EXOPLANET ANALYSIS REPORT

Target_3

Date: October 05, 2025

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1. CLASSIFICATION RESULTS

Classification: CANDIDATE

Confidence: 92.3%

Probabilities:

CONFIRMED: 5.7%
CANDIDATE: 92.3%
FALSE POSITIVE: 2.0%

3. INPUT DATA

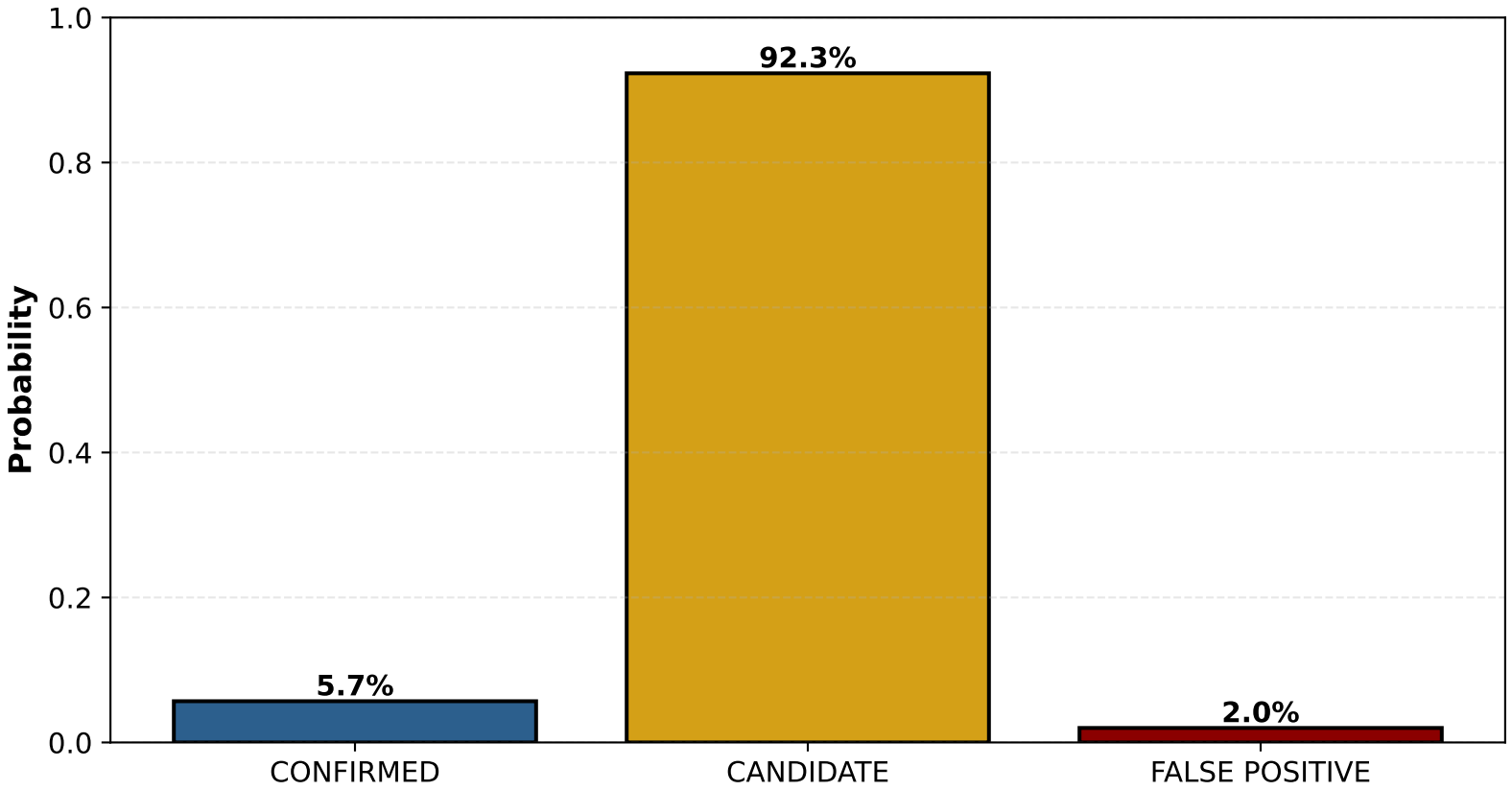
Transit Features: 53 parameters
Spectrum: Not provided

4. KEY FINDINGS

• Classified as CANDIDATE (92.3% confidence)

OBSERVER NOTES

Data Quality: 100.0% (53/53 features)



INTERPRETATION:

Classification: CANDIDATE
Confidence: 92.3%

The transit classifier analyzed the light curve and determined this is most likely a CANDIDATE.

Model Performance:
- Accuracy: 89.5% on 3,913 test samples
- F1-Score: 88.9%
- Training: 15,652 Kepler candidates

Confidence Guide:
- >90%: High confidence, reliable result
- 70-90%: Moderate, consider follow-up observations
- <70%: Low confidence, uncertain classification

CANDIDATE: Strong transit signal (92%) from light curve analysis

DETAILS & RECOMMENDATIONS

MODEL INFORMATION

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Transit Classifier:
  Type: Stacking Ensemble (RF + XGBoost + LightGBM)
  Accuracy: 89.5%
  F1-Score: 88.9%
  Training: 15,652 Kepler exoplanet candidates
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RECOMMENDATIONS

- Additional transit observations recommended
- Spectroscopic confirmation needed
- Verify with independent photometric data
- Consider for follow-up target list