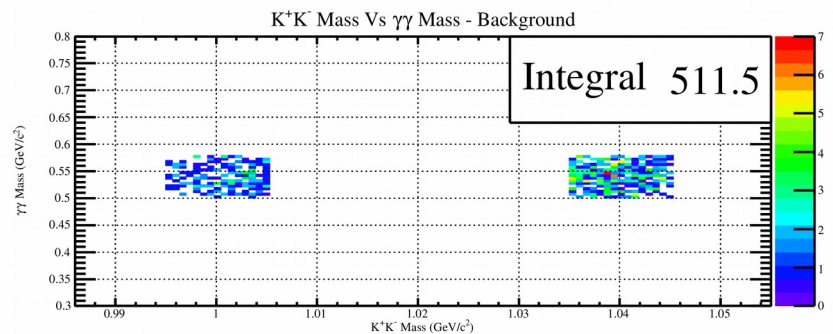
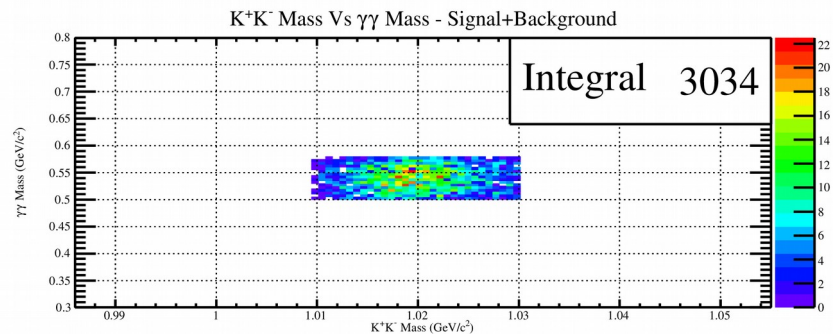
PhiEta



*1680 Seen, 1850 Seen

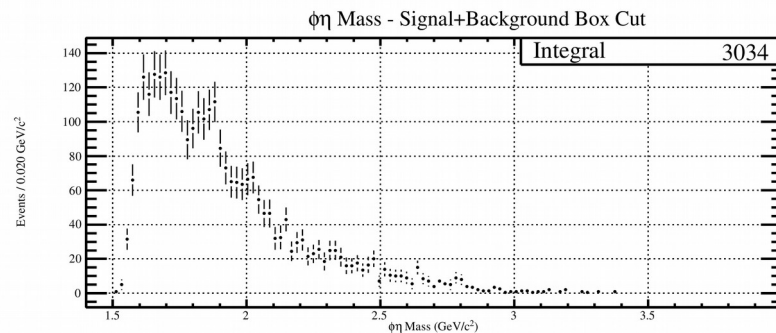
Box Cut Study: Select Eta, KK sidebands

* There are no
Weights used in
These events



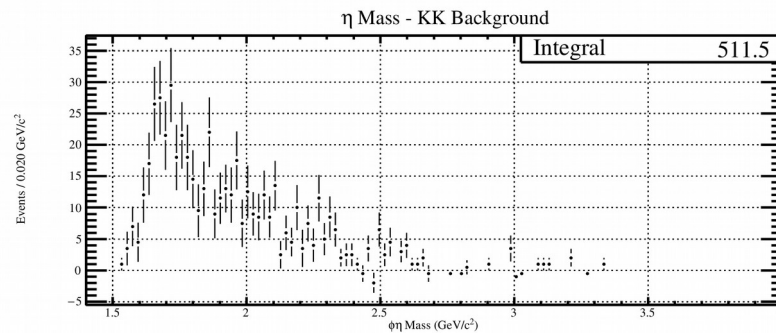
Box Cut Study: Select Eta, KK sidebands

Eta KK +
PhiEta



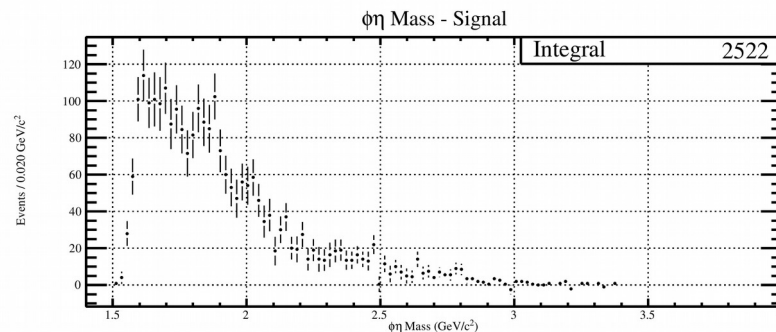
* There are no
Weights used in
These events

Eta KK



* 1680 structure seen in
Eta KK Background,
Consistent with Qval_Eta!

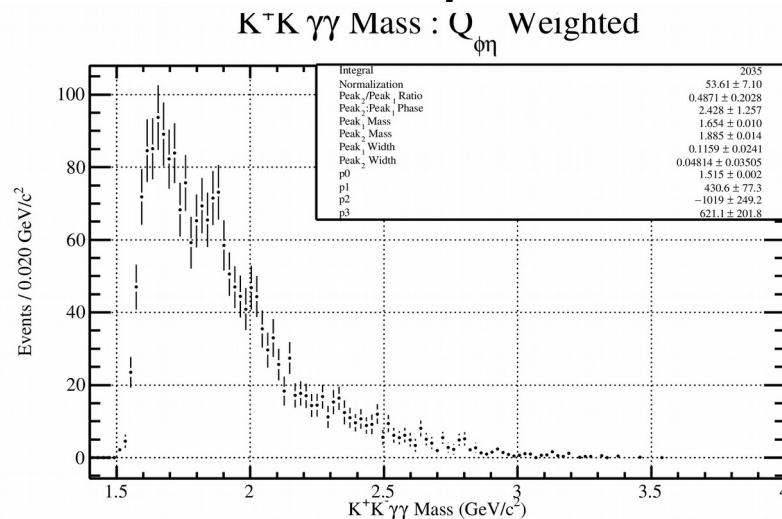
PhiEta



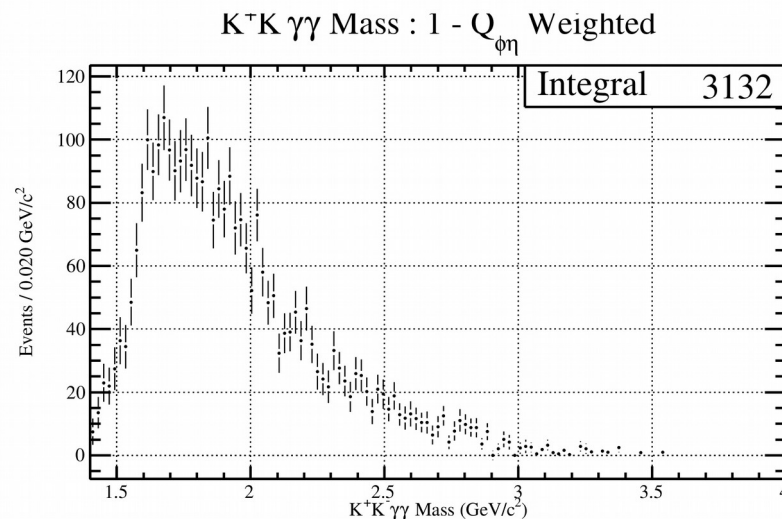
*1680 Seen, 1850 Seen

Qvalue PhiEta, Select the Phi

PhiEta

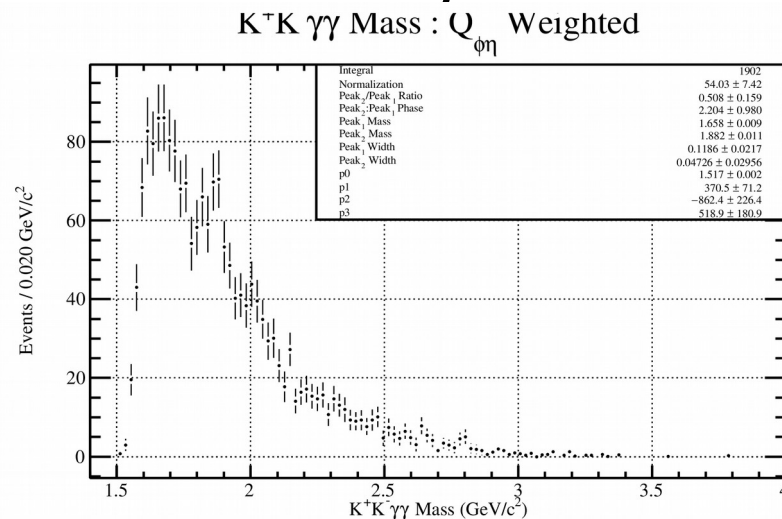


Phi gg

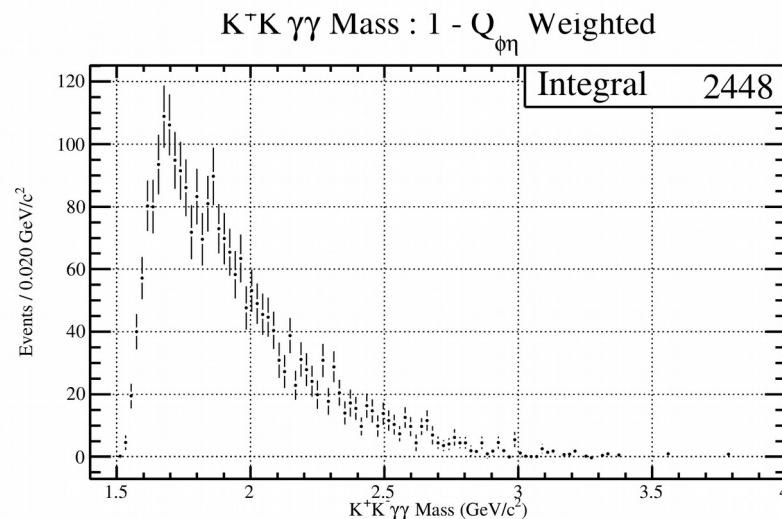


Qvalue PhiEta, Select the Eta

PhiEta



Eta KK



Schedule In The Next 6 Weeks:

MARCH 2019						
SUN	MON	TUE	WED	THU	FRI	SAT
					1	2
3	4	5 Today	6	7	8	9
10	11	12	13	14	15 Send to P & S	16
17	18	19	20 Edit Thesis	21	22	23
24	25 90% Deadline	26	27 Edit Thesis	28	29 Send to committee	30
31						

Schedule In The Next 6 Weeks:

APRIL 2019						
SUN	MON	TUE	WED	THU	FRI	SAT
	1	2	3 Make/ Practice Talk	4	5	6
	7	8	9	10 Make/ Practice Talk	11	12 Defense
14	15	16	17 Make Corrections	18	19	20
21	22 Thesis Due	23	24	25	26	27
28	29	30				