# Search for $\ell\gamma + X$ in 929 $pb^{-1}$

## Motivation

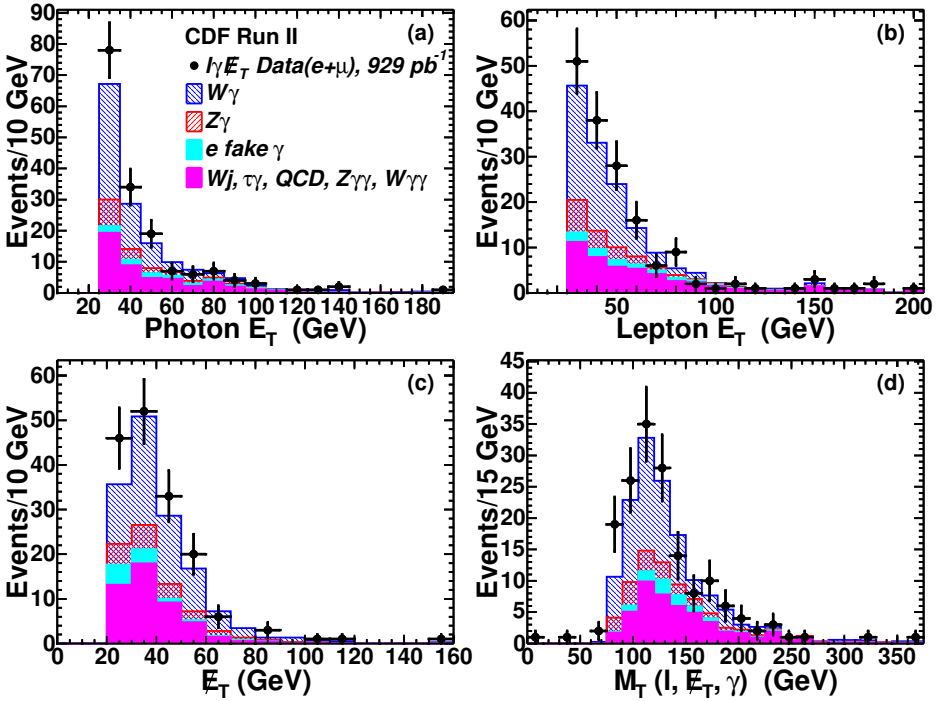
- Run I $ee\gamma\gamma\not{E}_{\rm T}$ ($10^{-6}$ expected, 1 observed)
- $\ell\gamma\not{E}_{\rm T}$: 7.6±0.7 expected, 16 observed, $2.7\sigma$

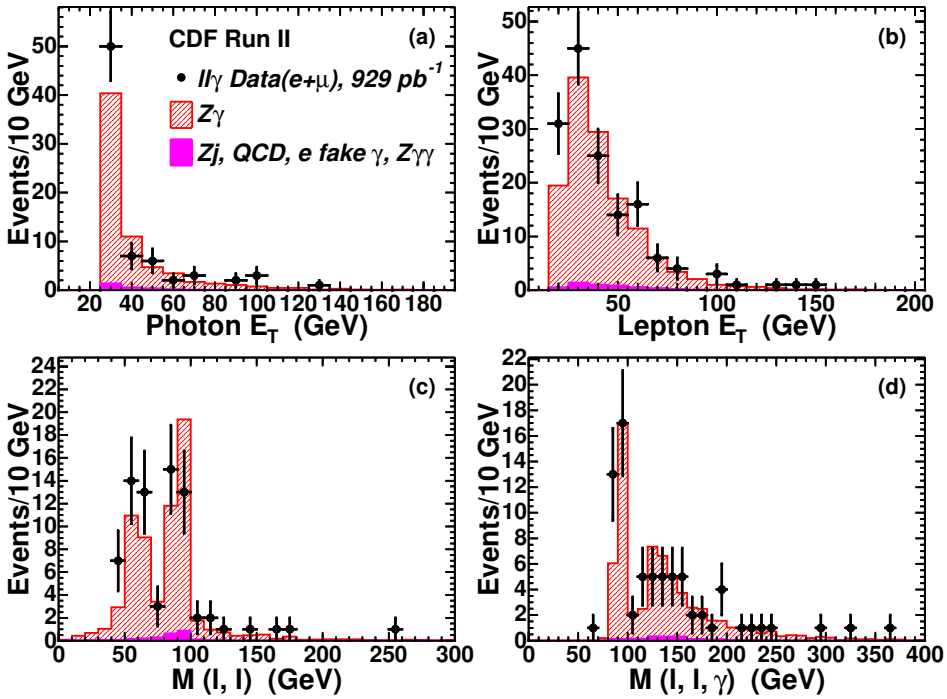
## Analysis

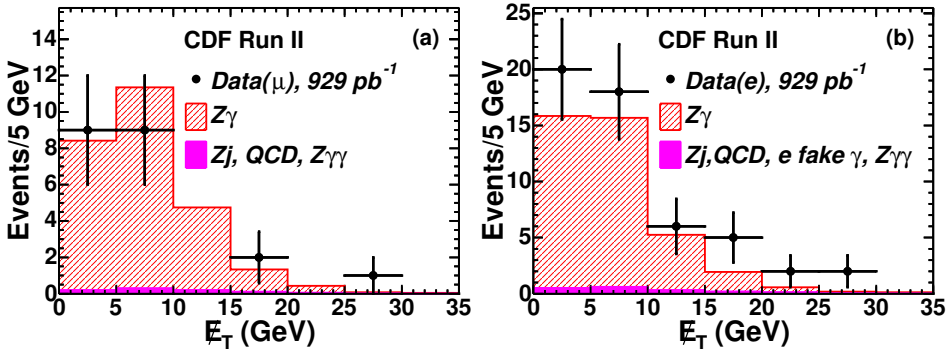
- Signature-Based search
- *a priori* defined cuts (same as in Run I)
- MadGraph, CompHep and Baur MC

## Results

| $\ell\gamma\not{E}_{\rm T}$ | $e\gamma\not{E}_{\rm T}$ | $\mu\gamma\not{E}_{\rm T}$ | $(e+\mu)\gamma\not{E}_{\rm T}$ |
|---|---|---|---|
| Predicted | $94.8 \pm 8.1$ | $55.7 \pm 7.1$ | $150.6 \pm 13.0$ |
| Observed | 96 | 67 | 163 |




| $\ell\ell\gamma$ | $ee\gamma$ | $\mu\mu\gamma$ | $\ell\ell\gamma$ |
|---|---|---|---|
| Total | $39.0 \pm 4.8$ | $26.1 \pm 3.1$ | $65.1 \pm 7.7$ |
| Observed | 53 | 21 | 74 |

0 $e\mu\gamma$ vs. $1.0 \pm 0.3$, 0 $\ell\gamma\gamma$ vs. $0.62 \pm 0.15$